

Provas de Agregação em Bioengenharia

Curriculum Vitae

Paula Maria Marques Leal Sanches Alves

Oeiras, January 2024

Instituto de Tecnologia Química e Biológica António Xavier
Universidade Nova de Lisboa



INDEX

A . SYNOPSIS	3	15.1. Post-Docs	89
1. PERSONAL INFORMATION	3	15.2. PhD STUDENTS (<i>PhD Students were awarded with FCT PhD grants or PhD program grants</i>)	90
2. CAREER SYNOPSIS	3	15.2.1. Thesis On Going	90
3. RESEARCH SYNOPSIS	7	15.2.2. Thesis Concluded	90
B . BIOGRAPHIC DATA	11	15.3. MASTER STUDENTS (<i>date indicate thesis conclusion</i>)	93
4. EDUCATION.....	11	15.4. SHORT TERM INTERNATIONAL GRADUATE STUDENTS	94
5. POSITIONS	11	15.5. UNDERGRADUATE STUDENTS	94
5.1. IN ACADEMIA	11	15.6. GRADUATE STUDENTS (BI FELLOWSHIPS)	95
5.2. OTHER.....	11	16. AWARDS AND RECOGNITIONS	95
6. ADVISORY POSITIONS	12	16.1. PM ALVES AWARDS AND RECOGNITIONS	95
6.1. IN EUROPEAN COMMISSION	12	16.2. VISITING SCIENTISTS IN PM ALVES LAB	96
6.2. OTHER INTERNATIONAL	12	16.3. TEAM AWARDS	96
6.3. IN PORTUGAL	13	16.3.1. Students PhD Thesis Awards	96
7. INSTITUTIONAL ACTIVITY.....	13	16.3.2. Students Posters Awards	97
8. SCIENTIFIC COURSES	13	17. EVALUATION ACTIVITY	98
9. RESEARCH VISITS TO FOREIGN LABS AND INTERNSHIPS	14	17.1. EDITORIAL ACTIVITY	98
C . SCIENTIFIC ACTIVITY	16	17.2. EXPERT REVIEWING FOR INTERNATIONAL AGENCIES AND INSTITUTIONS	98
10. BIBLIOMETRICS	16	17.3. JOURNAL PEER REVIEW	99
10.1 MOST CITED PUBLICATIONS	16	18. ORGANIZATION OF INTERNATIONAL SCIENTIFIC CONFERENCES & ADVANCED COURSES	99
11. PUBLICATIONS	18	18.1. ORGANIZATION OF SCIENTIFIC CONFERENCES	99
11.1 SUMMARY	18	18.2. ORGANIZATION OF INTERNATIONAL ADVANCED COURSES	100
11.2 HIGHLIGHTS	18	19. PARTICIPATION IN COMMITTEES IN INTERNATIONAL CONFERENCES	101
11.3. LIST OF PUBLICATIONS IN PEER REVIEWED JOURNALS.....	20	19.1. AS MEMBER OF SCIENTIFIC COMMITTEES	101
11.4. PUBLISHED BOOKS (EDITOR)	61	19.2. AS MEMBER OF ORGANIZING COMMITTEES	102
11.5. BOOK CHAPTERS	61	19.3. AS SESSION CHAIR	102
11.6. PAPERS IN CONFERENCE PROCEEDINGS	66	19.4. AS POSTER SESSION CHAIR AND IN POSTER JURY COMMITTEES	104
11.7. SCIENCE DISSEMINATION ARTICLES	67	19.5. IN OTHER CONFERENCES AND MEETINGS & AS MODERATOR	105
12. PATENTS	68	20. MEMBERSHIPS	105
13. ORAL PRESENTATIONS.....	68	21. COLLABORATIONS	105
13.1. INVITED KEYNOTE LECTURES	68	21.1. INTERNATIONAL	105
13.2. INVITED TALKS IN INTERNATIONAL CONFERENCES.....	69	21.2. IN PORTUGAL	107
13.3. INVITED TALKS AT PHARMA & BIOTEC INDUSTRY	72	D: ACADEMIC ACTIVITY	109
13.4. Invited Talks in Portuguese Academic Departments and R&D Organizations.....	74	22. PhD COURSES	109
13.5. INVITED LECTURES IN ADVANCED INTERNATIONAL COURSES.....	76	23. MASTER COURSES	110
13.6. ORAL COMMUNICATIONS (SELECTED FROM SUBMITTED ABSTRACTS)	77	23.1. CONCEPTION, COORDINATION AND TEACHING	110
13.7. POSTER COMMUNICATIONS.....	82	23.2. INVITED LECTURES IN MASTER COURSES	111
14. RESEARCH FUNDING (RESEARCH PROJECTS WITH COMPANIES WERE NOT ACCOUNTED).....	83	24. BACHELOR COURSES	111
14.1. PROJECTS AS PRINCIPAL INVESTIGATOR	83	25. ADVANCED INTERNATIONAL POSTGRADUATE COURSES	111
14.1.1. INTERNATIONAL GRANTS	83	26. PhD THESIS JURY PARTICIPATION	112
14.1.2. FUNDAÇÃO PARA A CIÊNCIA E TECNOLOGIA (FCT) GRANTS	86	26.1 AS MAIN OPPONENT (INTERNATIONAL	112
14.1.3. R&D PROJECTS WITH PHARMA AND BIOTEC COMPANIES	86	26.2 AS MAIN OPPONENT (PORTUGAL	113
14.2. PROJECTS AS PARTICIPANT RESEARCHER	87	26.3 AS MEMBER OF THE JURY (PORTUGAL	114
14.2.1. INTERNATIONAL GRANTS	87	27. OTHER JURY PARTICIPATION	115
14.2.2. FUNDAÇÃO PARA A CIÊNCIA E TECNOLOGIA (FCT) GRANTS	87	E: OUTREACH AND OTHER ACTIVITIES	116
15. SUPERVISION OF RESEARCH STUDENTS	89		

A. SYNOPSIS

1. PERSONAL INFORMATION

Name	Paula Maria Marques Leal Sanches Marques Alves
Place and Date of Birth	Lisbon, 26 July 1967
Nationality	Portuguese
Civil Status	Married, two children (boys born 1997 and 2000)
Work Address	Instituto de Tecnologia Química e Biológica António Xavier, Universidade Nova de Lisboa (ITQB NOVA) & iBET - Instituto de Biologia Experimental e Tecnológica Av República, EAN, 2784-505 Oeiras, Portugal Phone (+351) 21 446 94 21/16
E-mail	margues@itqb.unl.pt ; alves@ibet.pt
Lab Web page	http://tca.itqb.unl.pt , www.ibet.pt
Researcher ID	C-1070-2008
Scopus Author ID	Paula M Alves Scopus 57200143732
ORCID ID	0000-0003-1445-3556 ;
Google Scholar	http://scholar.google.pt Paula M Alves

2. CAREER SYNOPSIS

Paula Alves received her first degree in Biochemistry in 1991 from Faculdade de Ciências da Universidade de Lisboa. In the last year of this degree (Sept 90 - Dec 91) she was a research intern at the Animal Cell Technology Lab in CTQB/iBET (supervised by Prof Manuel Carrondo). She received her PhD in Biochemical Engineering by ITQB – Universidade Nova de Lisboa in 2001. Her PhD thesis entitled “NMR Studies of Central Metabolism in Brain Cells, Immobilized Primary Cultures as Model-System”, with a fellowship from Programa Ciência/JNICT, was supervised by Prof Helena Santos and Prof Manuel Carrondo. She did part of her PhD studies at the NMR Center of Sintef - Trondheim Hospital (Norway) at Prof Ursula Sonnewald Lab, the Chemistry Department of Bremen University (Germany) at Prof Dieter Leibfritz Lab and the Biochemistry Department of University of Cambridge (UK) at Prof Kevin Brindle Lab. Her PhD work contributed to the establishment of 3D in vitro models of Brain Cells for metabolic trafficking studies, using *in vivo* NMR spectroscopy and resulted in 6 publications (5 original articles e one book chapter). She developed a mini bioreactor compatible with the NMR spectrometer that permitted the perfusion inside the NMR magnet of mammalian cells, cultured in 3D gel threads, for up to two weeks. Her work was pivotal for the development of alternative approaches for culturing mammalian cells in 3D.

In 2001-2005 Paula was hired as Assistant Investigator at Laboratório Associado de Oeiras (ITQB /iBET/IGC) and in 2005-2006 as Principal Investigator. During this period, she focused her research on the development of bioprocesses and analytics for production and characterization of cell-based vaccines and biopharmaceuticals, namely VLPs and recombinant adenoviruses. In 2006 she got a permanent position as Assistant Investigator of

ITQB NOVA and in 2009 as Principal Investigator. In 2009 she was a visiting researcher at the Prof Daniel Wang Laboratory in MIT.

Paula was invited Assistant Professor at Piaget – ISEIT from 1999 to 2002 teaching Microbial and Animal Cell Culture Techniques to the Bachelor Course in Chemistry and Environment Sciences. Since 2011, she is Invited Associate Professor at Faculdade Ciência e Tecnologia – Universidade Nova de Lisboa. Was lecturer at the MIT-Portugal program from 2007 to 2012.

From 2001 to 2007 she was vice-director of the Animal Cell Technology Lab of ITQB NOVA/iBET. From January 2007 to present she has been Head of the Cell Bioprocesses Lab (CBL) and Coordinator of the Animal Cell Technology Unit (ACTU) of ITQB NOVA/iBET that integrates 7 Laboratories headed by PIs (Lab Heads) and 3 Senior Scientists (Research Contracts).

At ITQB NOVA, as Principal Investigator, Paula was a member of the Scientific Council from 2011 to Nov 2022, Head of the ITQB Technology Division from 2013 to Nov 2022 and member of the ITQB Institute Board from 2014 to Nov 2022. Represents ITQB NOVA at iBET Directive Board since 2007.

She is member of iBET Executive Directive Board since 2008 and iBET Chief Executive Officer (CEO) since 2012. iBET, a private not-for profit institute, is internationally recognized by Pharma, Biotech Industry and Academia as a top performer in biopharmaceuticals R&D, currently employs 250 people out of which 110 are PhDs. During the last 6 years iBET has been growing more than 10%/year (EBITDA 4 M€ and Budget 17 M€ in 2023). To meet this significant growth, Paula has been specially committed to iBET reorganization. Some highlights/achievements during the last years as CEO, supported by the board of directors, were: i. launching a competitive grant program, iBETXplore, with annual calls for internal projects to promote collaborative projects within iBET scientists from different labs, support new ideas and young scientists; ii. renewal of the iBET infrastructure (GMP certified analytical services unit in 2017 and pilot unit in 2019); iii. Construction of a new Building – iBET Biofarma - to expand R&D activities and the support to Pharma and Biotech (25 M€ investment, 30 BSL2 R&D labs, 1 BSL3 Lab, 800 m2 area for clean rooms and social areas) inaugurated in June 2023, iv. implementing Evaluation Policies and training programs to promote a meritocracy culture at the institute and iBET's People Development at all hierarchical levels.

Paula Alves was Genibet Biopharmaceuticals Chief Scientific Officer (2009-2010), member of the Directing Board (2012-2020) and since November 2020, Senior Scientific Advisor of the Genibet Directing Board. GeniBET is a privately owned CMO, funded by Manuel Carrondo as a spin off from iBET in 2006 sold to the Swedish Pharma company Recipharm in Jan 2022. Paula Alves was part of the team that negotiated this transaction of Genibet to Recipharm.

In 2005 Paula was elected member of the Executive Committee of the ESACT - European Society for Animal Cell Technology, the most important scientific international society in this field, and was re-elected in 2007, was elected ESACT Secretary in 2009, a position she held until 2013 when she was nominated Vice-president of ESACT. During this period Paula was involved in many initiatives ESACT, namely as member of ESACT conference scientific and

organizing committees, in the organization of the ESACT poster prize and in the development of ESACT web page and communication strategy. In 2010 she started, with Prof Godia from Universidad Autonoma de Barcelona, the ESACT Advanced Courses Series, that run annually since then. More than 500 students were already trained in ACT and related areas through these courses. From June 2017 to June 2022 Paula was the Chairperson of ESACT. In June 2022 Paula organized (chairperson) the ESACT2022.

In 2021 Paula was elected international member of the National Academy of Engineering (USA), being inducted in NAE in October 2022. In Portugal, received the Scientific Merit Medal from the NOVA University in 2009, the Scientific Merit Award from Santander Totta/NOVA University of Lisbon in 2008 and the Scientific Award from the Portuguese association of French Doctorates in 2005. In 2017 was recognized by Ciência Viva as one of the 100 Top Portuguese Women Scientists. Was invited by the Portuguese Minister of Science, Technology and Health, Prof Manuel Heitor, to be commissioner of the Ciência 2021 meeting and received the Merit Gold Medal of Oeiras Municipality in June 2021. Will receive in February 2024 the ECI Advancing Manufacture of Cell and Gene Therapies Award, USA.

In the European Commission, Paula was an invited member of IMI Scientific Committee (2018-2021), and of ESACT-EURL ECVAM Scientific Advisory Board (2017-2021) and member of the Advisory Group for Horizon 2020 Societal challenge 1 – Health (2013-2018). She was a member of several International Evaluation Panels of Research Institutes (e.g. BOKU-Austria and NICO-Italy), Funding Agencies (ANR-France, SFI-Ireland, Vinnova-Sweden, BSRC-UK) and is regularly invited to be part of International Grant Evaluation Panels (Eurostars, ERC, ITN, NSF, A-Star) and at FCT-Fundação Ciência e Tecnologia (Portugal). Paula is also a member of the International Advisory Committee of the Center for Research and Development of Immunobiologicals – CerDI (Instituto Butantan, Brasil), of the Advisory board of the Biotop PhD Program (BOKU, Austria) and of the IABS (International Alliance for Biological Standardization (IABS) Endowment Fund Committee, France.

In Portugal she is, since 2015, member of the Directive and Scientific Board of iNOVA4Health, a Translational Research Unit funded by FCT with more than 230 researchers. Is member of the directive board of LS4F-Life Sciences 4 Future a Portuguese Associate Laboratory starting in 2021 where she represents iBET. Paula was a member of the Steering Committee of the Harvard Medical School Portugal Program (2009-2012) and member of the Board of NOVA Saúde (2015-2017).

She actively participated in the several organizing and scientific committees of international renowned conferences (e.g. Vaccine Technology, Scale-up and Manufacturing of Cell Based Therapies and Cell Culture Engineering, PEACE Meeting). Was the chairwoman of the ESACT2022, an international conference held in Lisbon from 26 to 29 June 2022 with 1018 participants, coming from 32 countries, and an exhibition area with more than 62 companies participating. The conference motto was Advanced Cell Technologies: Making Protein, Cell, and Gene Therapies a Reality and a revenue of more than 250 k€ was obtained to ESACT Society (registered in Germany). Paula is Associate Editor of two journals (Journal of Biotechnology and BMC Biotechnology), Guest Editor of one Special Issue for Biotechnology and Bioengineering and has acted as reviewer for more than 25 journals.

Paula Alves main research interests are focused in understanding cell metabolism to improve the efficiency of bioprocesses and at developing new tools and technologies for pre-clinical research. Key areas of interest include (i) production of biopharmaceuticals such as viral vectors, vaccines and recombinant proteins (ii) development of 3D culture systems for expansion and differentiation of stem cells in bioreactors for cell therapy, regenerative medicine and in vitro toxicology applications, (iii) bioanalytics and (iv) expand systems biology approaches to improve the processes involved in the research described in (i-iii).

Paula has supervised 18 Post-Docs, 40 PhD students (3 on going) and several master and graduate students. Participated in 38 PhD Juries in Portugal and abroad. She was awarded with 34 research projects as Principal Investigator, from which 25 funded by the European Commission and 9 by FCT-Fundação para a Ciência e Tecnologia, Portugal. To date, the total funding obtained in competitive open calls was approx. 12.5 M€ of which 10.8 M€ in projects and 1,75 M€ in fellowships. Additionally, Paula obtained more than 10 M€ in research contracts as PI with industry.

Has published over 310 articles in international peer-reviewed journals (h-index 53, approx. 10690 citations, source Scopus), 34 Book chapters and edited 1 book and is inventor in 2 international patents. Was invited for 14 Keynote lectures and approx. 41 talks in international conferences. Was also invited for 20 seminars at Pharma and Biotech Industry, 27 department seminars in Academic Departments and R&D organizations and 15 invited lecturers in International Advances Courses. In 2021 was invited by the Lisbon Academy of Sciences to present and discuss Current Challenges in Vaccine Manufacturing at the Academy Conferences “Encontro da Sociedade” Cycle.

Since 2012, she is member of the directive Board of two PhD programs at NOVA University of Lisbon: PhD in Molecular Biosciences (MolBios) and PhD in Regenerative Medicine (RegMed). From 2014 she coordinates 2 curricular Units in MolBios ITQB NOVA University PhD program (“Frontiers in Biotechnology” and “Technology for Pharmaceuticals Development”. Students’ surveys, done annually, rate the overall quality of these units with an average of 4.5 in 5 (source: ITQB NOVA Academic Services Info 2012-2022). Was responsible for the “Viral Vaccines and VLPs” and “Stem Cell Bioprocessing” curricular unit of RegMed PhD Program (from 2014 to 2016). She was a lecturer at MIT-Portugal PhD Bioengineering Program from 2007 to 2019. Since 2014 coordinates the curricular unit “Biopharmaceuticals” in the Biochemistry for Health Master Program of ITQB NOVA (offered also to 3 Masters at FCT NOVA), students’ surveys, done annually, rate the overall quality of this unit with an average of 4.7 in 5 (source: CLIP/NOVA 2014-2023). Until 2019 was responsible for the Animal Cell Technology module of Biochemical Engineering Curricular unit of the Biochemical and Chemical Engineering at FCT NOVA.

Paula is invited for seminar and workshops in several PhD and Master Programs in Portugal on Animal Cell Technology, Biopharmaceuticals and Advanced Therapy Medicinal Products related topics several international postgraduation Courses. She participates actively in junior scientists mentoring programs and in science outreach activities (e.g. TEDx, Cogito, FFMS series). She is a Mentor in the Gulbenkian Foundation “Jovens Talentos” Fellowship Program.

Promotes Women in Science and Women & Girls in Engineering through seminars, TV and radio interviews visiting schools. At ITQB NOVA was founding member of the organizing committee of the ITQB NOVA Open Day (2005) and organized the initiative Yoga@ITQB (2005-2008).

3. RESEARCH SYNOPSIS

Paula Alves research activities started in the 5th year of the undergraduate degree in Biochemistry. Awarded with a Junior Research Fellowship from JNICT her work focused on the understanding BHK natural cell aggregation kinetics and hydrodynamics effects in suspended batch cultures.

Since the 4th year at university, her interests were towards the application of biochemistry and cell biology to biotechnology. She pursued an internship in this area and during two semesters did her final diploma thesis (5th year) working full-time at the Animal Cell Technology Lab of CTQB/iBET. The lab, headed by Prof Manuel Carrondo, was just starting activities and, together with J Moreira, a PhD student, Paula was enrolled in many tasks related with the set-up of the lab and challenged to implement several cell culture techniques and analytics while developing her diploma thesis project. The multidisciplinary approach to the projects running in the lab confirmed the interest in pursuing a research carer in biotechnology, in particular doing R&D for biopharmaceuticals, a scientific area blooming at that time (early 90's). From then on, her research was always focused on merging fundamental knowledge in cell biology and metabolism with bioengineering towards more efficient bioprocesses and for advancing tools and technologies for pre-clinical research.

With a Starting Research Grant at Carrondo's lab (1992-1994) she gained expertise in animal cell technology for production of Monoclonal Antibodies (BHK cells and hybridomas), including an internship at Bryan Griffiths Lab in PHLS (Salisbury) in 1992, where she went to learn different cell culture systems (microcarriers, stirred tanks, fluidized, and fixed bed bioreactors). During this period her work on cell aggregation and impact of bioprocess parameters on cell growth and productivity contributed to the publication of 6 articles (numbers 1-5 and 7 – see detailed publication list in 11.3). In 1994 Paula accepted a proposal from Prof M Carrondo and Prof H Santos (ITQB NOVA) and went to Norway to gain expertise in methodologies for primary cultures of brain cells and ¹³C NMR spectroscopy at Prof Ursula Sonnewald Lab (NMR Center Sintef). After returning to Portugal her research focused on Brain Cell Metabolism and implemented the Brain Cell Culture research area in the Carrondo's ACT Lab bridging these competences to Santo's Cell Physiology and NMR lab, through joint projects. This was the starting point of the research topic of her PhD, NMR Studies of Central Metabolism in Brain Cells, started in 1995.

Research during her PhD focused on several aspects on metabolic function and trafficking in the brain. By merging innovative perfusion bioreactor technology with exquisite cell culture techniques, e.g. aggregation, immobilization in microcarriers and encapsulation in biocompatible polymers, her work resulted in ground-breaking contributions to the advance of 3D *in vitro* culture technologies. Development of prototypes of miniaturized bioreactors, combined with small-scale perfusion systems, compatible with ¹³C and ³¹P *in vivo* NMR

spectroscopy, allowed for long term studies of primary cultures of murine neurons and astrocytes, under physiological conditions and during metabolic disturbances. On-line monitoring of cell energetics and in-depth studies of metabolic pathways contributed to the elucidation of the role of lactate and malate in the brain and to identification of mechanisms of metabolic trafficking to support neuronal function during ischemia and hypoxia. The PhD resulted in 6 publications (five original papers - 6, 8, 11, 13, 14 and one book chapter - 1). In parallel, the interest in applying *in vivo* NMR spectroscopy to other cell models and applications, namely correlating cell energetics with productivity and product quality, lead to the establishment of internal collaborations in Carrondo's lab that resulted in the co-authorship in several publications (e.g. 9, 10, 12 and 15).

After the PhD, Paula applied to an Assistant Investigator position in Laboratório Associado de Oeiras to develop work at Carrondo's lab, a position that she held until 2005. At that time the focus of Carrondo's lab was in Bioengineering, in particular bioprocess development, upstream and downstream, for the production of i) *recomproteins* produced in BHK cells and in insect cells, using the baculovirus expression system and ii) retroviruses and lentiviruses for gene therapy mainly focusing on cell line development and upstream. Specially concentrated on understanding viruses' infection kinetics and its impact on host cell metabolism Alves scientific question was: ***how to manipulate cell metabolism to maximize cell productivity and product quality?***

Profiting from many tools and technologies existing in the lab, she was actively enrolled in projects for the production and characterization cell culture-based vaccines, namely recombinant adenovirus-based vaccines using HEK cells, Rotavirus VLPs based vaccines using insect cells and *Ehrlichia ruminantium* vaccines, an intracellular bacteria produced in endothelial cells. All these candidate vaccines were targeting veterinary or human diseases in developing countries, namely Sub-Saharan Africa and Latin America. To fund her research, she won competitive grants as Principal Investigator, 2 funded by EU (14.1.1 grants #1, #2, #4) and 2 by FCT – the Portuguese funding agency (14.1.2 grants #2, #5) and in parallel participated as team member in several projects led by Manuel Carrondo. Published more than 50 articles in these topics, the majority as principal and corresponding author, some selected are: i) adenovirus [21, 25, 27, 46, 62, 67, 73, 102 and 103] addressing CCI - cell concentration at infection metabolism, bioreaction feeding strategies and unveiling novel purification schemes for adenoviruses, ii) *Ehrlichia ruminantium* [18, 22, 28, 48 and 50] disclosing the replication, release kinetics and mass production of ER using in *in vitro* cultures of endothelial cells, iii) VLPs [23, 40, 66, 82] reporting on the replication kinetics and assembly of triple layered rotavirus VLPs produced in SF9 cells. Paula also established collaborations for the development of formulations and encapsulation strategies to store and delivery these cell-based vaccines in Africa and Caribbean, where the maintenance of bioactivity in stringent environments (high temperatures, big thermal shifts, dryness), without cold-chain, pose many challenges to their use for vaccination of ruminants and wild-life, original results were published in [33, 38. 158]. All these projects have aroused Paula's interest in R&D for developing countries, a commitment that she maintains until today.

In 2003, Paula initiated a research *niche* in Carrondo's Lab focusing in "3D cultures approaches and Brain Cell Metabolism". The aim was to combine her research in vaccine development

described above, done in collaboration with M Carrondo, with this new research line also dedicated to cell physiology and metabolism but targeting a research question that arose during her PhD: ***how can we advance cell culture technologies to develop models that resemble in vitro the three-dimensionality of tissues and organs and better mimic cell behaviour in health and disease?***

In this topic won her first Grant as a Principal Investigator (funded by FCT in 2003 c.f. 14.1.2 grants #1) and since then Paula pursues a working hypothesis aiming to show that, by combining different cell types cultured as 3D structures (cell spheroids/aggregates or cells immobilized in biopolymers) with well-defined and controlled cell culture environment (achieved by using stirred tank bioreactors), it is possible to obtain and maintain cell functionality for long periods of time. By bridging science and technology and pursuing collaborations with scientists with expertise in complementary fields, Paula integrative approach and problem solver attitude enabled research outputs within a broad spectrum of topics and seminal contributions to the field of 3D advanced human in vitro models and to the “bye bye flat biology” trend, currently well accepted by the scientific community and established in many labs around the world.

Paula became Principal Investigator in 2005 and Head of the Cell Bioprocesses Lab in 2007 and Coordinator of the Animal Cell Technology Unit (TCA) at iBET. Following her previous multidisciplinary path, the research in her Lab was always carried out at the interface between Biochemistry and Bioengineering. A broad range of complementary lines of research and techniques existing at TCA unit including genetic manipulation, cell growth kinetics, viruses infection kinetics, cell metabolism, bioreactors, bioprocess understanding, -omics and analytics allowed Paula and her team to continue pursuing the two scientific questions mentioned above.

In the biopharmaceuticals area, her lab specially focused on studying insect cells (Sf9 and High Five) metabolic pathways and, using metabolic flux analysis, develop feeding strategies to improve the production of VLPs and viruses for gene therapy (baculoviruses and AAVs) [71, 77, 78, 87, 119, 128, 155, 203]. Pivotal cell line development work generated Sf9 and HiFive cells for stable expression of proteins and VLPs in [140, 148, 156] currently used in the lab for VLPs and AAVs production projects. All these products demanded significant efforts in the development and implementation of exquisite analytical techniques.

The other research line that started by developing 3D culture strategies for primary cultures of brain cells [17, 26, 51], quickly evolved for other organs, in particular liver [64, 94, 116]. Key findings with impact in this field were done through collaborations with labs of many scientists from academia and industry (c.f. 21). So far, the main research achievement led by Paula was published in 2012 in Hepatology (the article was selected for the journal cover) showing, for the first time, that primary cultures of human liver spheroids could maintain as physiologically relevant *in vitro* models and used for repeated dose toxicology up to 3 weeks [130]. The article shows maintenance of key read-outs of hepatocytes functionality such as albumin and urea synthesis, CYPs activity and the formation of canaliculi like structures permitting cells secretory features.

The scientific advances in the stem cell biology encouraged Paula to enter the stem cells arena in 2004, in collaboration with Manuel Carrondo team and Cellartis (Sweden). Since then, a well-funded lab with several research projects in this exciting and scientifically demanding research field (c.f. 14.1), that require a multidisciplinary approach, attracted top very creative students that, together with key collaborations, contributed to the international recognition of the Cell Bioprocesses Lab in the areas of stem cells bioengineering and advanced cell models. Bioprocess understanding for production of significant amounts of high-quality human stem cells, adult [52, 72, 85, 187, 193] and pluripotent [99, 127, 179] and the development of analytics to assist bioprocess development and ensure stem cell key attributes, enabled the integration of stem cells expansion and differentiation protocols with -omics data. Paula's lab contributed to a better understanding on the impact of cell culture conditions on stem cell maturation pathways and on cell functionality namely for cardiomyocytes [164, 167, 197, 223, 230, 239, 252, 260, 272], neural [136, 214, 257] and hepatic [169, 210, 248, 274] cells to be used for regenerative medicine (cardiac) and in the development of in vitro models for screening and human diseases studies (cardiac, brain and liver). Importantly, Paula encouraged and supported two of her lab's senior researchers to start their independent laboratories in the field of Advanced Cancer Cell Models (headed by Catarina Brito since 2015) and Stem Cell Bioengineering (headed by Margarida Serra since 2018), both more focused in translational biomedical research and with whom Paula is closely collaborating namely via co-supervision of PhD Students. All these labs established many important collaborations with clinicians in Portugal and abroad [293, 298].

Because since March 2012 approx. 60% of her time is dedicated to iBET management, Paula decided to focus her research on the development of analytical tools for bioprocess understanding and for the characterization of biologics namely cell based products and viruses. Closely working with the post-docs Patrícia Alves and Inês Isidro, with António Roldão and Manuel Carrondo Labs, and co-supervising several PhD students in the field her Lab has been developing omics tools to reinforce bioanalytics [258, 272, 277, 282, 284]. The advances accomplished and importance of this area resulted in the establishment of a new group in the Animal Cell Technology Unit in 2021, the Biosystems and Data Science group, led by the senior scientist Inês Isidro.

Paula research merit was recently recognized (2021) by the US National Academy of Engineering that elected Paula Alves as an international member for her leadership in biomanufacturing advanced biotherapeutics and bridging the gap between academia and industry. In the future Paula would like to keep her holistic approach to science and technology and continue working in ATMPs development with a special focus on oncolytic and other rec viruses' modalities that still pose many bioprocessing and analytical challenges.

B. BIOGRAPHIC DATA

4. EDUCATION

- 2001** PhD in Biochemical Engineering
ITQB - Instituto de Tecnologia Química e Biológica
Universidade Nova de Lisboa
- 1991** Diploma in Biochemistry
Faculdade de Ciências
Universidade de Lisboa

5. POSITIONS

5.1. ACADEMIA

- 2011-(...)** Invited Associate Professor, FCT-NOVA
- 2009-(...)** Principal Investigator, ITQB-NOVA
- 2007-(...)** Head of Cell Bioprocesses Laboratory, ITQB-NOVA
- 2007-2012** Lecturer, MIT-Portugal Program
- 2006-2009** Assistant Investigator, ITQB, NOVA University of Lisbon
- 2005-2006** Principal Investigator, ITQB/iBET/IGC LAO - Associated Laboratory
- 2001-2005** Assistant Investigator, ITQB/iBET/IGC LAO - Associated Laboratory
- 1995-2000** PhD Student, ITQB, NOVA University of Lisbon, Portugal

5.2. OTHER

- 2023-(...)** President of the Fiscal Council of the SPCE-TC- Portuguese Society for Stem Cells and Cell Therapy; Portugal
- 2023-(...)** Member of the General Council of CIP – Confederação Industrial de Portugal, Portugal
- 2022-(...)** President of the General Assembly of AICIB – Agência Investigação Clínica e Inovação Biomédica, Portugal
- 2021-(...)** Member of the US National Academy of Engineering, USA
- 2021-(...)** Senior Scientific Advisor, GenIBET Biopharmaceuticals, Portugal
- 2017-2022** Chairperson of the ESACT - European Society for Animal Cell Technology.

- 2015-2017** Member of the Scientific Council for Life and Health Sciences, Fundação para a Ciência e Tecnologia, Portugal
- 2015-2020** Member of the Board, GenIBET Biopharmaceuticals, Portugal
- 2013-2017** Vice-Chair of the ESACT-European Society for Animal Cell Technology, Germany
- 2013-2017** Chairperson of the General Assembly of the SPCE-TC- Portuguese Society for Stem Cells and Cell Therapy; Portugal
- 2012-(...)** CEO, iBET, Portugal
- 2009-2010** CSO, GenIBET Biopharmaceuticals, Portugal
- 2008- 2012** Member of the Executive Board, iBET, Portugal.
- 2008-2009** Member of the Board, GenIBET Biopharmaceuticals, Portugal
- 2007-(...)** Head of Cell Bioprocesses Laboratory, ITQB-UNL/iBET, Portugal.
- 2007-(...)** Director, Animal Cell Technology Unit, ITQB-UNL/iBET, Portugal
- 2001-2006** Co-Director (with Manuel Carrondo), Animal Cell Technology Laboratory, ITQB/iBET, Portugal.

6. ADVISORY POSITIONS

6.1. EUROPEAN COMMISSION

- 2018-2021** Member of the IMI (Innovative Medicines Initiative) Scientific Committee
- 2017-2021** Member of the ESAC - EURL ECVAM Scientific Advisory Committee
- 2014** Member of the Advising Working Group for the EU Joint Program - JPND, Neurodegenerative Disease Research Group, Berlin
- 2013-2018** Member of the Advisory Group for Horizon 2020 Societal Challenge 1- European Commission, Brussels

6.2. OTHER INTERNATIONAL

- 2022-(...)** Member IABS (International Alliance for Biological Standardization (IABS) Endowment Fund Committee, France
- 2022-(...)** Member of the International Advisory Committee of the Center for Research and Development of Immunobiologicals – CerDI (Instituto Butantan, Brasil)
- 2022** Member of the Expert Panels for Swecco, AdBIOPRO, Sweden
- 2021** Member of the Evaluation Panel of BOKU - The University of Natural Resources and Applied Life Sciences, Austria
- 2021** Member of the Panels for Linköping University Recruitment if Staff
- 2017** Member of the Jury of Sartorius & Science International Prize for Regenerative Medicine & Cell Therapy, Science AAAS

- 2016-2019** Member of the External Scientific Advisory Board of Technobeat (Horizon2020 Project)
- 2016-(...)** Member of the External Scientific Advisory Board of Ingestem Infrastructure – ANR, France
- 2016** Member of the External Scientific Committee of NICO - Neuroscience Institute Cavalieri Ottolenghi, Italy
- 2014-(...)** Member of the Advisory Board of the BioTOP – International PhD Program in Protein Biotechnology at BOKU, Austria

6.3. PORTUGAL

- 2021** Commissioner of “Encontro Ciência 2021”, invited by the Portuguese Minister of Science, Technology and higher Education, Prof Manuel Heitor, June 2021
- 2020-2023** Member of the Committee “Empresas” - Prémio Nacional de Agricultura (PNA), Cofina/BPI
- 2009-2012** Member of the Steering Committee of the Harvard Medical School Portugal Program, ITQB NOVA representative
- 2008-(...)** iBET representative in “Health Cluster Portugal” board

7. INSTITUTIONAL ACTIVITY

- 2021-(...)** Member of LS4Future Directive Board – Laboratório Associado (Fundação Ciência e Tecnologia)
- 2015-(...)** Member of the Scientific and Directive Boards of iNOVA4Health Research Unit (Fundação Ciência e Tecnologia)
- 2015-2017** Member of the Board, NOVA Saúde, Rector, NOVA University
- 2014-2022** Member of the Institute Board, ITQB NOVA University
- 2013-2014** Member of the Board, Bio-entrepreneur Committee, NOVA University
- 2013-2022** Head of the Technology Division, ITQB NOVA University
- 2012-(...)** Member of the Scientific Board of the PhD Program in Regenerative Medicine, IST and IMM (Lisbon University) and ITQB, FCM and CEDOC (NOVA University) and IBET
- 2012-(...)** Member of the Directive Board of the PhD Program in Molecular Biosciences, ITQB, FCT (NOVA University) and IBET
- 2011-2022** Member Scientific Council, ITQB NOVA
- 2008-2012** Member Pedagogic Council, PhD Program, ITQB NOVA

8. SCIENTIFIC COURSES ATTENDED

- 2009** Fermentation Technology Course, MIT, Cambridge, USA, July 2009

- 2007** EMBO Laboratory Management Course for Independent Scientists; the Art of Leadership – Fewer Conflicts, More Results, Ericeira, Portugal, November 2007
- 2005** Stability Testing Requirements for Biotechnology Molecules Course, London, United Kingdom, January 2005
- 2003** Stability Testing for Pharmaceutical Products Course, Pharmaceutical Training International, London, United Kingdom, October 2003
- 2002** Gene Vectors EuroLabCourse, Theoretical and practical training on gene vectors, Paris, France, April 2002
- 2002** Therapeutic Vaccines Course, London, United Kingdom, January 2002
- 1996** Brain Biophysics Course, Fundação Calouste Gulbenkian, Lisbon, Portugal, July, 1996
- 1995** Advances in Cell Culture for Clinic and Pharmaceutical Industry Course, Science & Technology International Courses, Leiden, Netherlands, November 1995
- 1992** FEBS NMR Course, Centro de Tecnologia Química e Biológica/Instituto Gulbenkian de Ciência, Oeiras, Portugal, September 1992
- 1990** Animal Cell Technology Course, iBET-Instituto de Biologia Experimental e Tecnológica, Oeiras, Portugal, September 1990

9. RESEARCH VISITS TO FOREIGN LABS AND INTERNSHIPS

- 2016** Aug-Sep: **Visiting Researcher** at CNRS, Montpellier, France
Adenovirus : Receptors, Trafficking and Vectorology Lab
Adenoviruses and CNS Gene Therapy
Host: Dr Eric Kremer
- 2009** July-Sep: **Visiting Researcher** at MIT, Cambridge, USA,
Department of Chemical Engineering
Scaling-down Methodologies for Drug Screening
Host: Prof Daniel Wang
- 2002** April: **Visiting Researcher** at Genethon, France
Research and Development Department
Bioprocessing Development for Viral Vectors
Host: Dr Otto Merten
- 1998** May: **Internship** at University of Cambridge, UK
Biochemistry Department/NMR Laboratory
Mapping Cell Distribution using NMR Spectroscopy and Imaging
Host: Prof Kevin Brindle
- 1996** April: **Internship** at Faculty of Medicine of NTNU-Norwegian University of Science and Technology, Trondheim, Norway
Department of Pharmacology and Toxicology

Metabolism of Primary Cultures of Brain Cells

Host: Prof Ursula Sonnewald

- 1995** Sept-Oct: **Internship** at Bremen University, Germany
Organic Chemistry Department, NMR Laboratory
Cell Immobilization and Perfusion for in vivo NMR Spectroscopy
Host: Prof Dieter Leibfritz
- 1995-2000** **PhD Student** at ITQB NOVA University of Lisbon
Cellular Physiology and NMR Lab and Animal Cell Technology Lab
NMR Studies of Central Metabolism in Brain Cells, Immobilized Primary Cultures as Model-System.
Supervisors: Prof Helena Santos and Prof Manuel Carrondo.
- 1994** Jan-June: **Internship** at Sintef, Hospital in Trondheim, Norway
Biomedical Laboratory of Magnetic Resonance Center
NMR Spectroscopy to Study Brain Cells Cultures Metabolism
Supervisor: Prof Ursula Sonnewald
- 1992** Jan-June: **Internship** at Public Health Laboratory Services (PHLS), Salisbury, UK
Centre for Applied Microbiology and Research (CAMR)
Biotechnology Laboratory of Animal Cells
Mammalian Cell Immobilization for Fluidized and Fixed Bed Bioreactor Cultures
Host: Dr Bryan Griffiths
- 1992-94** **Internship** as Young Research Fellow at iBET/CTQB
Animal Cell Technology Lab
Development and Optimization of Immobilization Systems for Animal Cell Growth in Stirred Tank Bioreactors.
Supervisors: Prof Manuel Carrondo and Dr José Moreira.
- 1990-91** October 90 - September 91: Final Year **Diploma Thesis Internship** at iBET, Oeiras, Portugal
Animal Cell Technology Lab CTQB-UNL/iBET.
Growth of Animal Cells (BHK) as Suspended Natural Aggregates in Stirred Vessels
Supervisor: Prof Manuel Carrondo

C. SCIENTIFIC ACTIVITY

10. BIBLIOMETRICS (JAN 2024)

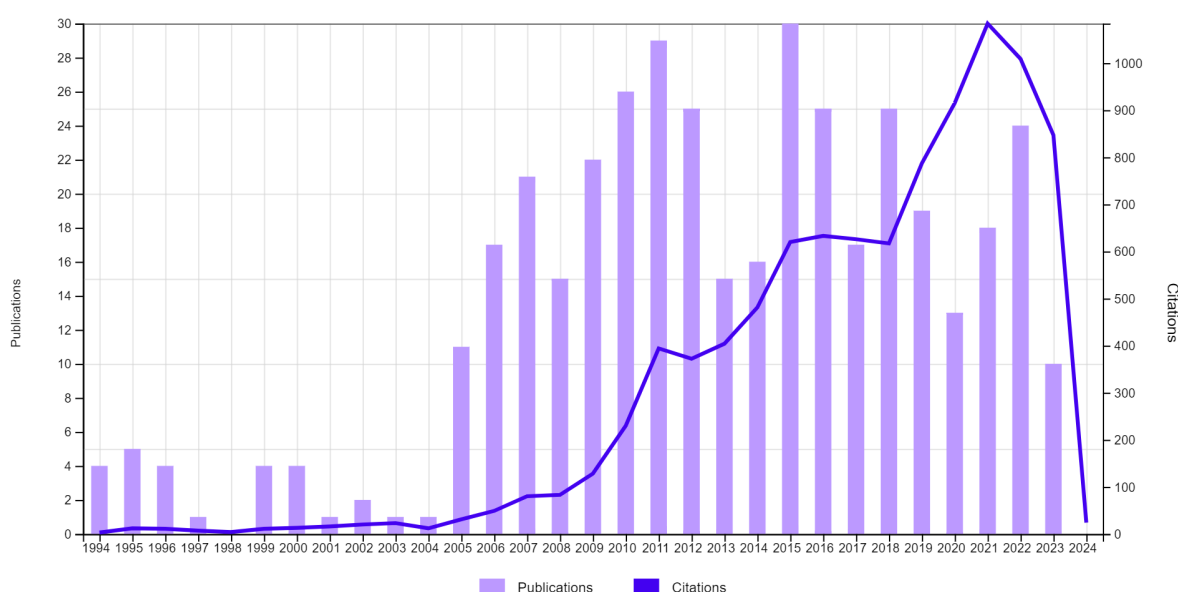
December 2023: 343 Peer-reviewed publications: 310 original articles, 30 reviews, 3 editorials

Scopus: 342 documents, h-index 53, citations >10693

Source Web of Science (ALL): 405 publications, h-index 50, citations >9,546

Source academic Google: h-index 65, citations >15582 i10=279

Source Web of Science (2013-2023) 212 publications, h-index 33



10.1. MOST CITED PUBLICATIONS FROM PAULA ALVES LAB

ORIGINAL RESEARCH ARTICLES

Year	Publication	Citations (Jan 2024)
2012	[#130] Tostões RM, Leite SB, Serra M, Jensen J, Bjorquist P, Carrondo MJT, Brito C, Alves PM (2012) Human liver cell spheroids in extended perfusion bioreactor culture for repeated dose drug testing, <i>Hepatology</i> , 55(4):1227-1236. Journal Cover DOI: 10.1002/hep.24760	194
2017	[#221] Correia C, Koshkin A, Duarte P, Hu D, Teixeira A, Domian I, Serra M, Alves PM (2017) Distinct carbon sources affect structural and functional maturation of cardiomyocytes derived from human pluripotent stem cells, <i>Scientific Reports</i> , 7(1): 8590. DOI: 10.1038/s41598-017-08713-4	167

2011	[#127] Serra M, Correia C, Malpique R, Brito C, Bjorquist P, Carrondo MJT, Alves PM (2011) Microencapsulation technology: a powerful tool to integrate expansion and cryopreservation of pluripotent human embryonic stem cells, PLoS ONE, 6(8): e23212 DOI: 10.1371/journal.pone.0023212	119
2010	[#99] Serra M, Brito C, Sousa MFQ, Jensen J, Strehl R, Hyllner J, Tostões R, Clemente J, Carrondo MJT, Alves PM (2010) Improving expansion of pluripotent human embryonic stem cells in perfused bioreactors through oxygen control, Journal of Biotechnology, 148: 208-215. DOI: 10.1016/j.jbiotec.2010.06.015	131
2009	[#77] Bernal V, Carinhas N, Yokomizo AY, Carrondo MJT, Oliveira R, Alves PM (2009) Cell density effect in the Baculovirus-Insect Cells system: a quantitative analysis of energetic metabolism, Biotechnology and Bioengineering, 104(1): 162-180. Selected for the ISSUE HIGHLIGHT. DOI: 10.1002/bit.22364	101

REVIEW ARTICLES

Year	Publication	Citations (Jan 2024)
2010	[#103] Roldão A, Mellado MC, Castilho LR, Carrondo MJT, Alves PM (2010) Virus-Like Particles in Vaccine Development, Expert Review of Vaccines, 9(10): 1149 -76. DOI: 10.1586/ERV.DOI: 10.115	586
2012	[#137] Serra M, Brito C, Correia C, Alves PM (2012) Process engineering human pluripotent stem cells for clinical applications, Trends in Biotechnology, 30(6): 350-9. DOI: 10.1016/j.tibtech.2012.03.003	223
2011	[#118] Vicente T, Roldão A, Peixoto C, Carrondo MJTC, Alves PM (2011) Large-scale production and purification of VLP-based vaccines, Journal of Invertebrate Pathology (Baculovirus in Medicine – Special Issue), 107: S42-48. DOI: 10.1016/j.jip.2011.05.004	172
2009	[#80] Teixeira AP, Oliveira R, Alves PM , Carrondo MJT (2009) Advances in on-line monitoring and control of mammalian cell cultures: supporting the PAT initiative, Biotechnology Advances, 27:726-732. DOI: 10.1016/j.biotechadv.2009.05.003	149
2011	[#111] Vieira HLA, Alves PM , Vercelli A (2011) Modulation of neuronal stem cell differentiation: Influence of hypoxia and reactive oxygen species, Progress in Neurobiology, 93(3): 444-55. DOI: 10.1016/j.pneurobio.2011.01.007	135

11. PUBLICATIONS

11.1. SUMMARY

Publications Peer-Reviewed:

- Research Articles: 310
- Review Articles: 30
- Proceeding Papers: 29

Author Position (last 10 years source Scopus): 28% Corresponding; 33% Last Author; 4% first Author

Other Publications:

- Meeting Abstracts: 30
- Editorial Material: 3
- Science Dissemination Articles: 9
- Total Book Chapters: 32

Editor:

- Edited Books: 1
- Special Issue Guest Editor (Biotechnology & Bioengineering, Wiley): 1

11.2. HIGHLIGHTS

11.2.1. 5 SELECTED RESEARCH ARTICLES THAT PAULA ALVES CONSIDERS WERE SEMINAL FOR ADVANCING THE FIELD (* CORRESPONDING AUTHOR)

[#130] Tostões RM, Leite SB, Serra M, Jensen J, Bjorquist P, Carrondo MJT, Brito C, **Alves PM*** (2012) Human liver cell spheroids in extended perfusion bioreactor culture for repeated dose drug testing, *Hepatology*, 55(4):1227-1236. DOI: 10.1002/hep.24760 **Journal Cover**

[#99] Serra M, Brito C, Sousa MFQ, Jensen J, Strehl R, Hyllner J, Tostões R, Clemente J, Carrondo MJT, **Alves PM*** (2010) Improving expansion of pluripotent human embryonic stem cells in perfused bioreactors through oxygen control, *Journal of Biotechnology*, 148: 208-215. DOI: 10.1016/j.jbiotec.2010.06.015

[#221] Correia C, Koshkin A, Duarte P, Hu D, Teixeira A, Domian I, Serra M, **Alves PM*** (2017) Distinct carbon sources affect structural and functional maturation of cardiomyocytes derived from human pluripotent stem cells, *Scientific Reports*, 7(1): 8590. DOI: 10.1038/s41598-017-08713-4

[#77] Bernal V, Carinhas N, Yokomizo AY, Carrondo MJT, Oliveira R, **Alves PM*** (2009) Cell density effect in the Baculovirus-Insect Cells system: a quantitative analysis of energetic metabolism, *Biotechnology and Bioengineering*, 104(1): 162-180. DOI: 10.1002/bit.22364 **Selected for the ISSUE HIGHLIGHT**

[#8] **Alves PM**, Flögel U, Brand A, Leibfritz D, Carrondo MJT, Santos H, Sonnewald, U (1996) Immobilization of Primary Astrocytes and Neurons for NMR Monitoring of Biological Processes in Vivo, *Developmental Neuroscience*, 18:478-483. DOI: 10.1159/000111443

11.2.2. 6 SELECTED RESEARCH ARTICLES THAT REFLECT THE COMPLEXITY AND INTEGRATIVE APPROACH THROUGH KEY COLLABORATIONS (* CORRESPONDING AUTHOR)

– NOT INCLUDED IN 11.2.1

[#268] Castro R, Nobre LS, Eleutério RP, Thomaz M, Pires A, Monteiro SM, Mendes S, Gomes RA, Clemente JJ, Sousa MFQ, Pinto F, Silva AC, Freitas MC, Lemos AR, Akpogheneta O, Kosack L, Bergman ML, Duarte N, Matoso P, Costa J, Bandejas TM, Gomes-Alves P, Gonçalves CP, Demengeot J, **Alves PM*** (2021) Production of high-quality SARS-CoV-2 antigens: impact of bioprocess and storage on glycosylation, biophysical attributes, and ELISA serologic tests performance, *Biotechnology and Bioengineering*, 118, 2202-2219 DOI: 10.1002/bit.27725

[#248] Arez F, Rebelo SP, Fontinha D, Simão D, Martins TR, Machado M, Fischli C, Oeuvray C, Badolo L, Carrondo MJT, Rottmann M, Spangenberg T, Brito C, Greco B, Prudêncio M, **Alves PM*** (2019) Flexible 3D Cell-Based Platforms for the Discovery and Profiling of Novel Drugs Targeting Plasmodium Hepatic Infection, *ACS Infectious Diseases*;5(11): 1831-1842 DOI: 10.1021/acsinfecdis.9b00144

[#190] Eichholz K, Bru T, Tran TTP, Fernandes P, Welles H, Mennechet FJC, Manel N, **Alves PM**, Perreau M, Kremer EJ (2016) Immune-Complexed Adenovirus Induce AIM2-Mediated Pyroptosis in Human Dendritic Cells, *PLOS Pathog.* 12(9): E1005871. DOI: 10.1371/journal.ppat.100587

[#75] Malpique R, Ehrhart F, Katsen-Globa A, Zimmermann H, **Alves PM*** (2009) Cryopreservation of Adherent Cells: Strategies to Improve Cell Viability and Function after Thawing, *Tissue Engineering, Part C*, 15:1-14. **Selected for the ISSUE COVER** DOI: 10.1089/ten.tec.2008.0410

[#48] Marcelino I, Vachiéry N, Amaral AI, Roldão A, Lefancois T, Carrondo MJT, **Alves PM**, Martinez D (2007) Effect of Purification Process and the Storage Conditions on the Efficacy of an Inactivated Vaccine Against Heartwater, *Vaccine*, 25:4903-4913. DOI: 10.1016/j.vaccine.2007.04.055

[#45] Roldão A, Vieira HLA, Charpilienne A, Poncet D, Roy P, Carrondo MJT, **Alves PM**, Oliveira R (2007) Modeling Rotavirus-Like Particles production in a baculovirus expression vector system: infection kinetics, baculovirus DNA replication, mRNA synthesis and protein production, *Journal of Biotechnology*, 128:875-894. DOI: 10.1016/j.jbiotec.2007.01.003

11.2.3. LATEST REVIEW ARTICLES CITING THE MOST RECENT RESEARCH ADVANCES IN THE LAB (* CORRESPONDING AUTHOR) – HIGHLIGHT ON BIOANALYTICS ADVANCES

[#282] Escandell JM, Pais DA, Carvalho SB, Vincent K, Gomes-Alves P, **Alves PM*** (2022) Leveraging rAAV bioprocess understanding and next generation bioanalytics development. *Current Opinion Biotechnology*. Jan 7;74:271-277. DOI: 10.1016/j.copbio.2021.12.009.

[#278] Sampaio-Pinto V, Janssen J, Chirico N, Serra M, **Alves PM**, Doevendans PA, Voets IK, Sluijter JPG, van Laake LW, van Mil A (2021). A Roadmap to Cardiac Tissue-engineered Construct Preservation: Insights from Cells, Tissues and Organs. *Advanced Materials*, 2008517 DOI: 10.1002/adma.202008517

[#272] Sebastião MJ, Marcos-Silva L, Gomes-Alves P, **Alves PM*** (2021) Proteomic and Glyco(proteo)mic tools in the profiling of cardiac progenitors and pluripotent stem cell derived

cardiomyocytes: Accelerating translation into therapy. *Biotechnology Advances*, 49, 107755. DOI: 10.1016/j.biotechadv.2021.107755 (#272)

11.3. LIST OF PUBLICATIONS IN PEER REVIEWED JOURNALS

Year	Publication	Q	IF	5YIF (5 year IF)
2023				
<i>Impact factor from 2022</i>				
310	Cedillo-Servin G, Louro AF, Gamelas B, Meliciano A, Zijl A, Alves PM , Malda J, Serra M, Castilho M (2023) Microfiber-reinforced hydrogels prolong the release of human induced pluripotent stem cell-derived extracellular vesicles to promote endothelial migration, <i>Biomaterials Advances</i> , 155, 213692 DOI: 10.1016/j.bioadv.2023.213692	NA	NA	NA
309	Mooij P, Mortier D, Aartse A, Murad AB, Correia R, Roldao A, Alves PM , Fagrouch Z, Eggink D, Stockhofe N, Engelhardt OG, Verschoor EJ, van Gils MJ, Bogers WM, Carrondo MJT; Remarque EJ (2023) Vaccine-induced neutralizing antibody responses to seasonal influenza virus H1N1 strains are not enhanced during subsequent pandemic H1N1 infection, <i>Frontiers in Immunology</i> , 14, 1256094 DOI: 10.3389/fimmu.2023.1256094	Q1	7.3 [§]	8.0
308	Geada, I; Roldao, A; Betenbaugh, MJ; Alves, PM . (2023) Advanced cell technologies: Making protein, cell, and gene therapies a reality, <i>Biotechnology and Bioengineering</i> , 120(9) 2385-2388 DOI: 10.1002/bit.28521	Q2	3.8 [§]	4.0
307	Costa MHG, Costa MS, Painho B, Sousa CD, Carrondo I, Oltra E, Pelacho B, Prosper F, Isidro IA, Alves PM , Serra M. (2023) Enhanced bioprocess control to advance the manufacture of mesenchymal stromal cell-derived extracellular vesicles in stirred-tank bioreactors. <i>Biotechnology and Bioengineering</i> , 120(9):2725-2741. Special Issue Cover DOI: 10.1002/bit.28378	Q2	3.8 [§]	4.0
306	Escandell, J; Moura, F; Carvalho, SB; Silva, RJS; Correia, R; Roldao, A; Gomes-Alves, P; Alves, PM (2023) Towards a scalable bioprocess for rAAV production using a HeLa stable cell line. <i>Biotechnology and Bioengineering</i> , 120(9):2578–2587 DOI: 10.1002/bit.28394	Q2	3.8 [§]	4.0
305	Virgolini, N, Silvano, M, Hagan, R, Correia, R, Alves, PM , Clarke, C, Roldao, A, Isidro, IA. (2023) Impact of dual-baculovirus infection on the Sf9 insect cell transcriptome during rAAV production using single-cell RNA-seq. <i>Biotechnology and Bioengineering</i> , 120(9), 2588–2600 DOI: 10.1002/bit.28377	Q2	3.8 [§]	4.0

304	Silvano, M; Virgolini, N; Correia, R; Clarke, C; Isidro, IA; Alves, PM ; Roldao, A. (2023) Dissecting insect cell heterogeneity during influenza VLP production using single-cell transcriptomics, <i>Frontiers in Bioengineering and Biotechnology</i> , 1143255 <i>DOI: 10.3389/fbioe.2023.1143255</i>	Q1	5.7 [§]	6.2
303 *	Silva, G, Rodrigues, AF, Ferreira, S, Matos, C, Eleutério, RP, Marques, G, Kucheryava, K, Lemos, AR, Sousa, PMF, Castro, R, Barbas, A, Simão, D, Alves, PM (2023) Novel scFv against Notch Ligand JAG1 Suitable for Development of Cell Therapies toward JAG1-Positive Tumors, <i>Biomolecules</i> , 13(3), 459 <i>DOI: 10.3390/biom13030459</i>	Q1	5.5 [§]	5.8
302	Virgolini, N, Hagan, R, Correia, R, Silvano, M, Fernandes, S, Alves, PM , Clarke, C, Roldão, A, Isidro, IA. (2023) Transcriptome analysis of Sf9 insect cells during production of recombinant Adeno-associated virus, <i>Biotechnology Journal</i> , 18 (2) <i>DOI: 10.1002/biot.202200466</i>	Q1	4.7 [§]	4.5
2022				
301 *	Carvalho, SB, Silva, RJS, Sousa, MFQ, Peixoto, C, Roldao, A, Carrondo, MJT, Alves, PM . (2022) Bioanalytics for Influenza Virus-Like Particle Characterization and Process Monitoring, <i>Frontiers in Bioengineering and Biotechnology</i> , 10 <i>DOI: 10.3389/fbioe.2022.805176</i>	Q1	5.7	6.2
300	Sebastião, MJ, Almeida, HV, Serra, M, Hamdani, N, Saraiva, F, Lourenço, AP, Barros, AS, Vasques-Nóvoa, F, Leite-Moreira, A, Alves, PM , Falcao-Pires, I, Gomes-Alves, P. (2022) Unveiling Human Proteome Signatures of Heart Failure with Preserved Ejection Fraction, <i>Biomedicines</i> , 10(11) <i>DOI: 10.3390/biomedicines10112943</i>	Q1	4.7	4.9
299	Almeida JI, Tenreiro MF, Martinez-Santamaria L, Guerrero-Aspizua S, Gisbert JP, Alves PM , Serra M, Baptista PM. (2022) Hallmarks of the human intestinal microbiome on liver maturation and function. <i>Journal of Hepatology</i> , 76(3):694-725 <i>DOI: 10.1016/j.jhep.2021.10.015</i>	Q1	25.7	26.2
298	Faro-Viana J, Bergman ML, Gonçalves LA, Duarte N, Coutinho TP, Borges PC, Diwo C, Castro R, Matoso P, Malheiro V, Brennan A, Kosack L, Akpogheneta O, Figueira JM, Cardoso C, Casaca AM, Alves PM , Nunes T, Penha-Gonçalves C, Demengeot J. (2022) Population homogeneity for the antibody response to COVID-19 BNT162b2/Comirnaty vaccine is only reached after the second dose across all adult age ranges. <i>Nat Commun.</i> 2022 Jan 10;13(1):140. <i>DOI: 10.1038/s41467-021-27761-z</i>	Q1	17.694	17.763

- 297** Hasan M, Moiz B, Qaiser S, Masood KI, Ghous Z, Hussain A, Ali N, Simas JP, Veldhoen M, **Alves P**, Abidi SH, Ghias K, Khan E, Hasan Z. (2022) IgG antibodies to SARS-CoV-2 in asymptomatic blood donors at two time points in Karachi. PLoS One. 2022 Aug 24;17(8):e0271259
DOI: 10.1371/journal.pone.0271259
- 296** Louro, AF, Paiva, MA, Oliveira, MR, Kasper, KA, **Alves, PM**, Gomes-Alves, P, Serra, M (2022) Bioactivity and miRNome Profiling of Native Extracellular Vesicles in Human Induced Pluripotent Stem Cell-Cardiomyocyte Differentiation, Advanced Science, 9 (15)
DOI: 10.1002/advs.202104296
- 295** Fernandes, B, Castro, R, Bhoelan, F, Bemelman, D, Gomes, RA, Costa, J, Gomes-Alves, P, Stegmann, T, Amacker, M, **Alves, PM**, Fleury, S, Roldao, A (2022) Insect Cells for High-Yield Production of SARS-CoV-2 Spike Protein: Building a Virosome-Based COVID-19 Vaccine Candidate, Pharmaceutics, 14 (4)
DOI: 10.3390/pharmaceutics14040854
- 294** Fontinha, D, Arez, F, Gal, IR, Nogueira, G, Moita, D, Baeurle, THH, Brito, C, Spangenberg, T, **Alves, PM**, Prudencio, M (2022) Pre-erythrocytic Activity of M5717 in Monotherapy and Combination in Preclinical Plasmodium Infection Models, ACS Infectious Diseases, 8 (4), 721-727
DOI: 10.1021/acsinfecdis.1c00640
- 293** Khandelwal, A, Arez, F, **Alves, PM**, Badolo, L, Brito, C, Fischli, C, Fontinha, D, Oeuvray, C, Prudencio, M, Rottmann, M, Wilkins, J, Yalkinoglu, O, Bagchus, WM, Spangenberg, T (2022) Translation of liver stage activity of M5717, a Plasmodium elongation factor 2 inhibitor: from bench to bedside, Malaria Journal, 21 (1)
DOI: 10.1186/s12936-022-04171-0
- 292** Fernandes, B, Sousa, M, Castro, R, Schaefer, A, Hauser, J, Schulze, K, Amacker, M, Tamborrini, M, Pluschke, G, **Alves, PM**, Fleury, S, Roldao, A (2022) Scalable Process for High-Yield Production of PfCyRPA Using Insect Cells for Inclusion in a Malaria Virosome-Based Vaccine Candidate, Frontiers in Bioengineering and Biotechnology, 10
DOI: 10.3389/fbioe.2022.879078
- 291** Louro, AF, Virgolini, N, Paiva, MA, Isidro, IA, **Alves, PM**, Gomes-Alves, P, Serra, M (2022) Expression of Extracellular Vesicle PIWI-Interacting RNAs Throughout hiPSC-Cardiomyocyte Differentiation, Frontiers In Physiology, 13
DOI: 10.3389/fphys.2022.926528
- 290** Fernandes, B, Correia, R, **Alves, PM**, Roldao, A (2022) Intensifying Continuous Production of Gag-HA VLPs at High Cell Density Using Stable Insect Cells Adapted to Low Culture Temperature, Frontiers in Bioengineering and Biotechnology, 10
DOI: 10.3389/fbioe.2022.917746

289	Correia, R, Fernandes, B, Castro, R, Nagaoka, H, Takashima, E, Tsuboi, T, Fukushima, A, Viebig, NK, Depraetere, H, Alves, PM , Roldao, A (2022) Asexual Blood-Stage Malaria Vaccine Candidate PfRipr5: Enhanced Production in Insect Cells, <i>Frontiers in Bioengineering and Biotechnology</i> , 10 <i>DOI: 10.3389/fbioe.2022.908509</i>	Q1	6.604	6.303
288	Mendes, R, Graca, G, Silva, F, Guerreiro, ACL, Gomes-Alves, P, Serpa, J, Boghaert, ER, Alves, PM , Felix, A, Brito, C, Isidro, IA (2022) Exploring Metabolic Signatures of Ex Vivo Tumor Tissue Cultures for Prediction of Chemosensitivity in Ovarian Cancer, <i>Cancers</i> , 14 (18) <i>DOI: 10.3390/cancers14184460</i>	Q1	6.575	6.886
287	Silvano, M, Correia, R, Virgolini, N, Clarke, C, Alves, PM , Isidro, IA, Roldao, A (2022) Gene Expression Analysis of Adapted Insect Cells during Influenza VLP Production Using RNA-Sequencing, <i>Viruses</i> , 14 <i>DOI: 10.3390/v14102238</i>	Q2	5.818	5.811
286	Takashima, E, Nagaoka, H, Correia, R, Alves, PM , Roldao, A, Christensen, D, Guderian, JA, Fukushima, A, Viebig, NK, Depraetere, H, Tsuboi, T (2022) A novel asexual blood-stage malaria vaccine candidate: PfRipr5 formulated with human-use adjuvants induces potent growth inhibitory antibodies, <i>Frontiers in Immunology</i> , 13 <i>DOI: 10.3389/fimmu.2022.1002430</i>	Q1	8.787	8.877
285	Mendes, JP, Fernandes, B, Pineda, E, Kudugunti, S, Bransby, M, Gantier, R, Peixoto, C, Alves, PM , Roldao, A, Silva, RJS (2022) AAV process intensification by perfusion bioreaction and integrated clarification, <i>Frontiers in Bioengineering and Biotechnology</i> , 10 <i>DOI: 10.3389/fbioe.2022.1020174</i>	Q1	6.604	6.303
284 *	Carvalho, SB, Dias, MM, Matheise, JP, Knott, I, Gomes-Alves, P, Alves, PM (2022) Biolayer Interferometry Analysis for a Higher Throughput Quantification of In-Process Samples of a Rotavirus Vaccine, <i>Vaccines</i> , 10 <i>DOI: 10.3390/vaccines10101585</i>	Q2	4.961	5.325
283	Simão, D, Gomes, CM, Alves, PM , Brito, C (2022) Capturing the third dimension in drug discovery: Spatially-resolved tools for interrogation of complex 3D cell models, <i>Biotechnology Advances</i> , 55 <i>DOI: 10.1016/j.biotechadv.2021.107883</i>	Q1	17.681	18.248
282 *	Escandell JM, Pais DA, Carvalho SB, Vincent K, Gomes-Alves P, Alves PM (2022) Leveraging rAAV bioprocess understanding and next generation bioanalytics development. <i>Current Opinion Biotechnology</i> . Jan 7,74: 271-277. <i>DOI: 10.1016/j.copbio.2021.12.009</i>	Q1	10.279	10.072

2021

- | | | | | |
|-----------------|--|----|--------|--------|
| 281 | Rodrigues MQ, Alves PM , Roldao A (2021) Functionalizing Ferritin Nanoparticles for Vaccine Development, <i>Pharmaceutics</i> , 13, 1261

<i>DOI: 10.3390/pharmaceutics13101621</i> | Q1 | 6.525 | 7.227 |
| 280 | Moreira AS, Faria TQ, Oliveira JG, Kavara A, Schofield M, Sanderson T, Collins M, Gantier R, Alves PM , Carrondo MJT, Peixoto C (2021) Enhancing the purification of Lentiviral vectors for clinical applications, <i>Separation and Purification Technology</i> , 274, 118598

<i>DOI: 118598 10.1016/j.seppur.2021.118598</i> | Q1 | 9.136 | 8.258 |
| 279 | Tenreiro MF, Almeida HV, Calmeiro T, Fortunato E, Ferreira L, Alves PM , Serra M (2021) Interindividual heterogeneity affects the outcome of human cardiac tissue decellularization, <i>Scientific Reports</i> , 11, 20834

<i>DOI: 10.1038/s41598-021-00226-5</i> | Q1 | 4.997 | 5.516 |
| 278 | Sampaio-Pinto V, Janssen J, Chirico N, Serra M, Alves PM , Doevendans PA, Voets IK, Sluijter JPG, van Laake LW, van Mil A (2021). A Roadmap to Cardiac Tissue-engineered Construct Preservation: Insights from Cells, Tissues and Organs. <i>Advanced Materials</i> , 2008517

<i>DOI: 10.1002/adma.202008517</i> | Q1 | 30.849 | 30.254 |
| 277
* | Sebastião MJ, Serra M, Gomes-Alves P, Alves PM (2021) Stem Cells characterization: 'Omics reinforcing analytics. <i>Current Opinion in Biotechnology</i> , 71, 175-181

<i>DOI: 10.1016/j.copbio.2021.07.021</i> | Q1 | 9.740 | 9.807 |
| 276 | Tenreiro M, Louro AF, Alves PM , Serra M (2021). Next generation of heart regenerative therapies: progress and promise of cardiac tissue engineering. <i>Npj Regenerative Medicine</i> 6, 30

<i>DOI: 10.1038/s41536-021-00140-4</i> | Q1 | 10.364 | 11.500 |
| 275 | Dias MM, Vidigal J, Sequeira DP, Alves PM , Teixeira AP, Roldão A (2021) Insect High Five TM cell line development using site-specific flipase recombination technology. <i>G3 (Bethesda)</i> 12: jkab166.

<i>DOI: 10.1093/g3journal/jkab166</i> | Q2 | 2.781 | 2.761 |
| 274
* | Arez F, Rodrigues AF, Brito C, Alves PM (2021) Bioengineered Liver Cell Models of Hepatotropic Infections", <i>Viruses</i> 13, 773.

<i>DOI: 10.3390/v13050773</i> | Q2 | 5.048 | 5.127 |
| 273 | Correia R, Meneses L, Richheimer C, Alves PM , Carrondo MJT, Duarte ARC, Paiva A, Roldão A (2021) Improved storage of influenza HA-VLPs using a trehalose-glycerol natural deep eutectic solvent system, <i>Vaccine</i> , 39 (24): 3279-3286

<i>DOI: 10.1016/j.vaccine.2021.04.033</i> | Q1 | 4.169 | 4.270 |

- | | | | | | |
|-----|---|---|----|--------|--------|
| 272 | * | Sebastião MJ, Marcos-Silva L, Gomes-Alves P, Alves PM (2021) Proteomic and Glyco(proteo)mic tools in the profiling of cardiac progenitors and pluripotent stem cell derived cardiomyocytes: Accelerating translation into therapy. <i>Biotechnology Advances</i> , 49, 107755.

DOI: 10.1016/j.biotechadv.2021.107755 | Q1 | 14.227 | 16.301 |
| 271 | | Mendes JP, Silva RJS, Berg M, Mathiasson L, Peixoto C, Alves PM , Carrondo MJT (2021) Oncolytic virus purification with periodic counter-current chromatography. <i>Biotechnology Bioengineering</i> . 118, 3522-3532

DOI: 10.1002/bit.27779 | Q2 | 4.530 | 4.630 |
| 270 | | Fernandes B, Correia R, Sousa M, Carrondo MJT, Alves PM , Roldão A (2021) Integrating high cell density cultures with adapted laboratory evolution for improved Gag-HA virus-like particles production in stable insect cell lines. <i>Biotechnology Bioengineering</i> . 118, 2536-2547

DOI: 10.1002/bit.27766 | Q2 | 4.530 | 4.630 |
| 269 | | Isidro IA, Vicente P, Pais DAM, Almeida JI, Domingues M, Abecasis B, Zapata-Linares N, Rodriguez-Madoz JR, Prosper F, Aspegren A, Alves PM , Serra M (2021) Online monitoring of hiPSC expansion and hepatic differentiation in 3D culture by dielectric spectroscopy, <i>Biotechnology and Bioengineering</i> , 118, 3610-3612

DOI: 10.1002/bit.27751 | Q2 | 4.530 | 4.630 |
| 268 | * | Castro R, Nobre LS, Eleutério RP, Thomaz M, Pires A, Monteiro SM, Mendes S, Gomes RA, Clemente JJ, Sousa MFO, Pinto F, Silva AC, Freitas MC, Lemos AR, Akpogheneta O, Kosack L, Bergman ML, Duarte N, Matoso P, Costa J, Bandejas TM, Gomes-Alves P, Gonçalves CP, Demengeot J, Alves PM (2021) Production of high-quality SARS-CoV-2 antigens: impact of bioprocess and storage on glycosylation, biophysical attributes, and ELISA serologic tests performance, <i>Biotechnology and Bioengineering</i> , 118, 2202-2219

DOI: 10.1002/bit.27725 | Q2 | 4.530 | 4.630 |
| 267 | | Almeida HV, Tenreiro MF, Louro AF, Abecasis B, Santinha D, Calmeiro T, Fortunato E, Ferreira L, Alves PM , Serra M (2021) Human Extracellular-Matrix Functionalization of 3D hiPSC-Based Cardiac Tissues Improves Cardiomyocyte Maturation", <i>ACS Applied Bio Materials</i> , 4(2), 1888–1899

DOI: 10.1021/acsabm.0c01490 | Q4 | 2.57 | n/a |

- | | | | | |
|------------|---|----|-------|-------|
| 266 | Moleirinho MG, Feast S, Moreira AS, Silva RJS, Alves PM , Carrondo MJT, Huber T, Fee C, Peixoto C (2021) 3D-printed ordered bed structures for chromatographic purification of enveloped and non-enveloped viral particles, Separation and Purification Technology, 254

DOI: 10.1016/j.seppur.2020.117681 | Q1 | 7.312 | 6.656 |
| 265 | Moreira AS, Cavaco D, Faria T, Alves PM , Carrondo MJT, Peixoto C (2021) Advances in Lentivirus Purification, Biotechnology Journal, 16, 2000019

DOI: 10.1002/biot.202000019 | Q2 | 4.667 | 4.596 |

2020

- | | | | | |
|-----------------|---|----|--------|-------|
| 264 | Rodrigues AF, Fernandes P, Laske T, Castro R, Alves PM , Genzel, Y, Coroadinha, AS (2020) Cell Bank Origin of MDCK Parental Cells Shapes Adaptation to Serum-Free Suspension Culture and Canine Adenoviral Vector Production, International Journal of Molecular Sciences, 21

DOI: 10.3390/ijms21176111 | Q1 | 5.923 | 6.132 |
| 263 | Cartaxo, AL, Estrada, MF, Domenici, G, Roque, R, Silva, F, Gualda, EJ, Loza-Alvarez, P, Sflomos, G, Briskin, C, Alves, PM , Andre, S, Brito, C (2020) A novel culture method that sustains ER alpha signaling in human breast cancer tissue microstructures, Journal of Experimental & Clinical Cancer Research, 39

DOI: 10.1186/s13046-020-01653-4 | Q1 | 11.161 | 9.976 |
| 262 | Correia R, Fernandes B, Alves PM , Carrondo MJT, Roldao A (2020) Improving Influenza HA-Vlps Production in Insect High Five Cells via Adaptive Laboratory Evolution, Vaccines, 8(4), 589

DOI: 10.3390/vaccines8040589 | Q2 | 4.422 | 5.513 |
| 261 | Pais DAM, Brown C, Neuman A, Mathur K, Isidro IA, Alves PM , Slade PG (2020) Dielectric spectroscopy to improve the production of rAAV used in Gene Therapy, Processes (MDPI), 8(11)

DOI: 10.3390/pr8111456 | Q3 | 2.847 | 2.824 |
| 260
* | Abecasis B, Canhão PGM, Almeida HV, Calmeiro T, Fortunato E, Gomes-Alves P, Serra M, Alves PM (2020) Towards a microencapsulated 3D hiPSC-derived in vitro cardiac microtissue for recapitulation of human heart microenvironment features, Frontiers in Bioengineering and Biotechnology, 8: 580744

DOI: 10.3389/fbioe.2020.580744 | Q1 | 5.890 | 5.973 |

- | | | | | |
|-----------------|--|----|-------|-------|
| 259 | Moleirinho MG, Fernandes RP, Carvalho SB, Bezemer S, Detmers F, Hermans P, Silva RJS, Alves PM , Carrondo MJT, Peixoto C (2020) Baculovirus affinity removal in viral-based bioprocesses, Separation and Purification Technology, 241: 116693

DOI: 10.1016/j.seppur.2020.116693 | Q1 | 7.312 | 6.656 |
| 258
* | Pais DAM, Galvão PRS, Kryzhanska A, Barbau J, Isidro IA, Alves PM (2020) Holographic Imaging of Insect Cell Cultures: Online Non-Invasive Monitoring of Adeno-Associated Virus Production and Cell Concentration, Processes, 8 (4), 487

DOI: 10.3390/pr8040487 | Q3 | 2.847 | 2.842 |
| 257
* | Vasconcelos e Sá J, Simão D, Terrasso AP, Silva MM, Brito C, Isidro I, Alves PM , Carrondo MJT (2020) Unveiling dynamic metabolic signatures in human induced pluripotent and neural stem cells, PLoS Computational Biology 2020, 16(4): e1007780

DOI: 10.1371/journal.pcbi.1007780 | Q1 | 4.475 | 5.379 |
| 256 | Silva RJS, Moleirinho MG, Moreira AS, Xenopoulos A, Alves PM , Carrondo MJT, Peixoto C (2020) A Flow-Through Chromatographic Strategy for Hepatitis C Virus-Like Particles Purification, Processes 2020, 8(1): 85

DOI: 10.3390/pr8010085 | Q3 | 2.847 | 2.824 |
| 255 | Moreira AS, Silva AC, Sousa MFQ, McWhirterc AH, Ahlenc G, Lundgren M, Coroadinha AS, Alves PM , Peixoto C, Carrondo MJT (2020) Establishing Suspension Cell Cultures for Improved Manufacturing of Oncolytic Adenovirus, Biotechnology Journal 2020, 1900411

DOI: 10.1002/biot.201900411 | Q1 | 4.677 | 4.596 |
| 254 | Moleirinho MG, Silva RJS, Alves PM , Carrondo MJT, Peixoto C (2020) Current challenges in biotherapeutic particles manufacturing, Expert Opinion on Biological Therapy, 20 (5): 451-465

DOI: 10.1080/14712598.2020.1693541 | Q2 | 4.388 | 4.199 |
| 253 | Fernandes B, Vidigal J, Correia R, Carrondo MJT, Alves PM , Teixeira AP, Roldão A (2020) Adaptive laboratory evolution of stable insect cell lines for improved HIV-Gag VLPs production, Journal of Biotechnology, 307: 139-147

DOI: 10.1016/j.jbiotec.2019.DOI: 10.004 | Q2 | 3.307 | 3.778 |
| 252
* | Sebastião MJ, Gomes-Alves P, Reis I, Sanchez B, Palacios I, Serra M, Alves PM (2020) Bioreactor-based 3D human myocardial Ischemia/Reperfusion invitro model: a novel tool to unveil key paracrine factors upon AMI, Translational Research 2020, 215:5774

DOI: 10.1016/j.trsl.2019.09.001 | Q1 | 7.012 | 6.105 |

2019

- | | | | | |
|-----------------|--|----|-------|-------|
| 251 | Moleirinho MG, Silva RJS, Carrondo MJT, Alves PM , Peixoto C (2019) Exosome-based therapeutics: Purification using semi-continuous multi-column chromatography, Separation and Purification Technology, 224: 515-523

DOI: 10.1016/j.seppur.2019.04.060 | Q1 | 5.329 | 4.202 |
| 250 | Soares HR, Fernandes MF, Marchel M, Alves PM , Coroadinha AS (2019) Enhancing Hepatitis C Virus pseudoparticles infectivity through p7NS2 cellular expression, Journal of Virological Methods, 274

DOI: 10.1016/j.jviromet.2019.113714 | Q3 | 2.014 | 2.001 |
| 249 | Sousa M, Fenge C, Ruppreche J, Tappe A, Greller G, Alves PM , Carrondo M, Roldão A (2019) Process Intensification for Peste des Petites Ruminants Virus Vaccine Production, Vaccine, 37, 7041-7051

DOI: 10.1016/j.vaccine.2019.07.009 | Q1 | 3.269 | 3.293 |
| 248
* | Arez F, Rebelo SP, Fontinha D, Simão D, Martins TR, Machado M, Fischli C, Oeuvray C, Badolo L, Carrondo MJT, Rottmann M, Spangenberg T, Brito C, Greco B, Prudêncio M, Alves PM (2019) Flexible 3D Cell-Based Platforms for the Discovery and Profiling of Novel Drugs Targeting Plasmodium Hepatic Infection, ACS Infectious Diseases,5(11): 1831-1842

DOI: 10.1021/acsinfecdis.9b00144 | Q1 | 4.911 | 5.264 |
| 247
* | Pais DAM, Portela RMC, Carrondo MJT, Isidro IA, Alves PM (2019) Enabling PAT in insect cell bioprocesses: In situ monitoring of recombinant adeno-associated virus production by fluorescence spectroscopy, Biotechnology and Bioengineering. 2019, 1–12, [Epub ahead of print] PubMed PMID: 31317525.

DOI: 10.1002/bit.27117 | Q2 | 4.530 | 4.630 |
| 246 | Carvalho SB, Silva R, Moleirinho M G, Cunha B, Moreira AS, Xenopoulos A, Alves PM , Carrondo MJT, Peixoto C (2019) Membrane-based approach for the downstream processing of influenza virus-like particles, Biotechnology Journal 14,1800570

DOI: 10.1002/biot.201800570 | Q1 | 4.677 | 4.596 |
| 245 | Carvalho SB, Silva RJS, Moreira AS, Cunha B, Clemente JJ, Alves PM , Carrondo MJT, Xenopoulos A, Peixoto C (2019) Efficient filtration strategies for the clarification of influenza virus-like particles derived from insect cells, Separation and Purification Technology, 218:81-88

DOI: 10.1016/j.seppur.2019.02.040 | Q1 | 5.329 | 4.202 |

244	Guerreiro MR, Freitas DF, Alves PM , Coroadinha AS (2019) Detection and Quantification of Label-Free Infectious Adenovirus Using a Switch-On Cell-Based Fluorescent Biosensor, ACS Sens. 2019 Jun 28,4(6):1654-1661. DOI: 10.1021/acssensors.9b00489	Q1	7.711	8.162
243 *	Pinto C, Silva G, Ribeiro AS, Oliveira M, Garrido M, Bandeira VS, Nascimento A, Coroadinha AS, Peixoto C, Barbas A, Paredes J, Brito C, Alves PM (2019) Evaluation of AAV-mediated delivery of shRNA to target basal-like breast cancer genetic vulnerabilities, J Biotechnol. 2019, 300:70-77 DOI: 10.1016/j.jbiotec.2019.05.016.	Q1	3.163	3.142
242 *	Sebastião MJ, Serra M, Pereira R, Palacios I, Gomes-Alves P, Alves PM (2019) Human cardiac progenitor cell activation and regeneration mechanisms: exploring a novel myocardial ischemia/reperfusion in vitro model, Stem Cell Res Ther. 2019 Mar 7,10(1):77 DOI: 10.1186/s13287-019-1174-4	Q1	4.659	5.382
241	Torán JL, López JA, Gomes-Alves P, Aguilar S, Torroja C, Trevisán-Herranz M, Moscoso I, Sebastião MJ, Serra M, Brito C, Cruz M, Sepúlveda JC, Abad JL, Galán-Arriola C, Ibañez B, Martínez F, Fernández ME, Fernández-Aviles F, Palacios I, R-Borlado L, Vázquez J, Alves PM & Berad A, (2019) Definition of a cell surface signature for human cardiac progenitor cells after comprehensive comparative transcriptomic and proteomic characterization, Scientific Reports, 9:4647. DOI: 10.1038/s41598-019-39571-x	Q1	4.116	4.609
240	Soares HR, Castro R, Tomás HA, Carrondo MJT, Alves PM , Coroadinha AS (2019) Pseudotyping retrovirus like particles vaccine candidates with Hepatitis C virus envelope protein E2 requires the cellular expression of CD81, AMB Express. 2019 Feb 7,9(1):22 DOI: 10.1186/s13568-019-0741-5	Q2	3.298	3.427
239 *	Abecasis B, Gomes-Alves P, Rosa S, Gouveia PJ, Ferreira L, Serra M, Alves PM (2019) Unveiling the molecular crosstalk in a human induced pluripotent stem cell derived cardiac model, Biotechnology and Bioengineering, 2019, 116:1245-1252 DOI: 10.1002/bit.26929	Q2	4.530	4.630
238 *	Serra AT, Serra M, Silva AC, Brckalo T, Seshire A, Brito C, Wolf M, Alves PM (2019) Scalable Culture Strategies for the Expansion of Patient-Derived Cancer Stem Cell Lines, Stem Cell International, Volume 2019, Article ID 8347595, 7 pages DOI: 10.1155/2019/8347595	Q2	3.846	4.055

2018

- | | | | | |
|------------|---|----|--------|--------|
| 237 | Serra M, Cunha B, Peixoto C, Gomes-Alves P, Alves PM (2018) Advancing manufacture of human mesenchymal stem cells therapies: technological challenges in cell bioprocessing and characterization, Current Opinion in Chemical Engineering, 22, 226-235

DOI: 10.1016/j.coche.2018.11.003 | Q1 | 4.504 | 4.323 |
| 236 | Hu D, Linders A, Yamak A, Correia C, Kijlstra JD, Garakani A, Xiao L, Milan DJ, van der Meer P, Serra M, Alves PM , Domian IJ (2018) Metabolic Maturation of Human Pluripotent Stem Cell-Derived Cardiomyocytes by Inhibition of HIF1 α and LDHA, Circulation Research. Oct 12, 123(9): 1066-1079

DOI: 10.1161/CIRCRESAHA.118.313249 | Q1 | 17.367 | 20.805 |
| 235 | Moleirinho MG, Rosa S, Carrondo MJT, Silva RJS, Hagner-McWhirter Å, Ahlén G, Lundgren M, Alves PM , Peixoto C (2018) Clinical-Grade Oncolytic Adenovirus Purification Using Polysorbate 20 as an Alternative for Cell Lysis, Current Gene Therapy. 2018,18(6): 366-374

DOI: 10.2174/1566523218666181109141257 | Q2 | 2.165 | 2.225 |
| 234 | Soares HR, Almeida AI, Tomás HA, Alves PM , Coroadinha AS (2018) Flexible pseudotyping of retrovirus using recombinase-mediated cassette exchange, Biotechnology Letters 2018 Apr, 40(4): 633-639

DOI: 10.1016/j.jviromet.2019.113714 | Q2 | 2.154 | 2.027 |
| 233 | Sebastião MJ, Menta R, Serra M, Palacios I, Alves PM , Sanchez B, DelaRosa O, Dalemans W, Lombardo E, Gomes-Alves P (2018) Human cardiac stem cells inhibit lymphocyte proliferation through paracrine mechanisms that correlate with indoleamine 2,3-dioxygenase induction and activity, Stem Cell Research & Therapy, 9: 290

DOI: 10.1186/s13287-018-1010-2 | Q2 | 4.627 | 5.363 |
| 232 | Simão D, Silva MM, Terrasso AP, Arez F, Sousa MFQ, Mehrjardi NZ, Saric T, Gomes-Alves P, Raimundo N, Alves PM , Brito C (2018) Recapitulation of Human Neural Microenvironment Signatures in iPSC Derived NPC 3D Differentiation, Stem Cell Reports, Vol II, 1–13

DOI: 10.1161/CIRCRESAHA.118.313249 | Q1 | 5.597 | 7.508 |
| 231 | Sequeira DP, Correia R, Carrondo MJT, Roldão A, Teixeira AP, Alves PM (2018) Combining stable insect cell lines with baculovirus-mediated expression for multi-HA influenza VLP production, Vaccine, 36: 3112-3123

DOI: 10.1016/j.vaccine.2017.02.043 | Q2 | 3.312 | 3.309 |

230 *	Sebastião MJ, Pereira R, Serra M, Gomes-Alves P, Alves PM (2018) Unveiling Human Cardiac Fibroblast Membrane Proteome, Proteomics, 18, 1700446 DOI: 10.1002/pmic.201700446	Q2	3.060	3.825
229	Lipps C, Klein F, Wahlicht T, Seiffert V, Butueva M, Zauers J, Herfurth T, Luckner M, Köster M, MacLeod R, Petzold J, Hühn J, Yuan Q, Müller PP, Dittrich-Breiholz O, Pufe T, Beckmann R, Drescher W, Riancho J, Sañudo C, Korff T, Opalka B, Rebmann V, Göthert JR, Alves PM , Ott M, Schucht R, Hauser H, Wirth D, May T (2018) Expansion of functional, personalized cells with specific transgene combinations, Nature Communications, 9:994 DOI: 10.1038/s41467-018-03408-4	Q1	11.878	13.881
228	Rebello SP, Pinto C, Martins TR, Harrer Nathalie, Estrada MF, Loza-Alvarez P, Cabeçadas J, Alves PM , Gualdad EJ, Sommergruber W, Brito C (2018) 3D-3-culture: A tool to unveil macrophage plasticity in the tumour microenvironment, Biomaterials, 163: 185-197 DOI: 10.1016/j.biomaterials.2018.02.030	Q1	10.273	9.550
227	Silva I, Estrada MF, Pereira CV, Bento da Silva A, Bronze MR, Alves PM , Duarte CMM, Brito C, Serra AT (2018) Polymethoxylated Flavones from Orange Peels Inhibit Cell Proliferation in a 3D Cell Model of Human Colorectal Cancer, Nutrition and Cancer, 70:2, 257-266 DOI: 10.1080/01635581.2018.1412473	Q3	2.029	2.456
226	Correia C, Koshkin A, Duarte P, Hu D, Carido M, Sebastião MJ, Gomes-Alves P, Alves PM , Serra M (2018) 3D aggregate culture improves metabolic maturation of human pluripotent stem cell derived cardiomyocytes, Biotechnology and Bioengineering, 115:630-644. DOI: 10.1002/bit.26504	Q1	4.260	4.365
225	Carvalho SB, Moreira AS, Gomes J, Carrondo MJT, Thornton DJ, Alves PM , Costa J, Peixoto C (2018) A detection and quantification label-free tool to speed up downstream processing of model mucins, PLoS ONE 13(1): e0190974 DOI: 10.1371/journal.pone.0190974	Q1	2.776	3.337
224	Vidigal J, Fernandes B, Dias MM, Patrone M, Roldão A, Carrondo MJT, Alves PM , Teixeira AP (2018) RMCE-based insect cell platform to produce membrane proteins captured on HIV-1 Gag Virus-like particles, Applied Microbiology and Biotechnology, 102:655–666 DOI: 10.1007/s00253-017-8628-3	Q1	3.670	3.889

- 223** Silva MM, Gomes-Alves P, Rosa S, Simão D, Inácio JM, Peixoto C, Serra M, Belo JA, **Alves PM** (2018) Full length human CCBE1 production and purification: leveraging bioprocess development for high quality glycosylation attributes and functionality, *Journal of Biotechnology*, 10, 285:6-14
- ***
- DOI: 10.1016/j.jbiotec.2018.08.015
- Q2 3.168 3.142

2017

- 222** Carvalho B, Fortuna AR, Woff MW, Peixoto C, **Alves PM**, Reichl U, Carrondo MJT (2017) Purification of influenza virus-like particles using sulfated cellulose membrane adsorbers, *Journal of Chemical Technology and Biotechnology*, 5474.
- DOI: 10.1002/jctb.5474
- Q2 2.587 2.734
- 221** Correia C, Koshkin A, Duarte P, Hu D, Teixeira A, Domian I, Serra M, **Alves PM** (2017) Distinct carbon sources affect structural and functional maturation of cardiomyocytes derived from human pluripotent stem cells, *Scientific Reports*, 7(1): 8590.
- DOI: 10.1038/s41598-017-08713-4
- Q1 4.122 4.609
- 220** Cunha B, Silva RJ, Correia C, Koshkin Alexey, **Alves PM**, Serra M, Peixoto C, Carrondo MJT (2017) Finding the design space of a filtration-based operation for the concentration of human pluripotent stem cells, *Journal of Membrane Science* 542 (2017) 399–407
- DOI: 10.1016/j.memsci.2017.08.036
- Q1 6.578 6.656
- 219** Gouveia PJ, Rosa S, Ricotti L, Abecasis B, Almeida HV, Monteiro L, Nunes J, Carvalho FS, Serra M, Luchkin S, Kholkin AL, **Alves PM**, Oliveira PJ, Carvalho R, Menciassi A, Das Neves RP, Ferreira LS (2017) Flexible nanofilms coated with aligned piezoelectric microfibers preserve the contractility of cardiomyocytes, *Journal of Biomaterials*, 139, 213-228
- DOI: 10.1016/j.biomaterials.2017.05.048
- Q1 8.806 9.315
- 218** Carvalho SB, Moleirinho MG, Wheatley D, Welsh J, Gantier R, **Alves PM**, Peixoto C, Carrondo MJT (2017) Universal label-free in-process quantification of influenza virus-like particles, *Biotechnology Journal*, 12, 1700031
- DOI: 10.1002/biot.201700031
- Q2 3.507 3.499

- | | | | | |
|-----------------|---|----|-------|-------|
| 217 | Cunha B, Aguiar T, Carvalho Sofia B., Silva Marta M, Gomes Ricardo A., Carrondo MJT., Gomes-Alves P, Peixoto C, Serra M, Alves PM (2017) Bioprocess Integration for Human Mesenchymal Stem Cells: From Up to Downstream Processing Scale-Up to Cell Proteome Characterization, <i>Journal of Biotechnology</i> , 248: 87-98.

DOI: 10.1016/j.jbiotec.2017.01.014 | Q2 | 2.533 | 2.843 |
| 216 | Abecasis B, Aguiar T, Arnault E, Costa R, Gomes-Alves P, Aspegren A, Serra M, Alves PM (2017) Expansion of 3D human induced pluripotent stem cell aggregates in bioreactors: bioprocess intensification and scaling-up approaches, <i>Journal of Biotechnology</i> 6:81–93

DOI: 10.1016/j.jbiotec.2017.01.004 | Q2 | 2.533 | 2.843 |
| 215 | Carinhas N, Koshkin A, Pais DAM, Alves PM , Teixeira AP (2017) ¹³ C-Metabolic Flux Analysis of Human Adenovirus Infection: Implications for Viral Vector Production, <i>Biotechnology and Bioengineering</i> , 114: 195–207.

DOI: 10.1002/bit.26063 | Q1 | 3.952 | 4.206 |
| 214
* | Sá JV, Kleiderman S, Brito C, Sonnewald U, Leist M, Teixeira AP, Alves PM (2017) Quantification of Metabolic Rearrangements During Neural Stem Cells Differentiation into Astrocytes by Metabolic Flux Analysis, <i>Neurochem Res</i> 42:244-253

DOI: 10.1007/s11064-016-1907-z | Q3 | 2.772 | 2.791 |
| 213 | Santo VE, Rebelo SP, Estrada MF, Alves PM , Boghaert E, Brito C (2017) Drug Screening in 3D in vitro tumor models: overcoming current pitfalls of efficacy read-outs, <i>Biotechnology Journal</i> 12, 1600505.

DOI: 10.1002/biot.201600505 | Q2 | 3.507 | 3.499 |
| 212 | Terrasso AP, Silva AC, Filipe A, Pedroso P, Ferreira AL, Alves PM , Brito C (2017) Human neuron-astrocyte 3D co-culture-based assay for evaluation of neuroprotective compounds, <i>Journal of Pharmacological and Toxicological Methods</i> 83: 72–79

DOI: 10.1016/j.vascn.2016.DOI: 10.001 | Q3 | 2.269 | 2.438 |
| 211 | Torán JL, Aguilar S, López JA, Torroja C, Quintana JA, Santiago C, Abad JL, Gomes-Alves P, Gonzalez A, Bernal JA, Jiménez-Borreguero LJ, Alves PM , R-Borlado L, Vázquez J, Bernad A (2017) CXCL6 is an important paracrine factor in the pro-angiogenic human cardiac progenitor-like cell secretome, <i>Scientific Reports</i> ", 7(1): 12490

DOI: 10.1038/s41598-017-11976-6 | Q1 | 4.122 | 4.609 |

- 210** * Rebelo SP, Costa R, Silva MM, Marcelino P, Brito C, **Alves PM** (2017) Three-dimensional co-culture of human hepatocytes and mesenchymal stem cells: improved functionality in long-term bioreactor cultures, *Journal of Tissue Engineering and Regenerative Medicine*, 11(7): 2034-2045.
DOI: 10.1002/term.2099

2016

- 209** Carvalho SB, Freire JM, Moleirinho MG, Monteiro F, Gasoar D, Castanho MARB, Carrondo MJT, **Alves PM** (2016), Bernardes GJL, Peixoto C, Bioorthogonal Strategy for Bioprocessing of Specific-Site-Functionalized Enveloped Influenza-Virus-Like Particles, *Bioconjugate Chemistry*, 27, 2386-2399
DOI: 10.1021/acs.bioconjchem.6b00372
- 208** Simão D, Terrasso Ana P, Teixeira Ana P, Brito C, Sonnenwald U, **Alves PM** (2016) Functional metabolic interactions of human neuron-astrocyte 3D *in vitro* networks, *Scientific Reports*, 6:33285
DOI: 10.1038/srep33285
- 207** Monteiro F, Bernal V, **Alves PM** (2016) The Role of Host Cell Physiology in the Productivity of the Baculovirus-Insect Cell System: Fluxome Analysis of *Trichoplusia ni* and *Spodoptera frugiperda* Cell Lines, *Biotechnology and Bioengineering*, 114: 674–684
DOI: 10.1002/bit.26089
- 206** Kleiderman S, Gutbier S, Tüfekci KU, Ortega F, Sá JV, Teixeira AP, Brito C, Glaab E, Berninger B, **Alves PM**, Leist M (2016) Conversion of nonproliferating astrocytes into neurogenic neural stem cells: control by FGF2 and IFN-gamma, *Stem Cells*. 2016 Dec, 34(12):2861-2874
DOI: 10.1002/stem.2483
- 205** Gonçalves M, Carvalho M, Peixoto C, **Alves PM**, Barreto C, Oliva A, Pinto Susana, Laborinho-Pronto A, Gromicho M, Costa J (2016) Phosphoneurofilament heavy chain and vascular endothelial growth factor as cerebrospinal fluid biomarkers for ALS, *Amyotrophic Lateral Sclerosis and Frontotemporal Degeneration Journal*, 134-136
DOI: 10.1080/21678421.2016.1212894
- 204** Queiroga C, Alves R, Conde S, **Alves PM**, Vieira H (2016) Paracrine effect of carbon monoxide: astrocytes promote neuroprotection via purinergic signaling, *Journal of Cell Science*, 129 (16): 3178-88
DOI: 10.1242/jcs.187260

203 *	Monteiro F, Bernal V, Chailletd M, Berger I, Alves PM (2017) Targeted supplementation design for improved production and quality of enveloped viral particles in insect cell-baculovirus expression system , Journal of Biotechnology, 233, 10:34–41. DOI: 10.1016/j.jbiotec.2016.06.029	Q1	2.599	2.908
202	Almeida AS, Sonnewald U, Alves PM , Vieira HL (2016) Carbon monoxide improves neuronal differentiation and yield by increasing the functioning and number of mitochondria, Journal of Neurochemistry, 138: 423–435. DOI: 10.1111/jnc.13653	Q1	4.083	3.973
201	Silva AC, Teixeira A, Alves PM (2016) Impact of Adenovirus infection in host cells metabolism evaluated by ¹ H NMR spectroscopy, Journal of Biotechnology, 231, 16–23. DOI: 10.1016/j.jbiotec.2016.05.025	Q1	2.599	2.908
200	Correia C, Koshkin A, Carido M, Espinha N, Saric T, Lima PA, Serra M, Alves PM (2016) Effective hypothermic storage of human pluripotent stem cell-derived cardiomyocytes compatible with global distribution of cells for clinical applications and toxicology testing, Stem Cells Translational Medicine, 5:658-669. DOI: 10.5966/sctm.2015-0238	Q1	4.000	4.660
199	Rodrigues AF, Guerreiro MR, Formas-Oliveira AS, Fernandes P, Blechert AK, Genzel Y, Alves PM , Hu WS, Coroadinha AS (2016) Increased titer and reduced lactate accumulation in recombinant retrovirus production through the down-regulation of HIF1 and PDK, Biotechnology and Bioengineering, 113(1): 150-62. DOI: 10.1002/bit.25691	Q1	4.481	4.338
198	Carinhas N, Pais DAM, Koshkin A, Fernandes P, Coroadinha AS, Carrondo MJT, Alves PM , Teixeira A (2016) Metabolic flux profiling of MDCK cells during growth and canine adenovirus vector production, Scientific Reports, 6:23529 DOI: 10.1038/srep23529	Q1	4.259	4.847
197 *	Gomes-Alves P, Serra M, Brito C, Ricardo CP, Cunha R, Sousa MF, Sanchez B, Bernad A, Carrondo MJT, Rodriguez-Borlado L, Alves PM (2016) In vitro expansion of human cardiac progenitor cells: exploring 'omics tools for characterization of cell-based allogeneic products, Translational Research, 171(5): 96-1DOI: 10. DOI: 10.1016/j.trsl.2016.02.001	Q1	4.652	4.395

- | | | | | |
|------------|---|----|-------|-------|
| 196 | Estrada MF, Rebelo SP, Davies EJ, Pinto MT, Pereira H, Santo VE, Matthew J Smalley, Barry ST, Gualda EJ, Alves PM , Anderson E, Brito C (2016) Modelling the tumour microenvironment in long-term microencapsulated 3D cocultures recapitulates phenotypic features of disease progression, <i>Biomaterials</i> , 78:50-61.

DOI: 10.1016/j.biomaterials.2015.11.030 | Q1 | 8.402 | 8.946 |
| 195 | Santo VE, Estrada MF, Rebelo SP, Abreu S, Silva I, Pinto C, Veloso SC, Serra AT, Boghaert E, Alves PM , Brito C (2016) Adaptable stirred-tank culture strategies for large scale production of multicellular spheroid-based tumor cell models, <i>Journal of Biotechnology</i> , 221 (2016) 221: 118–129

DOI: 10.1016/j.jbiotec.2016.01.031 | Q1 | 2.599 | 2.908 |
| 194 | Patrone M, Coroadinha AS, Teixeira AP, Alves PM (2016) Palmitoylation strengthens cholesterol-dependent multimerization and fusion activity of human cytomegalovirus gB, <i>Journal of Biochemical Chemistry</i> , 291:4711-4722.

DOI: 10.1074/jbc.M115.682252 | Q1 | 4.125 | 4.323 |
| 193 | Cunha B, Silva RJ, Aguiar T, Serra M, Daicic J, Maloisel JL, Clachan J, Åkerblom A, Carrondo MJT, Peixoto C, Alves PM (2016) Improving washing strategies of human mesenchymal stem cells using negative mode expanded bed chromatography, <i>Journal of Chromatography A</i> , 15, 1429: 292-303.

DOI: 10.1016/j.chroma.2015.12.052 | Q1 | 3.981 | 4.008 |
| 192 | Simão D, Pinto C, Fernandes P, Peddie CJ, Piersanti S, Collinson LM, Salinas S, Saggio I, Schiavo G, Kremer EJ, Brito C, Alves PM (2016) Evaluation of helper-dependent canine adenovirus vectors in a 3D human CNS model, <i>Gene Therapy</i> , 23:86-94.

DOI: 10.1038/gt.2015.75 | Q2 | 3.110 | 3.130 |
| 191 | Soares HR, Castro R, Tomás H, Rodrigues AF, Gomes-Alves P, Bellier B, Klatzmann D, Carrondo MJT, Alves PM , Coroadinha AS (2016) Tetraspanins displayed in retrovirus-derived virus-like particles and their immunogenicity, <i>Vaccine</i> , 34(13): 1634-1641.

DOI: 10.1016/j.vaccine.2015.12.015 | Q1 | 3.235 | 3.259 |
| 190 | Eichholz K, Bru T, Tran TTP, Fernandes P, Welles H, Mennechet FJC, Manel N, Alves PM , Perreau M, Kremer EJ, (2016) Immune-Complexed Adenovirus Induce AIM2-Mediated Pyroptosis in Human Dendritic Cells, <i>PLOS Pathog.</i> 12(9): E1005871.

DOI: 10.1371/journal.ppat.100587 | Q1 | 6.608 | 7.456 |

- 189** Kleiderman S, Sá JV, Teixeira AP, Brito C, Gutbier S, Evje LG, Hadera MG, Glaab E, Henry M, Sachinidis A, **Alves PM**, Sonnewald U, Leist M (2016) Functional and phenotypic differences of pure populations of stem cell-derived astrocytes and neuronal precursor cells, *GLIA*, 64(5): 695–715
DOI: 10.1002/glia.22954

2015

- 188** Nestola P, Peixoto C, **Alves PM**, Carrondo MJT, Mota JPB (2015) Rational development of two flowthrough purification strategies for adenovirus type 5 and retro virus-like particles, *Journal of Chromatography A*, 1426:91–101.
DOI: 10.1016/j.chroma.2015.11.037
- 187** * Cunha B, Aguiar T, Silva MM, Silva R, Sousa MF, Peixoto C, Serra M, Carrondo MJT, **Alves PM** (2015) Exploring continuous and integrated strategies for the up- and downstream processing of human mesenchymal stem cells, *Journal of Biotechnology*, 213:97–108.
DOI: 10.1016/j.jbiotec.2015.02.023
- 186** Rodrigues AF, Soares HR, Guerreiro MR, **Alves PM**, Coroadinha AS (2015) Viral vaccines and their manufacturing cell substrates: New trends and designs in modern vaccinology, *Biotechnology Journal*, 10(9): 1329-44.
DOI: 10.1002/biot.201400387
- 185** Sousa MFQ, Silva MM, Girous D, Hashimura Y, Wesselschmidt R, Lee B, Roldão A, Carrondo MJT, **Alves PM**, Serra M (2015), Production of oncolytic adenovirus and human mesenchymal stem cells in a single-use, vertical-wheel bioreactor system: Impact of bioreactor design on performance of microcarrier-based cell culture processes, *Biotechnology Progress*, 31(6): 1600-1612
DOI: 10.1002/btpr.2158
- 184** Rodrigues AF, Formas-Oliveira AS, Guerreiro M, Tomas H, **Alves PM**, Coroadinha AS (2015) Single step cloning-screening method: a new tool for developing and studying high-titer viral vector producer cells, *Gene Therapy*, 22(9): 685-95.
DOI: 10.1038/gt.2015.44
- 183** Nestola P, Silva RJS, Peixoto C, **Alves PM**, Carrondo MJT, Mota JPB (2015) Robust design of adenovirus purification by two-column, simulated countercurrent, size-exclusion chromatography, *Journal of Biotechnology*, 213: 109–119.
DOI: 10.1016/j.jbiotec.2015.01.030

182	Castro R, Fernandes P, Laske T, Sousa MFQ, Genzel Y, Scharfenberg K, Alves PM , Coroadinha AS (2015) Production of canine adenovirus type 2 in serum-free suspension cultures of MDCK cells, <i>Applied Microbiology and Biotechnology</i> , 99(17): 7059-68. DOI: 10.1007/s00253-015-6636-8	Q1	3.376	3.882
181	Gomes J, Gomes-Alves P, Carvalho SB, Peixoto C, Alves PM , Altevogt P, Costa J (2015) Extracellular Vesicles from Ovarian Carcinoma Cells Display Specific Glycosignatures, <i>Biomolecules</i> , 5(3): 1741-1761. DOI: 10.3390/biom5031741	Q1	n/a	n/a
180	Piersanti S, Burla R, Licursi V, Brito C, La Torre M, Alves PM , Simão D, Monttini C, Salinas S, Negri R, Tagliafico E, Kremer EJ, Saggio I (2015) Transcriptional response of human neurospheres to helper-dependent CAV-2 vectors: activation of DNA damage response, modulation of microtubule motors and centromeric proteins, <i>Plos One</i> , 10(7): e0133607. DOI: 10.1371/journal.pone.0133607	Q1	3.057	3.535
179 *	Silva MM, Rodrigues AF, Correia C, Sousa MFQ, Brito C, Coroadinha AS, Serra M, Alves PM (2015) Robust expansion of human pluripotent stem cells: integration of bioprocess design with transcriptomic and metabolomic characterization, <i>Stem Cells Translational Medicine</i> , 4(7): 731-42. DOI: 10.5966/sctm.2014-0270	Q1	4.247	5.028
178	Terrasso AP, Pinto C, Serra M, Filipe AE, Almeida S, Ferreira AL, Pedroso P, Brito C, Alves PM (2015) Novel scalable cell based-model for in vitro neurotoxicity testing: combining human differentiated neurospheres with gene expression and functional endpoints, <i>Journal of Biotechnology – 3D cell culture special issue</i> , 205:82-92. DOI: 10.1371/journal.pone.0133607	Q1	2.667	3.108
177	Suter-Dick, Alves PM , Blaauboer BJ, Bremm KD, Brito C, Coecke S, Flick B, Fowler P, Hescheler J, Ingelman-Sundberg M, Jennings P, Kelm JM, Manou I, Mistry P, Moretto A, Roth A, Stedman D, van de Water B, Beilmann M (2015) Stem cell derived (SCD) systems in toxicology assessment, <i>Stem Cells and Development</i> , 24(11): 1284-96. DOI: 10.1089/scd.2014.0540	Q2	3.777	3.978
176	Materne EM, Ramme P, Terrasso AP, Serra M, Alves PM , Brito C, Sakharov DA, Tonevitsky AG, Lauster R, Marx U (2015) A multi-organ chip co-culture of neurospheres and liver equivalents for long-term substance testing, <i>Journal of Biotechnology</i> , 205:36–46. DOI: 10.1016/j.jbiotec.2015.02.002	Q1	2.667	3.108

175 *	Silva AC, Simão D, Sousa MFQ, Küppers C, Lucas T, Cruz P, Carrondo MJT, Kochanek S, Alves PM (2015) Human Amniocyte-derived Cells for the Production of Adenoviral Vectors, <i>Biotechnology Journal</i> , 10, 760–771. DOI: 10.1002/biot.201400765	Q1	3.781	3.678
174	Fernandes P, Almeida A, Kremer EJ, Alves PM , Coroadinha AS (2015) Canine helper-dependent vectors production: implications of Cre activity and co-infection on adenovirus propagation, <i>Scientific Reports</i> , 5:9135. DOI: 10.1038/srep09135	Q1	5.228	5.525
173	Nestola P, Peixoto C, Silva RJS, Alves PM , Mota JPB, Carrondo MJT (2015) Improved virus purification processes for vaccines and gene therapy, <i>Biotechnology and Bioengineering</i> , 112(5): 843-57. DOI: 10.1002/bit.25545	Q1	4.243	4.393
172	Simão D, Pinto C, Piersanti S, Weston A, Peddie CJ, Bastos AEP, Licursi V, Schwarz SC, Collison LM, Salinas S, Serra M, Teixeira AP, Saggio I, Lima PA, Kremer EJ, Schiavo G, Brito C, Alves PM (2015) Modelling human neural functionality in vitro: 3D culture for dopaminergic differentiation, <i>Tissue Engineering – Part A</i> , 21(3-4): 654-668. DOI: 10.1089/ten.tea.2014.0079	Q1	3.892	4.451
171	Cunha B, Peixoto C, Silva M, Carrondo MJT, Serra M, Alves PM (2015) Filtration methodologies for the clarification and concentration of human mesenchymal stem cells, <i>Journal of Membrane Science</i> , 478:117-129. DOI: 10.1016/j.memsci.2014.12.041	Q1	5.557	5.741
170 *	Fernandes P, Simão D, Guerreiro MR, Kremer EJ, Coroadinha AS, Alves PM (2015) Impact of adenovirus life cycle on the generation of canine helper-dependent vectors, <i>Gene Therapy</i> , 22(1), 40-49. DOI: 10.1038/gt.2014.92	Q2	3.242	3.312
2014				
169 *	Rebelo SP, Costa R, Estrada M, Shevchenko V, Catarina C, Alves PM (2014) HepaRG microencapsulated spheroids in DMSO-free culture: novel culturing approaches for enhanced xenobiotic and biosynthetic metabolism, <i>Archives of Toxicology</i> , 89(8): 1347-1358. DOI: 10.1007/s00204-014-1320-9	Q1	6.637	5.574

168	Sarmiento L, Póvoa V, Nascimento R, Real G, Antunes I, Martins L, Moita M, Alves PM , Abecasis M, Moita L, Parkhouse R, Meijerink J and Barata JT (2014) CHK1 overexpression in T-cell acute lymphoblastic leukemia is essential for proliferation and survival by preventing excessive replication stress, <i>Oncogene</i> , 34(23): 2978-2990. DOI: 10.1038/onc.2014.248	Q1	8.459	7.632
167 *	Gomes-Alves P, Serra M, Brito C, Borlado L, López JA, Vázquez J, Carrondo MJT, Bernad A, Alves PM (2014) Exploring analytical proteomics platforms towards the definition of human cardiac stem cells receptome, <i>Proteomics</i> , 15(7): 1332–1337. DOI: 10.1002/pmic.201400318	Q1	3.807	3.823
166	Nestola P, Martins DL, Peixoto C, Roederstein S, Schleuss T, Alves PM , Mota JPB, Carrondo MJ (2014) Evaluation of Novel Large Cut-Off Ultrafiltration Membranes for Adenovirus Serotype 5 (Ad5) Concentration, <i>PLoS ONE</i> , 9(12): e115802. DOI: 10.1371/journal.pone.0115802	Q1	3.234	3.702
165	Rodrigues AF, Carrondo MJ, Alves PM , Coroadinha AS (2014) Cellular targets for improved manufacturing of virus-based biopharmaceuticals in animal cells, <i>Trends in Biotechnology</i> , 32(12): 602-7. DOI: 10.1016/j.tibtech.2014.09.010	Q1	11.958	11.681
164 *	Correia C, Serra M, Espinha N, Sousa M, Brito C, Burkert K, Zheng Y, Hescheler J, Carrondo MJT, Sarić T, Alves PM (2014) Combining Hypoxia and Bioreactor Hydrodynamics Boosts Induced Pluripotent Stem Cell Differentiation Towards Cardiomyocytes, <i>Stem Cell Reviews and Reports</i> , 10(6): 786-801. DOI: 10.1007/s12015-014-9533-0	Q2	2.768	3,440
163	Nestola P, Villian L, Peixoto C, Martins DL, Alves PM , Carrondo MJT, Mota JP (2014) Impact of grafting on the design of new membrane adsorbers for adenovirus purification, <i>Journal of Biotechnology</i> , 181:1-11. DOI: 10.1016/j.jbiotec.2014.04.003	Q1	2.871	3,180
162	Duarte TM, Carinhas N, Barreiro LC, Carrondo MJT, Alves PM , Teixeira AP (2014) Metabolic responses of CHO cells to limitation of key amino acids, <i>Biotechnology and Bioengineering</i> , 111(10): 2095-2106. DOI: 10.1002/bit.25266	Q1	4.126	4,289
161	Pais DAM, Carrondo MJT, Alves PM , Teixeira AP (2014) Towards real-time monitoring of therapeutic protein quality in mammalian cell processes, <i>Current Opinion in Biotechnology</i> , 30:161–167. DOI: 10.1016/j.copbio.2014.06.019	Q1	7.117	7,983

160	Gualda EJ, Simão D, Pinto C, Alves PM , Brito C (2104) Imaging of human differentiated 3D neural aggregates using light sheet fluorescence microscopy, <i>Frontiers in Cellular Neuroscience</i> , 8:221. DOI: 10.3389/fncel.2014.00221	Q2	4.289	4,289
159	Nestola P, Silva R, Peixoto C, Alves PM , Carrondo MJT, Mota JP (2014) Adenovirus purification by two-column, size-exclusion, simulated countercurrent chromatography, <i>Journal of Chromatography A</i> , 1347:111–121. DOI: 10.1016/j.chroma.2014.04.079	Q1	4.169	4,298
158 *	Silva AC, Yami M, Libeau G, Carrondo MJ, Alves PM (2014) Testing a new formulation for Peste des Petits Ruminants vaccine in Ethiopia, <i>Vaccine</i> , 32(24): 2878–2881. DOI: 10.1016/j.vaccine.2014.02.039	Q1	3.624	3,338
157	Patrone M, Carinhas N, Sousa MQ, Peixoto C, Ciferri C, Carfi A, Alves PM (2014) Enhanced expression of full-length Human Cytomegalovirus fusion protein in non3 swelling Baculovirus-infected cells with a minimal fed-batch strategy, <i>PLoS One</i> , 9(3): p 1-13, e90753. DOI: 10.1371/journal.pone.0090753	Q1	3.234	3,702
156 *	Fernandes F, Teixeira MM, Vidigal J, Sousa MFQ, Patrone M, Teixeira AP, Alves PM (2014) Production of rotavirus core-like particles in Sf9 cells using recombinase-mediated cassette exchange, <i>Journal of Biotechnology</i> , 171: 34–38. DOI: 10.1016/j.jbiotec.2013.11.020	Q1	2.871	3,180
155 *	Monteiro F, Bernal V, Saelens X, Lozano AB, Bernal C, Sevilla A, Carrondo MJT, Alves PM (2014) Metabolic profiling of insect cell lines: Unveiling cell line determinants behind system's Productivity, <i>Biotechnology and Bioengineering</i> , 111(4):816-28. DOI: 10.1002/bit.25142	Q1	4.126	4,289
2013				
154	Tavares L, Figueira I, McDougall GJ, Vieira HL, Stewart D, Alves PM , Ferreira RB, Santos CN (2013) Neuroprotective effects of digested polyphenols from wild blackberry species, <i>European Journal of Nutrition</i> , 52: 225-236. DOI: 10.1007/s00394-012-0307-7	Q1	3.467	3.255
153	Vidigal J, Dias MM, Fernandes F, Patrone M, Bispo C, Andrade C, Gardner R, Carrondo MJT, Alves PM , Teixeira AP (2013) A cell sorting protocol for selecting high-producing sub-populations of Sf9 and High Five TM cells, <i>Journal of Biotechnology</i> , 168(4): 436-9	Q1	2.884	3,221

DOI: 10.1016/j.jbiotec.2013.DOI: 10.020

- | | | | | |
|-----------------|---|----|-------|-------|
| 152 | Carinhas N, Duarte PM, Barreiro LC, Carrondo MJT, Alves PM , Teixeira AP (2013) Metabolic signatures of GS-CHO cell clones associated with butyrate treatment and culture phase transition, <i>Biotechnology and Bioengineering</i> , 110(2): 3244-57. | Q1 | 4.164 | 4,274 |
| | DOI: 10.1002/bit.24983 | | | |
| 151 | Rodrigues AF, Formas-Oliveira AS, Bandeira, VS, Alves PM , Hu WS, Coroadinha AS (2013) Metabolic pathways recruited in the production of a recombinant enveloped virus: mining targets for process and cell engineering, <i>Metabolic Engineering</i> , 20:131-45. | Q1 | 8.258 | 6,714 |
| | DOI: 10.1016/j.ymben.2013.DOI: 10.001 | | | |
| 150 | Fonseca CP, Fonseca LL, Montezinho LP, Alves PM , Santos H, Castro MM, Geraldies CF (2013) ²³ Na multiple quantum filtered NMR characterisation of Na(+) binding and dynamics in animal cells: a comparative study and effect of Na(+)/Li (+) competition, <i>European Biophysics Journal</i> , 42(7):503-19. | Q1 | 2.474 | 2,237 |
| | DOI: 10.1007/s00249-013-0899-8 | | | |
| 149 | Fernandes P, Santiago VM, Rodrigues AF, Tomás H, Kremer EJ, Alves PM , Coroadinha AS (2013) Impact of E1 and Cre on Adenovirus Vector Amplification: Developing MDCK CAV-2-E1 and E1-Cre Transcomplementing Cell Lines, <i>PLoS One</i> , 8(4): e60342. | Q1 | 3.534 | 4,015 |
| | DOI: 10.1371/journal.pone.0060342 | | | |
| 148
* | Fernandes F, Teixeira AP, Carinhas N, Carrondo MJT, Alves PM (2013) Insect cells as production platform of complex VLPs, <i>Expert Review of Vaccines</i> , 12(2):225-36. | Q1 | 4.217 | 3,749 |
| | DOI: 10.1586/ERV.12.153 | | | |
| 147
* | Fernandes P, Peixoto C, Santiago VM, Kremer EJ, Coroadinha AS, Alves PM (2013) Bioprocess development for canine adenovirus type 2 vectors, <i>Gene Therapy</i> , 20(4):353-60. | Q1 | 4.196 | 3,670 |
| | DOI: 10.1038/gt.2012.52 | | | |
| 146 | Lamego J, Cunha B, Peixoto C, Sousa M, Alves PM , Simplicio AL, Coroadinha AS (2013) Carboxylesterase 2 production and characterization in human cells: new insights into enzyme oligomerization and activity, <i>Applied Microbiology and Biotechnology</i> , 97(3): 1161–1173. | Q1 | 3.811 | 4,138 |
| | DOI: 10.1007/s00253-012-3994-3 | | | |

2012

- | | | | | |
|------------|--|----|-------|-------|
| 145 | Monteiro F, Carinhas N, Carrondo MJT, Bernal V, Alves PM (2012) Towards system-level understanding of baculovirus host cell | Q1 | 3,941 | 3,924 |
|------------|--|----|-------|-------|

- * interactions: from molecular fundamental studies to large-scale proteomics approaches, *Frontiers in Microbiology*, 3:391.
DOI: 10.3389/fmicb.2012.00391
- 144** Bandeira V, Peixoto C, Rodrigues AF, Cruz PE, **Alves PM**, Coroadinha AS, Carrondo MJT (2012) Downstream Processing of Lentiviral Vectors: Releasing Bottlenecks, *Human Gene Therapy Methods*, 23(4): 255-63.
DOI: 10.1089/hgtb.2012.059
- 143** Carrondo MJT, **Alves PM**, Carinhas N, Glassey J, Hesse F, Merten OW, Micheletti M, Noll T, Oliveira R, Reichl U, Staby A, Teixeira AP, Weichert H, Mandenius CF (2012) How can measurement, monitoring, modeling and control advance animal cell culture in industrial biotechnology? *Biotechnology Journal*, 7(12): 1522-9.
DOI: 10.1002/biot.201200226
- 142** Leite SB, Wilk-Zasadna I, Zaldivar Comenges JM, Airola E, Reis-Fernandes MA, Mennecozzi M, Guguen-Guillouzo C, Chesne C, Gouillou C, **Alves PM**, Coecke S (2012) 3D HepaRG Model as an attractive tool for toxicity testing, *Toxicological Sciences*, 130(1): 106-16.
DOI: 10.1093/toxsci/kfs232
- 141** Malpique R, Tostões R, Beier AF, Serra M, Brito C, Schulz JC, Björquist P, Zimmermann H, **Alves PM** (2012) Surface-based cryopreservation strategies for human embryonic stem cells: A comparative study, *Biotechnology Progress*, 28(4): 1079-87.
DOI: 10.1002/btpr.1572
- 140** Fernandes F, Vidigal J, Dias MM, Prather KLJ, Coroadinha AS, Teixeira AP, **Alves PM** (2012) Flipase-mediated cassette exchange in Sf9 insect cells for stable gene expression, *Biotechnology and Bioengineering*, 109(11): 2836–2844.
DOI: 10.1002/bit.24542
- 139** Queiroga CS, Tomasi S, Widerøe M, **Alves PM**, Vercelli A, Vieira HL (2012) Preconditioning Triggered by Carbon Monoxide (CO) Provides Neuronal Protection Following Perinatal Hypoxia-Ischemia, *PLoS ONE*, 7(8): e4263.
DOI: 10.1371/journal.pone.0042632
- 138** Carinhas N, Oliveira R, **Alves PM**, Carrondo MJT, Teixeira AP (2012) Systems biotechnology of animal cells: the road to prediction, *Trends in Biotechnology*, 30(7): 377-85.
DOI: 10.1016/j.tibtech.2012.03.004

- | | | | | |
|----------|--|----|--------|--------|
| 137
* | Serra M, Brito C, Correia C, Alves PM (2012) Process engineering human pluripotent stem cells for clinical applications, Trends in Biotechnology, 30(6): 350-9.

DOI: 10.1016/j.tibtech.2012.03.003 | Q1 | 9.66 | 9,289 |
| 136
* | Brito C, Simão D, Costa I, Malpique R, Pereira CI, Fernandes P, Serra M, Schwarz SC, Schwarz J, Kremer EJ, Alves PM (2012) Generation and genetic modification of 3D cultures of human dopaminergic neurons derived from neural progenitor cells, Methods, 56(3): 452-60.

DOI: 10.1016/j.ymeth.2012.03.005 | Q1 | 3.641 | 4,159 |
| 135 | Tavares L, Figueira I, Macedo D, McDougall GJ, Leirao MC, Vieira HLA, Stewart D, Alves PM , Ferreira RB, Santos, CN (2012) Neuroprotective effect of blackberry (Rubus sp.) polyphenols is potentiated after simulated gastrointestinal digestion, Food Chemistry, 131:1443-1452.

DOI: 10.1016/j.foodchem.2011.DOI: 10.025 | Q1 | 3.391 | 3,901 |
| 134 | Marcelino I, de Almeida AM, Brito C, Meyer DF, Barreto M, Sheikboudou C, Franco CF, Martinez D, Lefrançois T, Vachier N, Carrondo MJT, Coelho AV, Alves PM (2012) Proteomic analysis of Ehrlichia ruminantium highlight differential expression of MAP1-family proteins, Veterinary Microbiology, 4,156(3-4):305-14.

DOI: 10.1016/j.vetmic.2011.11.022 | Q1 | 3.127 | 3,248 |
| 133 | Rodrigues AF, Amaral AI, Veríssimo V, Alves PM , Coroadinha AS (2012) Adaptation of retrovirus producer cells to serum deprivation: Implications in lipid biosynthesis and vector production, Biotechnology and Bioengineering, 109(5): 1269-1279.

DOI: 10.1002/bit.24410 | Q1 | 3.648 | 3,879 |
| 132 | Almeida SS, Queiroga CS, Sousa MF, Alves PM , Vieira HL (2012) Carbon monoxide modulates apoptosis by reinforcing oxidative metabolism in astrocytes: role of BCL-2, Journal of Biological Chemistry, 287(14): 10761-70.

DOI: 10.1074/jbc.M111.306738 | Q1 | 4.651 | 5,023 |
| 131 | Roldão A, Mellado MC, Lima JC, Carrondo MJT, Alves PM , Oliveira R (2012) On the Effect of Thermodynamic Equilibrium on the Assembly Efficiency of Complex Multi-Layered Virus-Like Particles (VLP): the Case of Rotavirus VLP, PLoS Computational Biology, 8(2): e1002367.

DOI: 10.1371/journal.pcbi.1002367 | Q1 | 4.867 | 5,939 |
| 130
* | Tostões RM, Leite SB, Serra M, Jensen J, Bjorquist P, Carrondo MJT, Brito C, Alves PM (2012) Human liver cell spheroids in extended perfusion bioreactor culture for repeated dose drug testing, Hepatology, 55(4):1227-1236.

DOI: 10.1002/hep.24760 | Q1 | 12,003 | 11,400 |

2011

- | | | | | |
|-----|--|----|-------|--------|
| 129 | Teixeira AP, Dias JML, Carinhas N, Sousa M, Clemente JJ, Cunha AE, Von Stosch M, Alves PM , Carrondo MJT, and Oliveira R (2011) Cell functional enviromics: unravelling the function of environmental factors, BMC Systems Biology, 6, 5:92. | Q1 | 3.148 | 3,544 |
| | DOI: 10.1186/1752-0509-5-92 | | | |
| 128 | Carinhas N, Robitaille AM, Moes S, Carrondo MJT, Jenoe J, Oliveira R, Alves PM (2011) Quantitative proteomics of Spodoptera frugiperda cells during growth and baculovirus infection, PLoS ONE, 6(10): e26444 | Q1 | 4.092 | 4,537 |
| * | DOI: 10.1371/journal.pone.0026444 | | | |
| 127 | Serra M, Correia C, Malpique R, Brito C, Bjorquist P, Carrondo MJT, Alves PM (2011) Microencapsulation technology: a powerful tool to integrate expansion and cryopreservation of pluripotent human embryonic stem cells, PLoS ONE, 6(8): e23212 | Q1 | 4.092 | 4,537 |
| * | DOI: 10.1371/journal.pone.0023212 | | | |
| 126 | Amaral, AI, Teixeira AP, Håkonsen BI, Sonnewald U, Alves PM (2011) A Comprehensive Metabolic Profile of Cultured Astrocytes Using Isotopic Transient Metabolic Flux Analysis and ¹³ C-Labeled Glucose, Frontiers in Neuroenergetics, 7, 3:5. | Q2 | n/a | n/a |
| * | | | | |
| 125 | Gama-Norton L, Botezatu L, Herrmann S, Schweizer M, Alves PM , Hauser H, Wirth D (2011) Lentivirus Production Is Influenced by SV40 Large T-Antigen and Chromosomal Integration of the Vector in HEK293 Cells, Human Gene Therapy, 22(10): 1269-1279. | Q1 | 4.218 | 3,963 |
| | DOI: 10.1089/hum.20DOI: 10.143 | | | |
| 124 | Real G, Monteiro F, Burger C, Alves PM (2011), Improvement of lentiviral transfer vectors using cis-acting regulatory elements for increased gene expression, Applied Microbiology Biotechnology, 91(6): 1581-91. | Q1 | 3.425 | 3,613 |
| * | DOI: 10.1007/s00253-011-3392-2 | | | |
| 123 | Mandenius CF, Andersson TB, Alves PM , Batzl-Hartmann C, Björquist P, Carrondo MJT, Chesne C, Coecke S, Edsbagge J, Fredriksson JM, Gerlach JC, Heinzle E, Ingelman-Sundberg M, Johansson I, Küppers-Munther B, Müller-Vieira U, Noor F, Zeilinger K (2011) Toward Preclinical Predictive Drug Testing for Metabolism and Hepatotoxicity by Using In Vitro Models Derived from Human Embryonic Stem Cells and Human Cell Lines - A Report on the Vitrocellomics EU-project, ATLA, 39:147:171. | Q2 | 1.455 | 1,845 |
| | DOI: 10.1177/026119291103900210 | | | |
| 122 | Vicente T, Mota JP, Peixoto C, Alves PM , Carrondo MJ, (2011) Rational design and optimization of downstream processes of virus particles for | Q1 | 9.646 | 10,959 |

biopharmaceutical applications: Current advances, *Biotechnology Advances*, 29:869-878.

DOI: 10.1016/j.biotechadv.2011.07.004

- | | | | | |
|----------|---|----|-------|-------|
| 121
* | Silva AC, Carrondo MJT, Alves PM (2011) Strategies for improved stability of Peste des Petits Ruminants Vaccine, <i>Vaccine</i> , 29(31): 4983-91. | Q2 | 3.766 | 3,700 |
| | DOI: 10.1016/j.vaccine.2011.04.102 | | | |
| 120 | Rodrigues A, Guerreiro M, Santiago V, Alves PM , Dalba C, Klatzmann D, Carrondo MJT, Coroadinha AS (2011) Down-regulation of CD81 tetraspanin in human cells producing retroviral-based particles: Tailoring vector composition, <i>Biotechnology and Bioengineering</i> , 108:2623-33. | Q1 | 3.946 | 3,856 |
| | DOI: 10.1002/bit.23231 | | | |
| 119
* | Roldão A, Vicente T, Peixoto C, Carrondo MJT, Alves PM (2011) Quality control and analytical methods for baculovirus-based products, <i>Journal of Invertebrate Pathology</i> , (Baculovirus in Medicine - Special Issue), 107: S94-105. | Q2 | 2.064 | 2,147 |
| | DOI: 10.1016/j.jip.2011.05.009 | | | |
| 118
* | Vicente T, Roldão A, Peixoto C, Carrondo MJTC, Alves PM (2011) Large-scale production and purification of VLP-based vaccines, <i>Journal of Invertebrate Pathology</i> (Baculovirus in Medicine – Special Issue), 107: S42-48. | Q2 | 2.064 | 2,147 |
| | DOI: 10.1016/j.jip.2011.05.004 | | | |
| 117
* | Sá Santos S, Sonnewald U, Carrondo MJ, Alves PM (2011) The role of glia in neuronal recovery following anoxia: In vitro evidence of neuronal adaptation, <i>Neurochemistry International</i> , 58:665-675. | Q2 | 2.857 | 2,902 |
| | DOI: 10.1016/j.neuint.2011.02.005 | | | |
| 116
* | Leite SB, Teixeira AP, Miranda JP, Tostões RM, Clemente JJ, Sousa MF, Carrondo MJ, Alves PM (2011) Merging bioreactor technology with 3D hepatocyte-fibroblast culturing approaches: Improved in vitro models for toxicological applications, <i>Toxicology in Vitro</i> , 25:825-32. | Q2 | 2.775 | 2,755 |
| | DOI: 10.1016/j.tiv.2011.02.002 | | | |
| 115 | Lesch HP, Laitinen A, Peixoto C, Vicente T, Makkonen ME, Laitinen L, Pikkarainen JT, Samaranayake H, Alves PM , Carrondo MJT, Ylä-Herttua S, Airene KJ (2011) Production and Purification of lentiviral vectors generated in 293T suspension cells with baculoviral vectors, <i>Gene Therapy</i> , 18:531-538. | Q1 | 3.71 | 4,143 |
| | DOI: 10.1038/gt.20DOI: 10.162 | | | |

114	Teixeira AP, Duarte TM, Carrondo M, Alves PM (2011) Synchronous fluorescence spectroscopy as a novel tool to enable PAT applications in bioprocesses, <i>Biotechnology and Bioengineering</i> , 108:1852-61. <i>DOI</i> : 10.1002/bit.23131	Q1	3.946	3,856
113	Vicente T, Fáber R, Alves PM , Carrondo MJT, Mota JP (2011) Impact ligand density on the optimization of ion-exchange membrane chromatography for viral vector purification, <i>Biotechnology and Bioengineering</i> , 108:1347-59. <i>DOI</i> : 10.1002/bit.23058	Q1	3.946	3,856
112	Queiroga CS, Almeida AS, Alves PM , Brenner C, Vieira HL (2011) Carbon monoxide prevents hepatic mitochondrial membrane permeabilization, <i>BMC Cell Biology</i> , 12: <i>DOI</i> : 10. <i>DOI</i> : 10.1186/1471-2121-12-10	Q2	2.589	2,936
111	Vieira HLA, Alves PM , Vercelli A (2011) Modulation of neuronal stem cell differentiation: Influence of hypoxia and reactive oxygen species, <i>Progress in Neurobiology</i> , 93(3): 444-55. <i>DOI</i> : 10.1016/j.pneurobio.2011.01.007	Q1	8.874	10,056
110	Carinhas N, Bernal V, Teixeira AP, Carrondo MJT, Alves PM , Oliveira R (2011) Hybrid metabolic flux analysis: combining stoichiometric and statistical constraints to model the formation of complex recombinant product, <i>BMC Systems Biology</i> , 5:34. <i>DOI</i> : 10.1186/1752-0509-5-34	Q1	3.148	3,544
109 *	Amaral AI, Teixeira AP, Sonnewald U, Alves PM (2011) Estimation of intracellular fluxes in cerebellar neurons after hypoglycemia: Importance of the pyruvate recycling pathway and glutamine oxidation, <i>Journal of Neuroscience Research</i> , 89:700-7 <i>DOI</i> : 10. <i>DOI</i> : 10.1002/jnr.22571	Q2	2.738	3,047
108 *	Teixeira AP, Duarte TM, Oliveira R, Carrondo MJ, Alves PM (2011) High-throughput analysis of animal cell cultures using two dimensional fluorometry, <i>Journal of Biotechnology</i> , 151(3): 255-260. <i>DOI</i> : 10.1016/j.jbiotec.20 <i>DOI</i> : 10.11.015	Q1	3.045	3,288
107	Tavares L, Alves PM , Ferreira RB, Santos C (2011) Comparison of different methods for DNA-free RNA isolation from SK-N-MC Neuroblastoma, <i>BMC Research Notes</i> , 4,3 <i>DOI</i> : 10.1186/1756-0500-4-3	Q2	n/a	n/a
2010				
106	Coroadinha AS, Gama-Norton L, Amaral AI, Hauser H, Alves PM , Cruz PE (2010) Production of Retroviral Vectors, <i>Current Gene Therapy</i> ,	Q1	4.902	4,482

10(6):456-473.

DOI: 10.2174/156652310793797739

- | | | | | |
|-----------------|---|----|-------|-------|
| 105
* | Vieira HL, Pereira AC, Peixoto CC, Moraes RH, Alves PM , Mendonça RZ (2010) Improvement of recombinant protein production by an anti-apoptotic protein from hemolymph of <i>Lonomia oblique</i> , Cytotechnology, 62(6): 547-55. | Q1 | 2.97 | 3,225 |
| | DOI: 10.1007/s10616-010-9305-x | | | |
| 104
* | Bernal V, Monteiro F, Carinhas N., Ambrósio R, Carrondo MJT, Alves PM (2010), Metabolic burden in baculovirus-infected <i>Spodoptera frugiperda</i> Sf9 cells, Journal Biotechnology, 150(3):332-42. | Q2 | 3.572 | 3.338 |
| | DOI: 10.1016/j.jbiotec.20DOI: 10.09.958 | | | |
| 103
* | Roldão A, Mellado MC, Castilho LR, Carrondo MJT, Alves PM (2010) Virus-Like Particles in Vaccine Development, Expert Review of Vaccines, 9(10): 1149 -76. | Q1 | 4.194 | 4,069 |
| | DOI: 10.1586/ERV.DOI: 10.115 | | | |
| 102 | Silva AC, Peixoto C, Lucas T, Küppers C, Cruz PE, Alves PM , Kochanek S (2010) Adenovirus vector production and purification, Current Gene Therapy, 10(6): 437-55. | Q1 | 4.902 | 4,482 |
| | DOI: 10.2174/156652310793797694 | | | |
| 101
* | Tostões RM, Leite SB, Miranda JP, Sousa MFQ, Wang DIC, Carrondo MJT, Alves PM (2010), Perfusion of 3D encapsulated hepatocytes – a synergistic effect enhancing long term functionality in bioreactors, Biotechnology and Bioengineering, 108:41–49. | Q1 | 5.328 | 5,498 |
| | DOI: 10.1002/bit.22920 | | | |
| 100 | Gama-Norton L, Herrmann S, Schucht R, Coradinha AS, Löw R, Alves PM , Bartholomae CC, Schmidt M, Baum C, Schambach A, Hauser H, Wirth D (2010) Retroviral vector performance upon integration in to defined chromosomal loci of modular packaging cell lines, Human Gene Therapy, 21(8): 979-91. | Q4 | N/A | N/A |
| | DOI: 10.1089/hum.2009.089 | | | |
| 99
* | Serra M, Brito C, Sousa MFQ, Jensen J, Strehl R, Hyllner J, Tostões R, Clemente J, Carrondo MJT, Alves PM (2010) Improving expansion of pluripotent human embryonic stem cells in perfused bioreactors through oxygen control, Journal of Biotechnology, 148: 208-215. | Q1 | 2.97 | 3,225 |
| | DOI: 10.1016/j.jbiotec.20DOI: 10.06.015 | | | |
| 98 | Serra AT, Matias AA, Almeida AP, Bronze MR, Alves PM , Sousa HC, Duarte C (2010) Processing cherries (<i>Prunus avium</i>) using supercritical fluid technology. Evaluation of SCF extracts as promising natural chemotherapeutical agents, The Journal of Supercritical Fluids, | Q1 | 2.986 | 3,112 |

55:1007–1013.

DOI: 10.1016/j.supflu.20DOI: 10.06.006

- | | | | | |
|----|--|----|-------|-------|
| 97 | Vicente T, Mota JPB, Peixoto C, Alves PM , Carrondo MJT (2010) Analysis of adsorption of a baculovirus bioreaction bulk on an ion-exchange surface by surface plasmon resonance, Journal of Biotechnology, 148:171-181. | Q1 | 2.97 | 3,225 |
| | DOI: 10.1016/j.jbiotec.20DOI: 10.05.005 | | | |
| 96 | Adakal H, Stachurski F, Konkobo M, Zoungrana S, Meyer D, Pinarello V, Aprelon R, Lefrancois T, Marcelino I, Alves PM , Martinez D, Vachier N (2010) Efficiency of inactivated vaccines against heartwater in Burkina Faso: effect of Ehrlichia ruminantium genetic diversity Vaccine, 28:4573-4580. | Q1 | 3.572 | 3,467 |
| | DOI: 10.1016/j.vaccine.20DOI: 10.04.087 | | | |
| 95 | Vicente T, Peixoto C, Alves PM , Carrondo MJT (2010), Modeling electrostatic interactions of baculovirus vectors for ion-exchange process development, Journal of Chromatography A, 1217:3754-3764. | Q1 | 5.512 | 6,714 |
| | DOI: 10.1016/j.chroma.20DOI: 10.03.059 | | | |
| 94 | Miranda JP, Rodrigues A, Tostões RM, Leite, S, Zimmermann H, Carrondo MJT, Alves PM (2010) Extending Hepatocyte Functionality for Drug Testing Applications using high viscosity alginate encapsulated Three-Dimensional Cultures in Bioreactors, Tissue Engineering Part C, 16(6): 1223-1232. | Q1 | 4.636 | 5,669 |
| * | | | | |
| | DOI: 10.1089/ten.tec.2009.0784 | | | |
| 93 | Queiroga C, Martel C, Brenner C, Alves PM , Vieira H (2010) Glutathionylation of adenine nucleotide translocase induced by carbon monoxide prevents mitochondrial membrane permeabilisation and apoptosis, Journal of Biological Chemistry, 285(22): 17077-17088. | Q1 | 5.328 | 5,498 |
| | DOI: 10.1074/jbc.M109.065052 | | | |
| 92 | Fortalezas S, Tavares L, Pimpão R, Tyagi M, Pontes V, Alves PM , Santos C, Ferreira RB (2010) Antioxidant properties and neuroprotective capacity of strawberry tree fruit, Nutrients, 2(2): 214-229. | Q4 | N/A | N/A |
| | DOI: 10.3390/nu2020214 | | | |
| 91 | Amaral AI, Teixeira A, Martens S, Bernal V, Sousa MFQ, Alves PM (2010) Metabolic alterations induced by ischemia in primary cultures of astrocytes: merging 13C NMR spectroscopy and metabolic flux analysis, Journal of Neurochemistry, 113(3): 735-48. | Q1 | 2.97 | 3,225 |
| * | | | | |
| | DOI: 10.1111/j.1471-4159.20DOI: 10.06636.x | | | |

- 90** Matias A, Serra AT, Silva CA, Perdigão R, Ferreira T, Marcelino I, Silva S, Coelho, V A, **Alves PM**, Duarte C (2010) Portuguese winemaking residues as a potential source of natural anti-adenoviral agents, International Journal of Food Sciences and Nutrition, 61, 357-368.
DOI: 10.3109/09637480903430990
- 89** Vicente T, Mota P, Peixoto C, **Alves PM**, Carrondo MJT (2010) Modeling protein binding and elution over a chromatographic surface probed by surface plasmon resonance, Journal of Chromatography A, 1217:2032-2041.
DOI: 10.1016/j.chroma.20DOI: 10.01.068
- 88** Malpique R, Osório L, Ferreira D, Ehrhart F, Katsen-Globa A, Brito C, Zimmermann H, **Alves PM** (2010) Alginate encapsulation for cryopreservation of brain cell aggregates, Tissue Engineering, Part C, 16(5): 965-977
DOI: 10.1089/ten.tec.2009.0660
- 87** Carinhas N, Bernal V, Monteiro F, Carrondo MJT, Oliveira R, **Alves PM** (2010) Improving baculovirus production at high cell density through manipulation of energy metabolism, Metabolic Engineering, 12:39-52.
DOI: 10.1016/j.ymben.2009.08.008
- 86** Franco CF, Mellado MC, **Alves PM**, Coelho AV (2010) Monitoring virus-like-particle and viral protein production by Intact Cell MALDI-TOF Mass Spectrometry, Talanta, 80(4): 1561-8.
DOI: 10.1016/j.talanta.2009.06.081

2009

- 85** Serra M, Brito C, Costa E, Sousa MFQ, **Alves PM** (2009) Integrating human stem cell expansion and neuronal differentiation in bioreactors, BMC Biotechnology, 9:92.
DOI: 10.1186/1472-6750-9-82
- 84** Rodrigues AF, Carmo M, **Alves PM**, Coroadinha AS (2009) Retroviral vector production under serum deprivation: the role of lipids, Biotechnology and Bioengineering, 104(6): 1171-1181.
DOI: 10.1002/bit.22499
- 83** Carmo M, Dias JD, Panet A, Coroadinha AS, Carrondo MJT, **Alves PM**, Cruz PE (2009) Thermo sensitivity of the reverse transcription process as an inactivation mechanism of lentiviral vectors, Human Gene Therapy, 20(10): 1168-1176.
DOI: 10.1089/hum.2009.068
- 82** Mellado MC, Mena JA, Lopes A, Ramírez OT, Carrondo MJT, Palomares

- * LA, **Alves PM** (2009) Impact of physicochemical parameters on in vitro assembly and disassembly kinetics of recombinant triple layered rotavirus-like particles, *Biotechnology and Bioengineering*, 104(4): 674-686.
DOI: 10.1002/bit.22430
- 81** Carmo M, Alves A, Rodrigues AF, Coroadinha AS, Carrondo MJT, **Alves PM**, Cruz PE (2009) Stabilization of gammaretroviral and lentiviral vectors: from production to gene transfer, *Journal of Gene Medicine*, 11:670-678.
DOI: 10.1002/jgm.1353
- 80** Teixeira AP, Oliveira R, **Alves PM**, Carrondo MJT (2009) Advances in on-line monitoring and control of mammalian cell cultures: supporting the PAT initiative, *Biotechnology Advances*, 27:726-732.
DOI: 10.1016/j.biotechadv.2009.05.003
- 79** Güll I, **Alves PM**, Gabor F, Wirth M (2009) Viability of the Human Adenocarcinoma Cell Line Caco-2: Influence of Cryoprotectant, Freezing Rate, and Storage Temperature, *Scientia Pharmaceutica*, 77:133-141.
DOI: 10.3797/scipharm.0810-07
- 78** Vicente T, Peixoto C, Carrondo MJT, **Alves PM** (2009) Purification of recombinant baculoviruses for gene therapy using membrane processes, *Gene Therapy*, 16:766-775.
DOI: 10.1038/gt.2009.33
- * **77** Bernal V, Carinhas N, Yokomizo AY, Carrondo MJT, Oliveira R, **Alves PM** (2009) Cell density effect in the Baculovirus-Insect Cells system: a quantitative analysis of energetic metabolism, *Biotechnology and Bioengineering*, 104(1): 162-180. **Selected for the ISSUE HIGHLIGHT.**
DOI: 10.1002/bit.22364
- * **76** Roldão A, Oliveira R, Carrondo MJT, **Alves PM** (2009) Error Assessment in Recombinant Baculovirus Titration: Evaluation of Different Methods, *Journal of Virological Methods*, 159:69-80.
DOI: 10.1016/j.jviromet.2009.03.007
- * **75** Malpique R, Ehrhart F, Katsen-Globa A, Zimmermann H, **Alves PM** (2009) Cryopreservation of Adherent Cells: Strategies to Improve Cell Viability and Function after Thawing, *Tissue Engineering, Part C*, 15:1-14. **Selected for the ISSUE COVER.**
DOI: 10.1089/ten.tec.2008.0410
- 74** Vieira HLA, Cunha L, Goldmacher V, **Alves PM** (2009) The effect of the cell death suppressor vMIA on the production of a recombinant

- * protein in the adenovirus-293 expression system, Protein Expression and Purification, 64(2): 179-184.
DOI: 10.1016/j.pep.2008.11.004
- 73 Ferreira TB, Perdigão R, Silva AC, Zhang C, Aunins JG, Carrondo MJT, **Alves PM** (2009) 293 Cell Cycle Synchronisation in Adenovirus Vector Production, Biotechnology Progress, 25:235-243. Q2 2.398 2,580
* DOI: 10.1002/btpr.64
- 72 Serra M, Brito C, Leite SB, Gorjup E, Von Briesen H, Carrondo MJT, **Alves PM** (2009) Stirred Bioreactors for the Expansion of Adult Pancreatic Stem Cells, Annals of Anatomy, 191:104-115. Q4 0.877 1,934
* DOI: 10.1016/j.aanat.2008.09.005
- 71 Carinhas N, Bernal V, Yokomizo AY, Carrondo MJT, Oliveira R, **Alves PM** (2009) Baculovirus Production for gene Therapy: the role of cell density, Multiplicity of Infection and medium exchange, Applied Microbiology and Biotechnology, 81:1041-1049. Q1 2.896 3,264
* DOI: 10.1007/s00253-008-1727-4
- 70 Teixeira AP, Portugal CAM, Carinhas N, Dias JML, Crespo JP, **Alves PM**, Carrondo MJT, Oliveira R (2009) In situ 2D fluorometry and chemometric monitoring of mammalian cell cultures, Biotechnology and Bioengineering, 102(4):1098-1106. Q1 3.377 3,627
DOI: 10.1002/bit.22125
- 69 Miranda JP, Leite SB, Muller-Vieira U, Rodrigues A, Carrondo MJT, **Alves PM** (2009) Towards extended functional hepatocyte in vitro cultures, Tissue Engineering, Part C, 15:1-11. Q1 4.582 5,444
* DOI: 10.1089/ten.tec.2008.0352

2008

- 68 Gouveia RM, Gomes CM, Sousa M, **Alves PM**, Costa J (2008) Kinetic analysis of L1 Homophilic Interaction: Role of the First Four Immunoglobulin Domains and Implications on Binding Mechanism, Journal of Biological Chemistry, 283(42): 28038-28047. Q1 5.52 5,575
DOI: 10.1074/jbc.M804991200
- 67 Peixoto C, Ferreira TB, Sousa MQ, Carrondo MJT, **Alves PM** (2008) Towards Purification of adenoviral vectors based on membrane technology, Biotechnology Progress, 24:1290-1296. Q2 2.108 2,292
* DOI: 10.1002/btpr.25
- 66 Mellado MC, Peixoto C, Cruz PE, Carrondo MJT, **Alves PM** (2008) Purification of recombinant rotavirus VP7 glycoprotein for the study of in vitro rotavirus-like particles assembly, Journal Chromatography B, Q1 2.5 2,676
*

874:89-94.

DOI: 10.1016/j.jchromb.2008.09.002

- | | | | | |
|----|---|----|-------|-------|
| 65 | Rodrigues T, Alves A, Lopes A, Carrondo MJT, Alves PM , Cruz PE (2008) Removal of envelope protein-free retroviral vectors by anion exchange chromatography to improve product quality, Journal of Separation Science, 31:3509-3518. | Q1 | 2.746 | 2,655 |
| | DOI: 10.1002/jssc.200800195 | | | |
| 64 | Amaral AI, Coroadinha AS, Merten O-W, Alves PM (2008) Improving retroviral vectors production: Role of Carbon Sources in Lipid Biosynthesis, Journal of Biotechnology, 138:57-66. | Q1 | 2.748 | 2,938 |
| * | DOI: 10.1016/j.jbiotec.2008.08.005 | | | |
| 63 | Vieira HLA, Queiroga CSF, Alves PM (2008) Pre-conditioning induced by carbon monoxide provides neuronal protection against apoptosis, Journal of Neurochemistry, 107:375-384. | Q1 | 4.5 | 4,553 |
| * | DOI: 10.1111/j.1471-4159.2008.056DOI: 10.x | | | |
| 62 | Silva AC, Delgado I, Sousa MFQ, Carrondo MJT, Alves PM (2008) Scalable culture systems using different cell lines for the Production of Peste des Petits Ruminants Vaccine, Vaccine, 26:3305-11. | Q2 | 3.298 | 3,189 |
| * | DOI: 10.1016/j.vaccine.2008.03.077 | | | |
| 61 | Mellado MC, Franco C, Coelho A, Alves PM , Simplício AL (2008) Sodium dodecyl sulfate-capillary gel electrophoresis analysis of rotavirus-like particles, Journal of Chromatography A, 1192:166-72. | Q1 | 3.756 | 3,758 |
| | DOI: 10.1016/j.chroma.2008.03.035 | | | |
| 60 | Carmo M, Panet A, Carrondo MJT, Alves PM , Cruz PE (2008) From retroviral vector production to gene transfer: spontaneous inactivation is caused by loss of reverse transcription capacity, Journal of Gene Medicine, 10:383-91. | Q1 | 3.141 | 3,387 |
| | DOI: 10.1002/jgm.1163 | | | |
| 59 | Perovski Z, Norton de Matos MRP, Braga SS, Pereira CCL, Matos ML, Gonçalves IS, Pillinger M, Alves PM , Romão CC (2008) Synthesis, characterization and antitumor activity of 1,2-disubstituted ferrocenes and cyclodextrin inclusion complexes, Journal of Organometallic Chemistry, 693:675-684. | Q2 | 1.866 | 2,068 |
| | DOI: 10.1016/j.jorganchem.2007.11.053 | | | |
| 58 | Vicente T, Sousa MFQ, Peixoto C, Mota JPB, Alves PM , Carrondo MJT (2008) Anion Exchange Membrane Chromatography for Purification of Rotavirus-like Particles, Journal of Membrane Science, 311:270-283. | Q1 | 3.247 | 3,673 |

DOI: 10.1016/j.memsci.2007.12.021

- 57** Carrondo MJT, Merten O-W, Haury M, **Alves PM**, Coroadinha AS (2008) Impact of Retroviral Vector Components Stoichiometry on Packaging Cell Lines: effects on productivity and vector quality, Human Gene Therapy, 19(2), 199-200. DOI: 10.1089/hum.2007.0101
- 56** Roldão A, Carrondo MJT, **Alves PM**, Oliveira R (2008) Stochastic Simulation of Protein Expression in the Baculovirus/Insect Cells System, Computers and Chemical Engineering, 32:68-77. DOI: 10.1016/j.compchemeng.2007.04.017
- 55** * Teixeira A, Sá Santos S, Carinhas N, Oliveira R, **Alves PM** (2008) Combining Metabolic Flux Analysis tools and ¹³C-NMR to estimate intracellular fluxes of cultured astrocytes, Neurochemistry International, 52:478-486. DOI: 10.1016/j.neuint.2007.08.007

2007

- 54** Fabuary B, Geysen D, Ceeseey A, Marcelino I, **Alves PM**, Taoufik A, Postigo M, Bell-Sakyi L, Jongejan F (2007) Immunisation of Sheep Against Heartwater in The Gambia using Inactivated and Attenuated Ehrlichia Ruminantium Vaccines, Vaccine, 25:7939-7947. DOI: 10.1016/j.vaccine.2007.09.002
- 53** Teixeira AP, Carinhas N, Cruz PE, **Alves PM**, Carrondo MJT, Oliveira R (2007) Hybrid Semi-Parametric Mathematical Systems: Bridging the gap between systems biology and process engineering, Journal of Biotechnology, 132:418-425. DOI: 10.1186/1471-2105-8-30
- 52** * Serra M, Leite SB, Brito C, Costa J, Carrondo MJT, **Alves PM** (2007) Novel Culture Strategy for Human Stem Cell Proliferation and Neuronal Differentiation, Journal of Neuroscience Research, 85:3557-3566. DOI: 10.1002/jnr.21451
- 51** * Sá Santos S, Leite SM, Sonnewald U, **Alves PM** (2007) Stirred Vessels Cultures of Rat Brain Cell Aggregates: Characterization of Major Metabolic Pathways and Cell Population Dynamics, Journal of Neuroscience Research, 85:3386-3397. DOI: 10.1002/jnr.21409
- 50** * Peixoto C, Marcelino I, Amaral AI, Carrondo MJT, **Alves PM** (2007) Purification by membrane technology of an intracellular Ehrlichia ruminantium candidate vaccine against Heartwater, Process Biochemistry, 42:1084-1089. DOI: 10.1016/j.procbio.2007.04.017

DOI: 10.1016/j.procbio.2007.04.012

- | | | | | |
|---------|---|----|-------|-------|
| 49
* | Malpique R, Katsen-Globa A, Carrondo MJT, Zimmermann H, Alves PM (2007) Cryopreservation in micro-volumes: Impact upon Caco-2 Colon Adenocarcinoma cell proliferation and differentiation, <i>Biotechnology and Bioengineering</i> , 98:155-166. | Q1 | 3.037 | 3,276 |
| | DOI: 10.1002/bit.21382 | | | |
| 48
* | Marcelino I, Vachiéry N, Amaral AI, Roldão A, Lefancois T, Carrondo MJT, Alves PM , Martinez D (2007) Effect of Purification Process and the Storage Conditions on the Efficacy of an Inactivated Vaccine Against Heartwater, <i>Vaccine</i> , 25:4903-4913. | Q2 | 3.377 | 3,239 |
| | DOI: 10.1016/j.vaccine.2007.04.055 | | | |
| 47 | Rodrigues T, Carvalho A, Carmo M., Carrondo MJT, Alves PM , Cruz PE (2007) Scaleable purification process for gene therapy retroviral vectors <i>Journal of Gene Medicine</i> , 9:233-243. | Q1 | 3.544 | 3,659 |
| | DOI: 10.1002/jgm.1021 | | | |
| 46
* | Ferreira TB, Carrondo MJT, Alves PM (2007) Effect of ammonia production on intracellular pH: consequent effect on adenovirus vector production, <i>Journal of Biotechnology</i> , 129:433-438. | Q1 | 2.565 | 3,015 |
| | DOI: 10.1016/j.jbiotec.2007.01.010 | | | |
| 45 | Roldão A, Vieira HLA, Charpilienne A, Poncet D, Roy P, Carrondo MJT, Alves PM , Oliveira R (2007) Modeling Rotavirus-Like Particles production in a baculovirus expression vector system: infection kinetics, baculovirus DNA replication, mRNA synthesis and protein production, <i>Journal of Biotechnology</i> , 128:875-894. | Q1 | 2.565 | 3,015 |
| | DOI: 10.1016/j.jbiotec.2007.01.003 | | | |
| 44 | Teixeira A, Alves C, Alves PM , Carrondo MJT, Oliveira R (2007) Hybrid Elementary Flux Analysis/Nonparametric Modeling: Application for Bioprocess Control, <i>BMC Bioinformatics</i> , 8(1):30. | Q1 | 3.493 | 4,221 |
| | DOI: 10.1186/1471-2105-8-30 | | | |
| 43 | Roldão A, Vieira HLA, Alves PM , Oliveira R, Carrondo MJT (2007) Intracellular dynamics in Rotavirus-like particles production: Evaluation of multigene and monocistronic infection strategies, <i>Process Biochemistry</i> , 41:2188-2199. | Q1 | 2.336 | 2,628 |
| | DOI: 10.1016/j.procbio.2006.06.019 | | | |
| 42 | Gouveia RM, Morais VA, Peixoto C, Sousa M, Regalla M, Alves PM , Costa J (2007) Production and purification of functional truncated soluble forms of human recombinant L1 cell adhesion glycoprotein from <i>Spodoptera frugiperda</i> Sf9 cells, <i>Protein Expression and Purification</i> , 52:182-193. | Q2 | 1.94 | 1,783 |

DOI: 10.1016/j.pep.2006.DOI: 10.008

- 41** Rodrigues T, Carrondo MJT, **Alves PM**, Cruz PE (2007) Purification of retroviral vectors for clinical application: biological implication and technological challenges, Journal of Biotechnology, 127:520-541.

DOI: 10.1016/j.jbiotec.2006.07.028

- 40** Peixoto C, Sousa MFQ, Silva AC, Carrondo MJT, **Alves PM** (2007) Downstream Processing of Triple-layered Rotavirus Like Particles, Journal of Biotechnology, 127:452-61.

DOI: 10.1016/j.jbiotec.2006.08.002

2006

- 39** Vieira HLA, Pereira ACP, Carrondo MJT, **Alves PM** (2006) Catalase effect on cell death for the improvement of recombinant protein production in baculovirus-insect cell system, Bioprocess and Biosystems Engineering, 29:409-414.

DOI: 10.1007/s00449-006-0093-9

- 38** Lameiro MH, Malpique R, Silva AC, **Alves PM**, Melo E (2006) Encapsulation of adenoviral vectors into chitosan-bile salt microparticles for mucosal vaccination, Journal of Biotechnology, 126:152-162.

DOI: 10.1016/j.jbiotec.2006.04.030

- 37** Rodrigues T, Carvalho A, Roldão A, Carrondo MJT, **Alves PM**, Cruz PE (2006) Screening anion-exchange chromatographic matrices for isolation of onco-retroviral vectors, Journal Chromatography B, 837:59-68.

DOI: 10.1016/j.jchromb.2006.03.061

- 36** Zhang C, Ferreira TB, Cruz PE, **Alves PM**, Haury M, Carrondo MJT (2006) The importance of 293 cell cycle phase on adenovirus vector production, Enzyme Microbiology and Technology, 39:1328-1332.

DOI: 10.1016/j.enzmictec.2006.03.021

- 35** Coroadinha AS, **Alves PM**, Sá Santos S, Cruz PE, Merten O-W, Carrondo MJT (2006) Retrovirus Producer Cell Line Metabolism: implications on Viral Productivity, Applied Microbiology and Biotechnology, 72:1125-1135.

DOI: 10.1007/s00253-006-0401-y

- 34** Lameiro MH, Lopes A, Martins LO, **Alves PM**, Melo E (2006) Incorporation of a Model Protein into Chitosan-Bile salt Microparticles, International Journal of Pharmaceutics, 312:119-130.

DOI: 10.1016/j.ijpharm.2006.01.006

- | | | | | |
|---------|---|----|-------|-----|
| 33
* | Cruz PE, Silva AC, Roldão A, Carmo M, Carrondo MJT, Alves PM (2006) Screening of novel excipients for improving the stability of retroviral and adenoviral vectors, <i>Biotechnology Progress</i> , 22:568-576.

DOI: 10.1021/bp050294y | Q2 | 2.102 | N/A |
| 32 | Coroadinha AS, Silva AC, Pires E, Coelho A, Alves PM , Carrondo MJT (2006) Effect of osmotic pressure on the production of retroviral vectors: enhancement in vector stability, <i>Biotechnology and Bioengineering</i> , 94:322-329.

DOI: 10.1002/bit.20847 | Q1 | 2.999 | N/A |
| 31 | Coroadinha AS, Ribeiro J, Roldão A, Cruz PE, Alves PM , Merten O-W, Carrondo MJT (2006) Effect of medium sugar source on the production of retroviral vectors for gene therapy, <i>Biotechnology and Bioengineering</i> , 94:24-36.

DOI: 10.1002/bit.20778 | Q1 | 2.999 | N/A |
| 30 | Brennan L, Alves PM , Hewage C, Malthouse JG, Mcbean GJ (2006) Impact of gliotoxin L-serine-O-sulphate on cellular metabolism in cultured astrocytes, <i>Neurochemistry International</i> , 48:739-745.

DOI: 10.1016/j.neuint.2005.12.004 | Q2 | 3.159 | N/A |
| 29 | Carmo M, Faria, TQ, Falk, H, Coroadinha AS, Teixeira M, Merten O-W, Gény-Fiamma C, Alves PM , Danos O, Panet A, Carrondo MJT, Cruz PE (2006) Relationship between retroviral vector membrane and vector stability <i>Journal of General Virology</i> , 87:1349-1356.

DOI: 10.1099/vir.0.81302-0 | Q1 | 3.11 | N/A |
| 28
* | Marcelino I, Sousa MFQ, Veríssimo C, Peixoto C, Cunha A, Carrondo, MJT, Alves PM (2006) Process development for the mass production of <i>Ehrlichia ruminantium</i> , <i>Vaccine</i> , 24:1716-1725.

DOI: 10.1016/j.vaccine.2005.08.109 | Q2 | 3.159 | N/A |
| 27
* | Peixoto C, Ferreira TB, Carrondo MJT, Cruz PE, Alves PM (2006) Purification of adenoviral vectors using expanded bed chromatography, <i>Journal of Virological Methods</i> , 132:121-126.

DOI: 10.1016/j.jviromet.2005.DOI: 10.002 | Q3 | 2.097 | N/A |
| 26 | Sá Santos S, Gibson GE, Cooper AJL, Denton TT, Thompson CM, Bunik VI, Alves PM , Sonnewald U (2006) Inhibitors of α -Ketoglutarate Dehydrogenase Complex Alter $[1-^{13}\text{C}]$ Glucose and $[\text{U}-^{13}\text{C}]$ Glutamate Metabolism in Cerebellar Granule Neurons, <i>Journal of Neuroscience Research</i> , 83:450-458.

DOI: 10.1002/jnr.20279 | Q2 | 3.476 | N/A |

2005

- | | | | | |
|---------|---|----|-------|-----|
| 25
* | Ferreira TB, Ferreira AL, Carrondo MJT, Alves PM (2005) Two different serum-free media and osmolarity effect upon human 293 cell growth and adenovirus production, <i>Biotechnology Letters</i> , 27:1809-1813.

DOI: 10.1007/s10529-005-3558-z | Q3 | 1.108 | N/A |
| 24 | Ferreira TB, Alves PM , Aunins JG, Carrondo MJT (2005) Use of adenoviral vectors as veterinary vaccines, <i>Gene Therapy</i> , 12:73–83.

DOI: 10.1038/sj.gt.3302618 | Q1 | 4.836 | N/A |
| 23
* | Vieira HLA, Estevão C, Roldão A, Peixoto C, Sousa M, Cruz PE, Carrondo MJT, Alves PM (2005) Triple layered rotavirus VLP production: kinetics of vector replication, mRNA stability and recombinant protein production, <i>Journal of Biotechnology</i> , 120:72-82.

DOI: 10.1016/j.jbiotec.2005.03.026 | Q1 | 2.687 | N/A |
| 22
* | Marcelino I, Veríssimo C, Sousa MFQ, Carrondo MJT, Alves PM (2005) Characterization of Ehrlichia ruminantium replication and release kinetics in endothelial cell cultures, <i>Veterinary Microbiology</i> , 110, 87-96.

DOI: 10.1016/j.vetmic.2005.07.012 | Q2 | 2.175 | N/A |
| 21
* | Ferreira TB, Ferreira AL, Carrondo MJT, Alves PM (2005) Effect of refeed strategies and non-ammonogenic medium on adenovirus production at high cell densities, <i>Journal of Biotechnology</i> , 119:272-280.

DOI: 10.1016/j.jbiotec.2005.03.009 | Q1 | 2.687 | N/A |
| 20 | Teixeira A, Cunha AE, Clemente JJ, Moreira JL, Cru, HJ, Alves PM , Carrondo MJT, Oliveira R (2005) Modeling and optimisation of a recombinant BHK-21 cultivation process using hybrid grey-box systems, <i>Journal of Biotechnology</i> , 118:290-303.

DOI: 10.1016/j.jbiotec.2005.04.024 | Q1 | 2.687 | N/A |
| 19 | Fonseca LL, Monteiro MAR, Alves PM , Carrondo MJT, Santos H (2005) Cultures of rat astrocytes challenged with a steady supply of glutamate: a new model to study flux distribution in the glutamate-glutamine cycle, <i>GLIA</i> , 51:286-296.

DOI: 10.1002/glia.20209 | Q1 | 4.276 | N/A |
| 18
* | Peixoto CC, Marcelino I, Sousa MQ, Vachiéry N, Bensaid A, Martinez D, Carrondo MJT, Alves PM (2005) Quantification of Ehrlichia ruminantium by Real Time PCR, <i>Veterinary Microbiology</i> , 107:273-278.

DOI: 10.1016/j.vetmic.2005.02.001 | Q2 | 2.175 | N/A |

17	Sá Santos S, Fonseca LL, Monteiro MAR, Carrondo MJT, Alves PM (2005) Culturing primary brain astrocytes under fully controlled environment in a novel bioreactor, Journal of Neuroscience Research, 79:26-32.	Q2	3.239	N/A
*	DOI: 10.1002/jnr.20279			
2004				
16	Carmo M, Peixoto C, Coroadinha AS, Alves PM , Cruz PE, Carrondo MJT (2004) Quantitation of MLV-based retroviral vectors using real-time RT-PCR, Journal of Virological Methods, 119:115-119.	Q2	1.729	N/A
	DOI: 10.1016/j.jviromet.2004.03.007			
2002				
15	Carvalho AV, Coroadinha AS, Alves PM , Moreira JL, Hauser H, Carrondo MJT (2002) Metabolic Changes during Cell Growth Inhibition by the IRF 1 system, Enzyme and Microbial Technology, 30: 95-109.	Q1	1.773	N/A
	DOI: 10.1016/S0141-0229(01)00460-4			
2001				
14	Fonseca LL, Alves PM , Carrondo MJT, Santos H (2001) Effects of Ethanol on the Metabolism of Primary Astrocyte Cultures Studied by ¹³ C and ³¹ P NMR Spectroscopy, Journal of Neuroscience Research, 66:803-811.	Q2	3.378	N/A
	DOI: 10.1002/jnr.10039			
2000				
13	Alves PM , Nunes R, Hong ZC, Maycock CD, Sonnewald U, Carrondo MJT, Santos H (2000) Metabolism of [3- ¹³ C] malate in primary cultures of mouse astrocytes, Developmental Neuroscience, 22:456-462.	Q1	2.523	N/A
	DOI: 10.1159/000017475			
12	Cruz HJ, Freitas CM, Alves PM , Moreira JL, Carrondo MJT (2000) Effects of Ammonia and Lactate on Growth, Metabolism and Productivity of BHK Cells, Enzyme and Microbial Technology, 27:43-52.	Q2	1.411	N/A
	DOI: 10.1016/S0141-0229(00)00151-4			
11	Alves PM , Fonseca LL, Peixoto CM, Almeida AC, Carrondo MJT, Santos H (2000) NMR Studies on Energy Metabolism of Immobilized Primary Neurons and Astrocytes during Hypoxia, Ischemia and Hypoglycemia, NMR in Biomedicine, 13:438-448.	Q2	1.914	N/A
	DOI: 10.1002/nbm.665			
10	Cruz HJ, Peixoto CM, Nimtz M, Alves PM , Dias EM, Moreira JL, Carrondo MJT (2000) Metabolic shifts do not influence the	Q1	2.081	N/A

glycosylation patterns of a recombinant fusion protein expressed in BHK cells, *Biotechnology and Bioengineering*, 69:129-139.

DOI: 10.1002/(SICI)1097-0290(20000720)69:2<129::AID-BIT2>3.3.CO;2-X

1999

- 9 Cruz PE, Martins PC, **Alves PM**, Peixoto CC, Santos H, Moreira JL, Carrondo MJT (1999) Proteolytic Activity in Infected and non-Infected Insect Cells: Degradation of HIV-1 Pr55gag Particles, *Biotechnology and Bioengineering*, 65:133-143.

DOI: 10.1002/(SICI)1097-0290(19991020)65:2<133::AID-BIT2>3.0.CO;2-X

1996

- 8 **Alves PM**, Flögel U, Brand A, Leibfritz D, Carrondo MJT, Santos H, Sonnewald, U (1996) Immobilization of Primary Astrocytes and Neurons for NMR Monitoring of Biological Processes in Vivo, *Developmental Neuroscience*, 18:478-483.

DOI: 10.1159/000111443

- 7 **Alves PM**, Moreira JL, Rodrigues JM, Aunins JG, Carrondo, MJT (1996) Two Dimensional versus Three-Dimensional Cultures Systems: Effects on Growth and Productivity of BHK Cells, *Biotechnology and Bioengineering*, 52:429-432.

DOI: 10.1002/(SICI)1097-0290(19961105)52:3<429::AID-BIT9>3.0.CO;2-M

1995

- 6 **Alves PM**, Mckenna MC, Sonnewald U (1995) Lactate Metabolism in Mouse Brain Astrocytes Studied by [13C] NMR Spectroscopy, *NeuroReport*, 6, 2201-2204.

DOI: 10.1097/00001756-199511000-00024

- 5 Moreira JL, **Alves PM**, Aunins JG, Carrondo MJT (1995) Hydrodynamic effects on BHK cells grown as suspended natural aggregates, *Biotechnology and Bioengineering*, 46:351-360.

DOI: 10.1002/bit.260460408

- 4 Moreira JL, **Alves PM**, Feliciano AS, Carrondo MJT (1995) Serum Free and Containing Medium for Growth of Suspended BHK Natural Aggregates in Stirred Vessels, *Enzyme Microbiology Technology*, 17:437-444.

DOI: 10.1016/0141-0229(94)00071-X

1994

- 3 Moreira JL, **Alves PM**, Rodrigues JM, Cruz PE, Aunins JG, Carrondo MJT (1994) Studies of Baby Hamster Kidney Natural Cell Aggregation in

Suspended Batch Cultures, *Annals of the New York Academy of Sciences*, 745:122-133.

DOI: 10.1111/j.1749-6632.1994.tb44368.x

- 2 Moreira JL, **Alves PM**, Aunins JG, Carrondo MJT (1994) Changes in Animal Cell Natural Aggregates in Suspended Batch Cultures, *Applied Microbiology and Biotechnology*, 41:203-209.

DOI: 10.1007/BF00186960

- 1 Racher AJ, Moreira JL, **Alves PM**, Wirth M, Weidle UH, Hauser H., Carrondo MJT, Griffiths JB (1994) Expression of Recombinant Antibody and Secreted Alkaline Phosphatase in Recombinant Animal Cells. Influence of Cell Line and Culture System upon Production Kinetics, *Applied Microbiology and Biotechnology*, 40:851-856.

DOI: 10.1007/BF00173987

11.4. PUBLISHED BOOKS (EDITOR)

2012

- 1 JENKINS N, BARRON N, **ALVES PM** (Eds) (2012), *ESACT Proceedings of the 21st Annual Meeting of the European Society for Animal Cell Technology Springer*, Dordrecht, 753 pages.

ISBN: 978-94-007-0883-9

DOI: 10.1007/978-94-007-0884-6

11.5. BOOK CHAPTERS

2021

- 34 Sebastião MJ, Abecasis B, Carrondo MJT, **Alves PM**, Gomes-Alves P, Serra M, 3D Strategies for expansion of human cardiac stem cells, In: *Bioreactors For Stem Cell Expansion and Differentiation*, Cabral JMS and Lobato da Silva L (Eds) CRC Press Taylor & Francis Group, 2019; pp 63-95

Print ISSN: 978-1-4987-9590-6

DOI: 10.1201/9780429453144

- 33 ISIDRO IA, PAIS DAM, **ALVES PM** (2019), CARRONDO MJTC, Online Control Strategies, In: *Comprehensive Biotechnology*, Vol. 2, Moo-Young, M., Ed., Elsevier: Pergamon, 2019; pp 943–951.

Print ISSN: 978-0-444-64047-5

DOI: 10.1016/B978-0-444-64046-8.00112-9

2016

- 32 REBELO, SAP, DEHNE, EM, BRITO, C, HORLAND, R, **ALVES, PM**, MARX, U (2016), Validation of Bioreactor and Human-on-a-Chip Devices for Chemical Safety Assessment, In: *Eskes C and Whean M (Eds) Validation of Alternative Methods for Toxicity Testing*, pp 299-316, Springer International Publishing

Print ISSN: 0065-2598, eISSN: 2214-8019
DOI: 10.1007/978-3-319-33826-2_12

- 31 SIMÃO D, AREZ F, TERRASSO AP, PINTO C, SOUSA MFQ, BRITO C, **ALVES PM** (2016), Perfusion Stirred-Tank Bioreactors for 3D Differentiation of Human Neural Stem Cells, In: Turksen K (Ed.), Bioreactors in Stem Cell Biology, pp.129-142. Humana Press
Print ISBN: 978-1-4939-6476-5, Online ISBN: 978-1-4939-6478-9
DOI: http://dx.DOI.org/10.1007/7651_2016_333.
- 30 TOSTÕES R, **ALVES PM** (2016), Culturing Entrapped Stem Cells in Continuous Bioreactors, In: Mandenius C-F (Ed.), Bioreactors: Design, Operation and Novel Applications, Chapter 7, pp.201-226. Wiley-VCH Verlag GmbH & Co. KGaA, Weinheim, Germany
Print ISBN: 9783527337682, Online ISBN: 9783527683369.
DOI: <http://dx.DOI.org/10.1002/9783527683369.ch7>.
- 29 FERNANDES P, SILVA AC, COROADINHA AS, **ALVES PM** (2016), Upstream Bioprocess for Adenovirus Vectors, In: Curiel DT (Ed.), Adenoviral Vectors for Gene Therapy, Academic Press, 2nd Edition, pp.139–161. Elsevier.
ISBN: 978-0-12-800276-6.
DOI: <http://dx.DOI.org/10.1016/B978-0-12-800276-6.00006-1>.

2015

- 28 SILVA AC, ROLDÃO A, TEIXEIRA A, FERNANDES P, SOUSA MFQ, **ALVES PM** (2015), Cell Immobilization for the Production of Viral Vaccines, In: Al-Rubeai M (ed.), Animal Cell Culture, pp. 541-563. Springer International Publishing.
Print ISBN 978-3-319-10319-8, Online ISBN 978-3-319-10320-4.
DOI: http://dx.DOI.org/10.1007/978-3-319-10320-4_17.
- 27 REBELO SP, COSTA R, SOUSA MF, BRITO C, **ALVES PM** (2015), Establishing Liver Bioreactors for In Vitro Research, In: Vinken M, Rogiers V (Ed), Protocols in In Vitro Hepatocyte Research, pp.189-202. Humana Press.
Print ISBN 978-1-4939-2073-0, Online ISBN, 978-1-4939-2074-7.
DOI: http://dx.DOI.org/10.1007/978-1-4939-2074-7_13.

2014

- 26 ROLDÃO A, COX M, **ALVES PM**, CARRONDO MJT, VICENTE T (2014), Industrial Scale Suspension Culture of Living Cells, In: Meyer H-P, Schmidhalter DR (Ed.), Industrial Scale Suspension Culture of Living Cells, pp.348-389. Wiley-VCH Verlag GmbH & Co. KGaA, Weinheim, Germany.
Print ISBN: 9783527335473, ISBN: 9783527683321.
DOI: <http://dx.DOI.org/10.1002/9783527683321.ch10>.
- 25 SÁ JV, TIAGO, DUARTE TM, CARRONDO MJT, **ALVES PM**, TEIXEIRA A (2014), Metabolic Flux Analysis: A Powerful Tool in Animal Cell Culture, In: Al-Rubeai M (Ed.), Animal Cell Culture, Chapter 16, pp.521-539. Springer International Publishing.
Print ISBN 978-3-319-10319-8, Online ISBN 978-3-319-10320-4.
DOI: http://dx.DOI.org/10.1007/978-3-319-10320-4_16.
- 24 SERRA M, BRITO C, CORREIA C, **ALVES PM** (2014), Process engineering of human pluripotent stem cells for clinical application, In: Cell Press Reviews (Ed.), Stem Cells to Model and Treat Disease, Chapter 14, pp.271-291. ApCell.
Print ISBN 9780124201910, Online ISBN 9780127999166.

- 23 DUARTE T, CARINHAS N, SILVA AC, **ALVES PM**, TEIXEIRA AP (2014), ¹H-NMR protocol for exometabolome analysis of cultured mammalian cells, In: Pörtner R (Ed.), Animal Cell Biotechnology - Methods and Protocols, 3rd Edition, pp.237-247. Humana Press.
Print ISBN 978-1-62703-732-7, Online ISBN 978-1-62703-733-4.
DOI: http://dx.DOI.org/10.1007/978-1-62703-733-4_16.
- 22 VIDIGAL J, FERNANDES F, COROADINHA AS, TEIXEIRA AP, **ALVES PM** (2014), Insect cell line development using Flp-mediated cassette exchange technology, In: Pörtner R (Ed.), Animal Cell Biotechnology - Methods and Protocols, 3rd Edition, pp.15-27. Humana Press.
Print ISBN 978-1-62703-732-7, Online ISBN 978-1-62703-733-4.
DOI: http://dx.DOI.org/10.1007/978-1-62703-733-4_2.
- 21 SILVA AC, FERNANDES P, SOUSA MFQ, **ALVES PM** (2014), Scalable production of adenovirus vectors, In: Chillón M, Bosch A (Eds.), Adenovirus – Methods and Protocols, 3rd Edition, pp.175-196. Humana Press.
Print ISBN 978-1-62703-678-8, Online ISBN 978-1-62703-679-5.
DOI: http://dx.DOI.org/10.1007/978-1-62703-679-5_13.
- 20 FERNANDES F, TEIXEIRA AP, CARINHAS N, CARRONDO MJT, **ALVES PM** (2014), Production of complex virus-like particles in Insect cells., In: Buonaguro FM, Buonaguro L (Eds.), Virus-like Particles in Vaccine Development, pp.120-134. Future Medicine.
eISBN (PDF): 978-1-78084-417-6.
DOI: <http://dx.DOI.org/10.2217/fmeh2013.13.67>.

2013

- 19 TOMÁS H, RODRIGUES AF, **ALVES PM**, COROADINHA AS (2013), Lentiviral gene therapy vectors: challenges and future directions, In: Martin F (Ed.), Gene Therapy - Tools and Potential Applications, pp.287-317. InTech.
ISBN: 978-953-51-1014-9,
DOI: <http://dx.DOI.org/10.5772/52534>.
- 18 SERRA M, CORREIA C, BRITO C, **ALVES PM** (2013), Bioprocessing of Human Pluripotent Stem Cells for Cell Therapy Applications, In: Al-Rubeai M, Naciri M (Eds.), Stem Cells and Cell Therapy. Chapter 4, pp.71-95. Humana Press.
Print ISBN 978-94-007-7195-6, Online ISBN 978-94-007-7196-3,
DOI: http://dx.DOI.org/10.1007/978-94-007-7196-3_4.
- 17 DUARTE T, CARINHAS N, SILVA AC, **ALVES PM**, TEIXEIRA AP (2013), ¹H-NMR protocol for exometabolome analysis of cultured mammalian cells, In: Pörtner R (Ed.), Animal Cell Biotechnology - Methods and Protocols. 3rd Edition, pp.237-247. Humana Press.
Print ISBN 978-1-62703-732-7, Online ISBN 978-1-62703-733-4.
DOI: http://dx.DOI.org/10.1007/978-1-62703-733-4_16.
- 16 VIDIGAL J, FERNANDES F, COROADINHA AS, TEIXEIRA AP, **ALVES PM** (2013), Insect cell line development using Flp-mediated cassette exchange technology, In: Pörtner R (Ed.), Animal Cell Biotechnology - Methods in Molecular Biology. 3rd Edition, pp.15-27. Humana Press.
Print ISBN 978-1-62703-732-7, Online ISBN 978-1-62703-733-4.
DOI: http://dx.DOI.org/10.1007/978-1-62703-733-4_2.

2012

- 15 COROADINHA AS, WIRTH D, RODRIGUES AF, GAMA-NORTON L, DUROS C, COHEN-HAGUENAUER O, **ALVES PM**, CRUZ PE, CARRONDO MJT, HAUSER H (2012), Modular retroviral producer cell lines, In: Cohen-Haguenauer O (Ed.), The CliniBook - Clinical Gene transfer state of the art, pp.118-124. Éditions EDK, Paris.
ISBN: 978-2-8425-4171-2.
- 14 BANDEIRA V, PEIXOTO C, COROADINHA AS, CRUZ PE, CARRONDO MJT, MERTEN O-W, **ALVES PM** (2012), Facing the challenges of downstream processing of lentiviral vectors, In: Cohen-Haguenauer O (Ed.), The CliniBook - Clinical Gene transfer state of the art, pp.150-155. Éditions EDK, Paris.
ISBN: 978-2-8425-4171-2.
- 13 SILVA AC, SIMÃO D, SOUSA MFQ, PEIXOTO C, CRUZ PE, CARRONDO MJT, **ALVES PM** (2012), Production and purification of Ad vectors: current status and future needs for Adenovirus vector production, In: Cohen-Haguenauer O (Ed.), The CliniBook - Clinical Gene transfer state of the art, pp. 245-252. Éditions EDK, Paris.
ISBN: 978-2-8425-4171-2.

2011

- 12 CRUZ PE, RODRIGUES T, CARMO M, WIRTH D, AMARAL AI, **ALVES PM**, COROADINHA AS, (2011), Manufacturing of retroviruses, In: Merten O-W, Al-Rubeai M (Eds.) Viral Vectors for Gene Therapy - Methods and Protocols, pp.157-182. Humana Press.
Print ISBN 978-1-61779-094-2, Online ISBN 978-1-61779-095-9.
DOI: http://dx.Doi.org/10.1007/978-1-61779-095-9_7.
- 11 TEIXEIRA AP, OLIVEIRA R, **ALVES PM**, CARRONDO MJT (2011), Process Considerations, Online Control Strategies, In: Moo-Young M (Ed.), Comprehensive Biotechnology. Second Edition, volume 2, pp. 875–882. Elsevier.
ISBN: 978-0-08-088504-9.
DOI: <http://dx.Doi.org/10.1016/B978-0-08-088504-9.00143-4>.
- 10 ROLDÃO A, SILVA AC, MELLADO MCM, **ALVES PM**, CARRONDO MJT (2011), The Biophysical Basis Viruses and Virus-Like Particles in Biotechnology: Fundamentals and Applications, In: Moo-Young M (Ed.), Comprehensive Biotechnology. Second Edition, volume 1, pp. 625–649. Elsevier.
ISBN: 978-0-08-088504-9.
DOI: <http://dx.Doi.org/10.1016/B978-0-08-088504-9.00072-6>.
- 9 RODRIGUES AF, **ALVES PM**, COROADINHA AS (2011), Production of Retroviral and Lentiviral Gene Therapy Vectors: Challenges in the Manufacturing of Lipid Enveloped Virus, In: Xu K (Ed.), Viral Gene Therapy. Chapter 2, pp.15-40.
ISBN: 978-953-307-539-6.
DOI: <http://dx.Doi.org/10.5772/18615>.
- 8 CRUZ P, RODRIGUES T, CARMO M, WIRTH D, AMARAL A, **ALVES PM**, COROADINHA AS (2011), Manufacturing of Retroviruses, In: Merten O-W, Al-Rubeai M (Eds.), Viral Vectors for Gene Therapy - Methods and Protocols. Chapter 7, pp.157-182. Humana Press, NY
Print ISBN 978-1-61779-094-2, Online ISBN 978-1-61779-095-9.
DOI: <http://dx.Doi.org/10.1007/978-1-61779-095-9>

2009

- 7 VICENTE T, PEIXOTO C, CARRONDO MJT, **ALVES PM** (2009), Virus production for clinical gene therapy, In: Walther W, Stein U (Eds.), Methods in Molecular Medicine – Cancer Gene Therapy, Second edition, Chapter 24, pp.447-470. Humana Press, Totowa, NJ, USA.
Print ISBN 978-1-934115-85-5, Online ISBN 978-1-59745-561-9.
DOI: http://dx.DOI.org/10.1007/978-1-59745-561-9_24.

2008

- 6 MELLO I, CONCEIÇÃO MM, JORGE S, CRUZ PE, **ALVES PM**, CARRONDO MJT, PEREIRA CA (2008), Viral vaccines: concepts, principles and bioprocesses, In: Castilho LR, Moraes AM, Augusto EFP, Butler M (Eds.), Animal Cell Technology – from biopharmaceuticals to Gene Therapy, Chapter 18, 435-458. Taylor & Francis, London, UK.
ISBN 978-85-7241-730-3.
- 5 MELLO I, CONCEIÇÃO MM, JORGE S, CRUZ PE, **ALVES PM**, CARRONDO MJT, PEREIRA CA (2008), Vacinas virais: Conceitos, princípios e Bioprocessos, In: Moraes AM, Augusto EFP, Castilho LR (Eds.), Tecnologia do Cultivo de Células Animais: de Biofármacos a Terapia Gênica, Chapter 18, pp.427-450. Taylor & Francis, São Paulo, Brazil.
ISBN 978-85-7241-730-3.
- 4 **ALVES PM**, CRUZ PE, CARRONDO MJT (2008), Introdução à Tecnologia de Cultivo de Células Animais, In: Moraes AM, Augusto EFP, Castilho LR (Eds.), Tecnologia de Cultivo de Células Animais: de Biofármacos a Terapia Gênica, Chapter 1, pp.2-14. Taylor & Francis, São Paulo, Brazil.
ISBN 978-85-7241-730-3.
- 3 **ALVES PM**, CARRONDO MJT, CRUZ PE (2008), Introduction to Animal Cell Technology, In: Castilho LR, Moraes AM, Augusto EFP, Butler M (Eds.), Animal Cell technology: from Biopharmaceuticals to Gene Therapy. Chapter 1, pp.1-12. Taylor & Francis, Abingdon, UK.
ISBN 978-85-7241-730-3.

2007

- 2 CRUZ PE, CARMO M, RODRIGUES T, **ALVES PM** (2007), Retrovirus production and characterization, In: Pörtner R (Ed.), Animal Cell Biotechnology - Methods and protocols. Chapter 22, pp.475-497. Humana Press, Totowa, NJ, USA.
Print ISBN 978-1-58829-660-3, Online ISBN 978-1-59745-399-8.
DOI: http://dx.DOI.org/10.1007/978-1-59745-399-8_22.

2001

- 1 BARBOTIN JN, PORTAIS JC, **ALVES PM**, SANTOS H (2001), NMR and immobilized cells, In: Wijffels RH (Ed.), Immobilized Cells, Chapter XII, pp.123-138. Springer-Verlag Berlin Heidelberg.
Print ISBN 978-3-540-67070-4, Online ISBN 978-3-642-56891-6.
DOI: http://dx.DOI.org/10.1007/978-3-642-56891-6_12.

11.6. PAPERS IN CONFERENCE PROCEEDINGS

2008-2020

- 14-25** From 2008 to 2020 approx. 12 publications in Conference Proceedings namely from the ESACT – European Society for Animal Cell Technology and from the European Society for Gene and Cell Therapy)

2007

- 13** FERREIRA T, CARRONDO MJT, **ALVES PM**, (2007), Effect of Vitamins or Lipid Addition on Adenovirus Production at High Cell Densities, In: Cell Technology for Cell Products, R. Smith (Ed.). Springer, The Netherlands, 653-656
- 12** MARCELINO I, SOUSA MFQ, VERRÍSSIMO C, AMARAL A, PEIXOTO C, CUNHA A, CARRONDO MJT, **ALVES PM**. (2007), Process development for a veterinary vaccine against heartwater using stirred tanks, In: Cell Technology for Cell Products, R. Smith (Ed.). Springer, The Netherlands, 643-648

2005

- 11** MARCELINO I, SOUSA M, VERRÍSSIMO C, PEIXOTO C, CARRONDO MJT, **ALVES PM** (2005), Process development for a Veterinary vaccine against Heartwater, in Gòdia, F, Fussenegger, M. (Eds.), Animal Cell Technology Meets Genomics,, Springer, The Netherlands, 317-320
- 10** FERREIRA T, **ALVES PM**, Gonçalves D, CARRONDO MJT (2005), Effect of MOI and Medium Composition on Adenovirus Production Kinetics, in Gòdia, F, Fussenegger, M. (Eds.), Animal Cell Technology Meets Genomics, Springer, The Netherlands, 329-332

2003

- 9** MOREIRA JL, MIRANDA PM, MARCELINO I, **ALVES PM**, CARRONDO MJT (2003), Culture Methods for Mass Production of Ruminant Endothelial Cells, in Saha BC (Ed.) Fermentation Biotechnology, Amer Chemical Soc Symposium Series, vol 862:124-141

1998

- 8** **ALVES PM**, CARVALHAL AV, MOREIRA JL, CARRONDO MJT, SANTOS H (1998), Effect of Growth Regulation in BHK Metabolism: online Monitoring by ¹³C and ³¹P NMR Spectroscopy, in Merten, O-W., Perrin, P., Griffiths, B. (Eds.), New Developments and new Applications in Animal Cell Technology, Kluwer Academic Publishers, London, 223-225

1997

- 7** **ALVES PM**, CARRONDO MJT, SANTOS H (1997), Immobilization of Primary Brain Cells in Porous Microcarriers for on line NMR Spectroscopy, in Carrondo, M.J.T., Griffiths, B., Moreira, J.L. (Eds.) Animal Cell Technology, from Vaccines to Genetic Medicine, Kluwer Academic Publishers, London, 91-98

1995

- 6** GONÇALVES LMD, RODRIGUES JM, **ALVES PM**, AUNINS JG, CARRONDO MJT (1995), The effect of flow rate on the immobilization of anchorage-independent cells to porous glass beads, in Beuvery, E.C., Griffiths, J.B., Zeijlemaker, W.P. (Eds.), Animal Cell Technology: Developments towards the 21st Century, Kluwer Academic Publishers, Dordrecht, 717-

721

- 5 **ALVES PM**, MOREIRA JL, RODRIGUES JM, AUNINS JG, CARRONDO MJT (1995), Influence of the Culture System upon Growth and Productivity of Animal Cells in Stirred Tanks, in Beuvery, E.C., Griffiths, J.B., Zeijlemaker, W.P. (Eds.), *Animal Cell Technology: Developments towards the 21st Century*, Kluwer Academic Publishers, Dordrecht, 105-109

1994

- 4 **ALVES PM**, MOREIRA JL, FELICIANO AS, CARRONDO MJT (1994), A Comparison of Animal Cell Growth Using Microcarriers and Suspended Natural Aggregates, in Spier, R.E., Griffiths, J. B., Berthold, B. (Eds.), *Animal Cell Technology, Products for Today, Prospects for Tomorrow*, Butterworth & Co., London, 321-323
- 3 MOREIRA JL, FELICIANO AS, **ALVES PM**, AUNINS JG, CARRONDO MJT (1994), Hydrodynamic Control of Suspended Natural Animal Cell Aggregates, in Spier, R.E., Griffiths, J. B., Berthold, B.(Eds.), *Animal Cell Technology, Products for Today, Prospects for Tomorrow,, Butterworth & Co., London, 397-401*

1992

- 2 MOREIRA JL, **ALVES PM**, AUNINS JG, CARRONDO MJT (1992), Aggregate Suspension Cultures of BHK Cells, in Spier, R.E., Griffiths, J.B., MacDonald, C. (Eds.), *Animal Cell Technology: Developments, Processes and Products*, Butterworth & Co., London, 411-412
- 1 MOREIRA JL, **ALVES PM**, AUNINS JG, CARRONDO MJT (1992), Baby Hamster Kidney Aggregation in Fermentation, in Vardar-SuKan, F., Suha-SuKan (Eds.), *Recent Advances in Industrial Applications of Biotechnology*, Kluwer Academic Publishers, NATO-ASI Series, Serie E, Vol 210, 527-528

11.7. SCIENCE DISSEMINATION ARTICLES

2022

- 8 **ALVES PM**, MATIAS PM, ROQUE AC (2021) Small Molecules Drugs And Biopharmaceuticals, In: Fragata J (Ed) *From Life Molecules to Global Health*, pp Principia Editora (EN) ISBN 9789897162787 (688 pg)

2013

- 7 FERNANDES P, CESTRO R, **ALVES PM**, CARRONDO MJT, CORROADINHA AS. (2013), Terapia Génica e desafios no desenvolvimento de vectores virais, *Boletim de Biotecnologia da Sociedade Portuguesa de Biotecnologia* 4, 2-23. (Portuguese)
- 6 SIMÃO D, PINTO C, SERRA M, BRITO C, **ALVES PM**. (2013), Sistemas de cultura 3D para diferenciação neural de células estaminais humanas, . *Boletim de Biotecnologia da Sociedade Portuguesa de Biotecnologia* 4, 17-20. (Portuguese)
- 5 CORREIA C, ESPINHA N, BRITO C, SERRA M, **ALVES PM** (2013), Bioengenharia de células estaminais pluripotentes humanas para aplicação clínica, *Boletim de Biotecnologia da Sociedade Portuguesa de Biotecnologia* 4, 31-33. (Portuguese)

2011

- 4 VICENTE T, PEIXOTO C, MOTA JPB, CARRONDO MJT, **ALVES PM** (2011), Optimizing Downstream

Processing of Enveloped Viruses: Case Study Demonstrates Utility of Novel Strategies, Genetic Engineering & Biotechnology News: Bioprocess Tutorial Jan 15, 2011 (Vol. 31, No. 2)

2010

- 3 SERRA M, BRITO C, **ALVES PM** (2010), Bioengineering strategies for stem cell expansion and differentiation, Canal Bioquímica, Boletim da Sociedade Portuguesa de Bioquímica, 7:30-37. (Portuguese)

2006

- 2 MELLADO MCM, OLIVEIRA R, **ALVES PM** (2006), VLPs: Novas Tecnologias para Produção de Vacinas. Desafios na produção de VLP para Rotavírus, *Boletim de Biotecnologia* da Sociedade Portuguesa de Biotecnologia, 84, 42-51. (Portuguese)

1995

- 1 MOREIRA JL, GONÇALVES L, **ALVES PM**, CRUZ P, SANTOS H, CARRONDO MJT (1995) Aplicações de células animais em Biotecnologia, *Boletim de Biotecnologia* da Sociedade Portuguesa de Biotecnologia, 51, 5-14. (Portuguese)

12. PATENTS

- 1 “*Infected Cell Cultures*”, International PCT/EP2018/055717, filled 08/03/2018, Number: WO/2018/162623, published 13.09.2018, Merck Patent GmbH, Inventors: Spangenberg T, Greco B, **Alves PM**, Carrondo MJT, Brito C, Rebelo S, Arez F, Simão D, Prudêncio M, Fontinha D, Machado M.
- 2 “*Organometallic Molybdenum Compounds for Treating Cancer*”, International PCT2004/000004, filled 18.03.2004 Ref. WO2005/087783, published 22.09.2005 IBET - Instituto de Biologia Experimental e Tecnológica, Inventors: Norton de Matos M, Pereira CL, Rodrigues SS, Mora M, Silva MJP, **Alves PM**, Reis CA., Romão CC.

13. ORAL PRESENTATIONS

13.1. INVITED KEYNOTE LECTURES

- 14 **2024 ALVES PM** Pluripotent Stem Cells for Drug Development and Therapy: Bioprocess Development Challenges, Advancing Manufacture of Cell and Gene Therapies VIII, AWARD lecture, Coronado, 4-8 February 2024
- 13 **2021 ALVES PM** Pluripotent Stem Cells for Drug Development and Therapy: Bioprocess Development Challenges, Termis2021, Maastricht, The Netherlands, 15-99 November 2021

- 12 **2019: ALVES PM** Bioengineering the Next Generation of 3D Cell Models, CIFARP 2019, Ribeirão Preto, Brazil, 06-09 November 2019
- 11 **2019: ALVES PM** Advancing Manufacture of hPSC-derived cardiomyocytes through product and process understanding, BPI Europe, Vienna, 02-04 April 2019
- 10 **2018: ALVES PM** Pluripotent Stem Cells for Drug Development and Therapy: Bioprocess Development Challenges, 31st annual meeting of JAACT- Japanese Association for Animal Cell Technology *Tsukuba, Japan* from 5-8 November 2018
- 9 **2018: ALVES PM,** Bioengineering the next generation of 3D models, 20th International congress on In Vitro Toxicology, Berlin, 15-18 October 2018
- 8 **2018: ALVES PM,** Stem Cells for Drug Discovery and Cell Therapy: Bioprocessing Challenges, 18th European Congress of Biotechnology (ECB2018) *to be held in Geneva* from 1st - 4th July 2018
- 7 **2017: ALVES PM,** Integrative Bioprocess Approaches for Stem Cells Applications in Drug Discovery and Cell Therapy, ESACT UK Meeting, Oxford, UK, January 2017
- 6 **2014: ALVES PM,** Bioreactor-based 3D *in vitro* models for Drug Screening and Toxicology: towards prediction of hepatic drug metabolism and neurotoxicity, 18th International Congress on In Vitro Toxicology, The Netherlands, June, 2014
- 5 **2013: ALVES PM,** Tools to support development of PAT, identification of key analyticals in complex biological systems, 2nd Biberach Pharmaceutical Biotechnology Meeting, Biberach, Germany, October 2013
- 4 **2012: ALVES PM,** Novel strategies for in vitro culture of human hepatocyte: functional maintenance and pre-clinical research impact, Prof. Armando Porto Conference, 25 years: Advances and Perspectives, Coimbra, Portugal, November 2012
- 3 **2010: ALVES PM,** Stem Cells for Drug Discovery and Cell Therapy: Bioprocessing Challenges, 5th International Meeting of the Portuguese Society for Stem Cells and Cellular Therapies (SPCE-TC), Guimarães, Portugal, May 2010
- 2 **2009: ALVES PM,** Bioengineering long term neuronal and hepatocytes spheroid cultures for pre-clinical research, 9th Conference on Protein Expression in Animal Cells - PEACE, Jackson Hole, USA, September 2009
- 1 **2008: ALVES PM,** Bioengineering of Primary Cultures and Stem Cells, 21st Annual and International meeting of the Japanese Society for Animal Cell Technology, Fukuoka, Japan, November 2008

13.2. INVITED TALKS IN INTERNATIONAL CONFERENCES

- 41 **2024: ALVES PM,** Process Development and Manufacturing Strategies for Stem Cell Derived Products and Therapies, Gordon Research Conference on Biotherapeutics and Vaccines Development, Galveston, USA, March 2024

- 40 **2023: ALVES PM**, Cell Based Products: the R&D road to translation, ETRS & SPCE-TC International Conference, Coimbra, October 2023
- 39 **2019: ALVES PM**, Proteomics/Metabolomics in HFpEF, SPCCTV Annual Congress – 4D Visions, Albufeira, 22-24 November 2019
- 38 **2019: ALVES PM**, Bioengineering Approaches for Functional Maturation of Human Pluripotent Stem Cells Derived Cardiomyocytes, PDA 2019, ATMP's, Vilnius, Lithuania, 04-05 June 2019
- 37 **2019: ALVES PM**, Improving functional maturation of human pluripotent stem cells derived cardiomyocytes through metabolic understanding, Bioprocessing Summit Europe, Lisbon, 19-21 March 2019
- 36 **2018: ALVES PM**, Bioengineering Human Pluripotent Stem Cell Derived 3D Models, World Preclinical Congress Europe, Lisbon, November 2018
- 35 **2018: ALVES PM**, Pluripotent Stem Cells for Drug Development and Therapy: Bioprocess Development Challenges, 3rd International Congress of CiiEM: Research and Innovation in Human & Health Sciences, Almada, Portugal, June 2018
- 34 **2017: ALVES PM**, Insect Cell Platforms for Production of VLPs and difficult to express Proteins, BioPronet Meeting, Warwick, October 2017
- 33 **2017: ALVES PM**, Viral Vectorology for Gene Therapy, Biochemical and Molecular Engineering XX, Newport Beach, July 2017
- 32 **2017: ALVES PM**, Insect Cells Platforms for Fast Production of pseudotyped VLPs for Drug Discovery and Vaccine Development, 9th International Conference on Recombinant Protein Production, Dubrovnik, April 2017
- 31 **2016: ALVES PM**, Using omics tools to improve differentiation and maturation of cardiomyocytes derived from human pluripotent stem cells, ESGCT XXIV annual congress, Florence, October 2016
- 30 **2016: ALVES PM**, Stem Cell Bioprocess, applying single use technologies, Biotech Week Boston, October 2016.
- 29 **2015: ALVES PM**, Process Development for Scalable Production of Pluripotent Stem Cells and Cell Based Products, Pluripotent Stem Cells, Reprograming and Tissue Engineering, Paris, November 2015.
- 28 **2015: ALVES PM**, Exploring continuous and integrated strategies for the up- and downstream processing of human mesenchymal stem cells, Integrated Continuous Manufacturing, Berkeley, October 2015.
- 27 **2014: ALVES PM**, Process Development for a Pentavalent Influenza Vaccine, European Vaccine Initiative Rendez-Vous, Institute Pasteur, Paris, December, 2014.
- 26 **2014: ALVES PM**, Building Capacity for Vaccine Manufacturing, EVI conference on malaria vaccine development, Brussels, November 2014.

- 25 **2014: ALVES PM**, Stem Cell-based Therapies for Cardiac Repair: integrating bioprocessing engineering and omics tools for better characterized products, Heart With/Out Borders, Porto, Portugal, November 2014
- 24 **2014: ALVES PM**, VLP's (vaccines) and viral vectors for gene delivery - from cell development of cell lines to metabolomics, ECB 16 Congress, Edinburgh, Scotland, July 2014.
- 23 **2014: ALVES PM**, Bioprocess Development for Cardiac Stem Cells, PDA Europe Advanced Therapy Medicinal Products, Madrid, June 2014.
- 22 **2014: ALVES PM**, Integrating bioprocess optimization and omics tools towards the design of novel cardiac stem cell therapies, Cell Culture Engineering, Quebec City, Canada, May 2014.
- 21 **2014: ALVES PM**, Insect cell technology as a vaccine producing platform, Foundation Mérieux/Virus-like particles (VLPs) as vaccines, vectors and adjuvants, Lyon, France, April 2014.
- 20 **2014: ALVES PM**, 3D human cell models for pre-clinical research and long-term toxicity testing: towards prediction of hepatic drug metabolism and neurotoxicity, IT-LIVER Workshop, 3-Dimensional Cell Cultures and Drug Discovery, Austria, February 2014.
- 19 **2013: ALVES PM**, Toward System-Level Understanding of Baculovirus-Host Cell Interactions: From Molecular Fundamental Studies to Large-Scale Proteomics Approaches, PEGS, Lisbon 2013, Lisbon, November 2013.
- 18 **2013: ALVES PM**, Bioprocess Development for iPS derived Cardiac Cells, iMED Conference, Lisbon, October 2013.
- 17 **2013: ALVES PM** Bioengineering approaches for up- and downstream processing of human stem cells for clinical application, ESGCT European Society for Gene and Cell Therapy, Madrid, October 2013.
- 16 **2013: ALVES PM**, Flipase-Mediated Cassete Exchange in Sf9 Cells for Stable Gene Expression, 3rd Annual Meeting ISBiotech, Rosslyn, USA, March 2013
- 15 **2013: ALVES PM**, Human neural in vitro models for preclinical research: 3D culture systems for neural differentiation and genetic modification of human stem cells, Scale-Up and Manufacturing of Cell-Based Therapies III, San Diego, California, January 2013
- 14 **2012: ALVES PM**, Bioprocessing Approaches for Stem Cells towards pre-clinical research, Animal Cell Biotechnology: Products from Cells – Cells as Products International Course, Santa Fé, Argentina, October 2012
- 13 **2012: ALVES PM**, Bioprocessing Challenges in Cell Therapy, ATMP-Advanced Therapy Medicinal Products, PDA Europe 2012, Cascais, June 5-6 2012
- 12 **2012: ALVES PM**, Human stem cells and primary cultures for drug discovery and cell therapy: Bioprocessing challenges, Cell Culture Engineering XIII conference, Scottsdale, Arizona, April 22-27 2012

- 11 **2012: ALVES PM**, Novel strategies for 3D neural culture and gene delivery: towards human central nervous system in vitro models for preclinical research, 3D Cell Culture Conference, Zurich, March 14-16 2012
- 10 **2011: ALVES PM**, Challenges in Vaccine Process Development, Vaccines Europe Informa Life Sciences Conference, December 2011
- 9 **2011: ALVES PM**, Stem Cells for in vitro Toxicology and Cell therapy, Institute Pasteur Tunes, Tunisia, September 2011
- 8 **2011: ALVES PM**, Stem Cells and Biotechnology or Cell therapy, Course on Biotechnology, Spanish Society of Biotechnology (SEBIOT) and UIMP27, Santander, Spain, 11-12 July 2011
- 7 **2011: ALVES PM**, Improvements on Peste des Petits Ruminants Vaccine stability during production and storage, Biochemical Technology (BIOT) Division, 241st ACS National Meeting, Anaheim, USA, March, 2011
- 6 **2010: ALVES PM**, Stem Cells for Drug Discovery and Cell Therapy: Bioprocess Challenges, IV Seminário Latino-Americano de Tecnologia de Cultivos Celulares, Montevideo, Uruguay, 7-9 November 2010
- 5 **2010: ALVES PM**, Bioengineering approaches for pre-clinical research, BOKU, Vienna, Austria, May 2010
- 4 **2010: ALVES PM**, Improving baculovirus production at high cell density through manipulation of energy metabolism, Workshop - European Network on Viral Vaccine Processes (ENVVP), Frankfurt, Germany, October 2010
- 3 **2007: ALVES PM**, Modeling and Integrating Bioreaction and Downstream for RLP's production, 2nd European Rotavirus Biology Meeting, Djurönäset, Stockholm, Sweden, June, 2007
- 2 **2006: ALVES PM**, Insights on triple layer VLP's production using Insect Cells/Baculovirus Expression System, Instituto de Biotecnologia UNAM, Cuernacava, Mexico, June 2006
- 1 **2004: ALVES PM**, Heterologous Gene Expression in Mammalian Cells, 3rd European Biotechnology Workshop, Ittingen, Switzerland, September 2004

13.3. INVITED TALKS AT PHARMA & BIOTECH INDUSTRY

- 20 **2023: ALVES PM**, Bioengineering approaches for viral vectors and cell based products at iBET, Fugifilm, Brain Food series, International Webinar, October 2023
Host: Tom Fletcher
- 19 **2020: ALVES PM**, New Trends and Challenges in Vaccine Production, ThermoFisher, Millennials MERG Portugal series, International Webinar, December 2020

Host: Maria Mellado

- 18 2020: ALVES PM**, Vaccines, Insect Cells and VLPs Production, NIBRT| Vaccine Manufacturing Webinar 27 November 2020

Host: Elizabeth Topp

- 17 2018: ALVES PM** 3D Models for Pre-Clinical Research, InScreenX, Germany, October 2018

Host: Tobias May

- 16 2016: ALVES PM**, MS based analytical tools for Cell Based Product Characterization, Merck, Darmstadt, Germany, October 2016

Host: Ralf Guenther

- 15 2015: ALVES PM**, 3D Advanced Cell Models for Drug Development, Sanofi Pasteur, Vitry-sur-Seine, France, November 2015

Host: Cecile Orsini

- 14 2015: ALVES PM**, Towards improved predictability in pre-clinical research: Human neural 3D in vitro models, Sanofi Pasteur, Lyon, France, March 2015

Host: Valérie Dumon Jones

- 13 2014: ALVES PM**, Assessing Cell Metabolism for improved bioprocesses, Lonza Biologics, Slough, UK, September 2014

Host: Andrew Racher

- 12 2013: ALVES PM**, Cancer Models for pre-clinical Research, and Fluorescent based tools for PAT, Merck-Serono, Germany, October 2013

Host: Stefen Jaekel

- 11 2012: ALVES PM**, Bioengineering Approaches for Stem cells: towards clinical applications, J&J-Jansen, Philadelphia, August 2012

Host: Steven Lang

- 10 2012: ALVES PM**, 3D Models for pre-clinical Research, EMD Millipore, Boston, August 2012

Host: Robert Shaw

- 9 2011: ALVES PM**, Bioprocess Development for the production of Vaccines, Merial, Lyon, France, November 2011.

Host: Zahia Hannas

- 8 2010: ALVES PM**, Bioprocess Development for the production of Biopharmaceuticals, Bayer-Schering, Wuppertal, Germany, December 2010.

Host: Beate Müller-Tiemann

- 7 2010: ALVES PM**, Animal Cell technology in I&D: special focus on stem cells and pre-clinical models, Transgene, France, November 2010.

Host: Jean-Marc Balloul

- 6 2010: Alves PM**, Bioprocess Development for hESC: upstream challenges, PBS Biotech Inc, LA, USA, August 2010.

Host: Brian Lee

- 5 **2009: ALVES PM**, Stem Cell Expansion and Differentiation in Stirred Tank Bioreactors, Centocor, Horsham, USA, August 2009.
Host: Sadettin Ozturk
- 4 **2008: ALVES PM**, 3-Models for Pre-clinical Research, Department Neurochemistry, Merck & Co, West Point, USA, August 2008
Host: Yan Reynolds
- 3 **2008: ALVES PM**, Improved in vitro Modes for Screening and Pre-clinical Research, Bayer Schering, Bayer HealthCare AG, Global Drug Discovery – LGO, Protein Therapeutics, Wuppertal, Germany, January 2008
Host: Karl Ziegelbauer
- 2 **2006: ALVES PM**, Downstream Processes for Complex BioPharmaceuticals, Sartorius AG, Goettingen, Germany, January 2006.
Host: Uwe Gottschalk
- 1 **2005: ALVES PM**, Assessing Cell Metabolism for improved bioprocesses, Lonza Biologics, Slough, United Kingdom, January 2005.
Host: Andrew Racher

13.4. INVITED TALKS IN PORTUGUESE ACADEMIC DEPARTMENTS, SCIENCE AND R&D ORGANIZATIONS

- 27 **2021: ALVES PM**, Desafios na Produção e Distribuição de Vacinas para o COVID, Ciclo de Conferencias “Ao Encontro da Sociedade”, Academia das Ciências de Lisboa, February 2021 (webminar)
- 26 **2020: ALVES PM**, Opportunities and Challenges in R&D for Biologics Discovery and Development, Instituto Gulbenkian de Ciência, July 2020 (webminar)
- 25 **2017: ALVES PM**, Animal Cell Technology: Leveraging biopharmaceuticals development in the era of precision medicine, Departamento de Bioengenharia do Instituto Superior Técnico, Universidade de Lisboa, Lisbon, December, 2017
- 24 **2017: ALVES PM**, Stem Cell Cultivation for Drug Discovery and Cell Therapy, 5º Ciclo de Conferências da LAQV/UCIBIO, Faculdade de Ciências e Tecnologia NOVA, February 2017
- 23 **2016: ALVES PM**, Bioengineering Approaches for Scalable Production of Human Cells: applications in cell therapy and in the development of advanced 3D in vitro models for pre-clinical research, CNC Seminar Program, Coimbra University, February 2016
- 22 **2016: ALVES PM**, Advanced 3D Models for drug Discovery, CEDOC Seminars, Faculdade Ciências Médicas da NOVA, Lisbon, January 2016.
- 21 **2014: ALVES PM**, Animal Cell Technology: bioengineering Approaches in pre-clinical Research and drug Development, Ciclo de Conferências do Departamento

de Química e Bioquímica da Faculdade de Ciências da Universidade de Lisboa, Lisbon, December, 2014

- 20 **2014: ALVES PM**, Vacinas Virais: Desafios no Desenvolvimento de Partículas Semelhantes a Vírus (VLPs) para Vacinação, Jornadas Científicas NOVA Saúde, Lisbon, May 2014
- 19 **2014: ALVES PM**, Advanced 3D *in vitro* Models for Pre-Clinical Research, Encontros de Investigação do IPOLFG, Lisbon, May 2014.
- 18 **2013: ALVES PM**, Animal Cell Technology for Biopharmaceutical Production: the Challenges and Opportunities, Jornadas do Departamento Química da Universidade de Aveiro, Aveiro, May 2013
- 17 **2012: ALVES PM**, Stem Cells for Therapy and pre-clinical Research: Bioprocess Challenges, Seminar at Faculdade de Medicina da Universidade de Coimbra, Coimbra, November 2012
- 16 **2012: ALVES PM**, Tecnologia de Células Animais, XV Jornadas Tecnológicas, Faculdade de Ciência e Tecnologia da Universidade Nova de Lisboa, Monte da Caparica, Maio 2012
- 15 **2011: ALVES PM**, Animal Cell Technology in Biomedical Research, Ciclo de Seminários do Instituto Superior de Agronomia, Lisbon, April, 2011
- 14 **2010: ALVES PM**, Bioengineering long term neuronal and hepatocytes 3D cultures for pre-clinical research, CEDOC Seminars, Faculdade Ciências Médicas da NOVA, Lisbon, March, 201
- 13 **2009: ALVES PM**, Uma Bioquímica no Desenvolvimento de Fármacos Biológicos, Conferência de Retrospectiva do curso de Bioquímica da FCUL, Lisbon, November, 2009.
- 12 **2009: ALVES PM**, Vectores virais para vacinação e terapia génica numa perspectiva de desenvolvimento de bioprocessos para produção desses vectores utilizando tecnologia de células animais, Ciclo de Palestras do Instituto de Higiene e Medicina Tropical, Lisbon, November, 2009.
- 11 **2009: ALVES PM**, Biopharmaceuticals Developments using Animal Cell Technology, I Jornadas de Bioengenharia da Faculdade de Engenharia da Universidade do Porto, Porto, November, 2009.
- 10 **2009: ALVES PM**, Protein Expression and Purification Nanocourse - Advanced Course on Protein Expression and Purification: Tips and Tricks, Instituto de Medicina Molecular, Lisbon, April 2009.
- 9 **2009: ALVES PM**, I&D Em Biofármacos Complexos, Conference Apifarma 2009, A Inovação ao Serviço da Saúde e do Doente, Lisbon, March 2009.
- 8 **2008: ALVES PM**, Bioengenharia de Células Animais, Seminar Cycle Professor António Xavier, Departamento Química e Bioquímica, Faculdade Ciências da Universidade de Lisboa, Lisbon, November 2008.
- 7 **2006: ALVES PM**, Vaccination Strategies Using Viral Vectors, 1st Cycle of Symposia,

Sociedade Portuguesa de Ciências Farmacêuticas (SPCF), Faculdade de Farmácia da Universidade de Lisboa, Lisbon, May 2006.

- 6 **2006: ALVES PM**, Bioprocess Development for Complex Vaccines, Conference Cycle, Núcleo de Investigação de Pediatria da Clínica Universitária de Pediatria do Hospital de Santa Maria, Lisbon, May 2006.
- 5 **2005: ALVES PM**, Rational Improvement of Complex Vaccines: The Case for Rotavirus like Particles, Micro & Biotec 2005, Póvoa do Varzim, December 2005.
- 4 **2005: ALVES PM**, Animal Cell Technology for R&D, Symposium, Biotechnology: from Science to Start-ups, Faculdade de Farmácia da Universidade de Lisboa, Lisbon, October 2005.
- 3 **2005: ALVES PM**, Viral Vector Production for Gene Therapy, Conference Cycle, Instituto de Tecnologia Nuclear, Sacavém, May 2005.
- 2 **2002: ALVES PM**, *In vivo* NMR Studies of Mammalian Cells, FEBS Advanced Lecture Course, Advanced Technologies for Metabolic Engineering in Biotechnology and Medicine, Carcavelos, September 2002.
- 1 **2001: ALVES PM**, Studies on Brain Cell Metabolism Using NMR Spectroscopy, Conference Cycle, Departamento de Química da Faculdade de Ciências e Tecnologia da Universidade Nova de Lisboa, Monte da Caparica, November 2001.

13.5. INVITED LECTURES IN ADVANCED INTERNATIONAL COURSES

- 15 **2021 ALVES PM**, 2D and 3D cultures: improving bioprocesses and developing new tools and technologies for pre-clinical research, High Content and High Predictive Cellular Models For Host-Pathogen Interactions Studies, Disease Modeling And Drug Discovery, Institut Pasteur Montevideo & United Nations University, Uruguai, Novembro de 2021 (*via Skype*)
- 14 **2021 ALVES PM**, Bioengineering the next generation of 3D cell models, Programa de Pós Graduação em Ciências Farmacêuticas, Ribeirão Preto, Brasil, 29 Outubro de 2021 (*via Skype*)
- 13 **2020 ALVES PM**, Manufacturing Vaccines: Viral-Like Particles Production Challenges, NIBRT, Vaccine Manufacturing Webinar Series, Ireland, 27 November 2020 (*via Skype*)
- 12 **2018 ALVES PM**, Modelos celulares humanos avançados: cultivos 3D aplicados a la investigación pre-clínica, CABBIO, Santa Fé, Argentina, October 2018 (*via Skype*)
- 11 **2017 ALVES PM**, Cellular assays for later drug development in Cells and Animal Models for Drug Discovery International Course, Instituto Pasteur, Montevideo, Uruguay, October 2017.
- 10 **2015 ALVES PM**, Cell Therapies, Production of Biopharmaceuticals in Animal Cell Cultures International Course, Universidade Federal do Rio de Janeiro, Brazil, July 2015.

- 9 **2015 ALVES PM**, The use of three-dimensional models and bioreactors for in vitro toxicology, The European Society of Toxicology *In Vitro* (ESTIV) Applied in vitro toxicology course, Cascais, Portugal, January 2015 – ***selected by the students the best lecture in the course***
- 8 **2013 ALVES PM**, Animal Cell Technology: bioprocess Challenges in the development of biopharmaceuticals and novel therapies, Biomanufacturing of the future: a multidisciplinary consortium in support of the EU Bioprocess Industry Workshop, UCL, London, UK, April 2013.
- 7 **2012 ALVES PM**, Applications of 3D cell cultures in fully controlled bioreactors – special emphasis on liver cells, SEURAT-1 Summer School 2012, Oeiras, June 4-8 2012.
- 6 **2010 ALVES PM**, Bioengineering stem cell cultivation: 3D approaches for pre-clinical research and cell therapy, Animal Cell Biotechnology: Products from Cells – Cells as Products International Course, Institut Pasteur de Montvideo, Uruguai, 10-19 Nov 2010.
- 5 **2010 ALVES PM**, Development of quality control methods for baculovirus vectors, in Viral Vectors in Gene Therapy: Applications & Novel Production Methods Advanced Symposium and EMBO Practical Course, University of Eastern Finland, Kuopio, Finland, August 2010.
- 4 **2008 ALVES PM**, Cell Based Vaccines, Production of Biopharmaceuticals in Animal Cell Cultures International Course, Universidade Federal do Rio de Janeiro, Brazil, July 2008.
- 3 **2007 ALVES PM**, Cryopreservation for Cell Therapy, at IBMT Summer School, Fraunhofer Institute, St Ingbert, Germany, July 2007.
- 2 **2006 ALVES PM**, Development of Bioprocesses for Complex Vaccines, Production of Biopharmaceuticals in Animal Cell Cultures International Course, Universidade Federal do Rio de Janeiro, Brazil, July 2006.
- 1 **2006 ALVES PM**, Modificações Pós-Tradução em Células Animais, II Seminário Latino-Americano de Tecnologia de Cultivos Celulares, Instituto Butantan, São Paulo, Brazil, July 2006.

13.6. ORAL COMMUNICATIONS (SELECTED FROM SUBMITTED ABSTRACTS)

Presenting author is underlined

approx.
150

- From **2009 to 2023** – co-author in more than 250 oral communications in international conferences (selected from submitted abstracts)
- 52** PEIXOTO C, VICENTE T, CARRONDO MJT, **ALVES PM** (2009) Towards purification of baculovirus vectors using membrane technology, Bioprocess International Conference, Dusseldorf, Germany.

- 51 BRAGANÇA J, CARRONDO MJT, **ALVES PM** (2009) Role of the Cbp/p300-interacting transactivator with Glu/Asp-rich carboxy-terminal domain-2 protein in mouse embryonic stem cells, Lisboa, Portugal, 4th International Meeting of the Portuguese Society for Stem Cells and Cell Therapy, Lisboa, Portugal.
- 50 PEIXOTO C, VICENTE T, CARRONDO MJT, **ALVES PM** (2009) Desenvolvimento de novos biofármacos: O desafio da purificação, II Jornadas Tecnológicas da Licenciatura em Bioquímica, FCT-UNL, Portugal, May
- 49 CARRONDO MJT, **ALVES PM**, COROADINHA AS (2009) Site specific targeting and stoichiometric optimization as means to engineer robust cell lines for manufacturing complex bioproducts, oral presentation in the Cell Line Development and Engineering meeting, Berlin, Germany.
- 48 VICENTE T, MOTA JP, CARRONDO MJT, **ALVES PM** (2009) Microscaled sorption analysis of baculoviruses for gene therapy on ion-exchange surfaces using surface plasmon resonance, PREP 2009 International Symposium Philadelphia, PA, USA.
- 47 MALPIQUE R, FERREIRA D, EHRHART F, KATSEN-GLOBA A, CARRONDO MJT, ZIMMERMANN H, **ALVES PM** (2009) Improved Cryopreservation Protocols for Brain Cell Aggregates, 46th Meeting of the Society for Cryobiology, Sapporo, Japan.
- 46 MELLADO MC, CARRONDO MJT, **ALVES PM** (2009) In vitro approaches for improved rotavirus VLP's quality , 21st ESACT Meeting, Dublin, Ireland.
- 45 VICENTE T, PEIXOTO C, MOTA JP, CARRONDO MJT, **ALVES PM** (2009) New strategies in downstream processing of enveloped viruses: exploiting the fundamentals, presented at the Downstream Technology Forum 2009 Göttingen, Germany.
- 45 SERRA M, BRITO C, COSTA E, CARRONDO MJT, **ALVES PM** (2009) Integrating human stem cell expansion and neuronal differentiation in a fully controlled bioreactor, 21st ESACT Meeting, Dublin, Ireland.
- 44 COROADINHA AS, **ALVES PM** AND CARRONDO MJT (2008) Flexible and stable cell lines for mammalian expression: cassette exchange system from simple to complex bioproducts, Cell Line Development and Engineering meeting, Prague, Czech Republic.
- 43 SERRA M, BRITO C, LEITE SB, GORJUP E, VON BRIESEN H, CARRONDO MJT, **ALVES PM** (2008) Stirred Bioreactors for the Expansion of Undifferentiated Adult Pancreatic Stem Cells, 3rd International Meeting of the Portuguese Society for Stem Cells and Cellular Therapy, Faro, Portugal.
- 42 VICENTE T, ROLDÃO A, MOTA JP, OLIVEIRA R, CARRONDO MJT, **ALVES PM** (2008) Predictive modeling in rotavirus-like particles production: improving upstream and downstream processing design, Vaccine Technology II, Albufeira, Portugal.
- 41 PEIXOTO C, VICENTE T, CARRONDO MJT, **ALVES PM** (2008) Towards purification of gene therapy vectors using membrane technology, 4th European Downstream Technology Forum, Gottingen, Germany.
- 40 MALPIQUE R, EHRHART F, KATSEN-GLOBA A, CARRONDO MJT, ZIMMERMANN H, **ALVES PM** (2008) Cryopreservation of Adherent Cells: Strategies to Improve Cell Viability

and Function after Thawing, 45th Annual Meeting of the Society for Cryobiology – *CRYO 2008*, Charlotte, NC, USA.

- 39 AMARAL AI, BERNAL V, TEIXEIRA AP, **ALVES PM** (2008) Modelling of astrocytic metabolism in primary cultures subjected to ischemia: merging ¹³C NMR spectroscopy and metabolic flux analysis, 8th International Meeting for Brain Energy Metabolism, Beijing, China.
- 38 TEIXEIRA A, DIAS J, **ALVES PM**, CARRONDO M, OLIVEIRA R (2008) Macroscopic control of intracellular regulation: Application to mammalian cell cultures, Metabolic Engineering VII, Puerto Vallarta, Mexico.
- 37 TEIXEIRA A, DIAS J, **ALVES PM**, CARRONDO M, OLIVEIRA R (2008) Macroscopic control of intracellular regulation: Application to mammalian cell cultures, Chempor X, Braga, Portugal
- 36 CARINHAS N, BERNAL V, YOKOMIZO AY, VICENTE T, CARRONDO MJT, OLIVEIRA R, **ALVES PM** (2008) Improvement of Baculovirus vectors production based on the metabolic characterization and modeling of Sf-9 cultures. Chempor X, Braga, Portugal.
- 35 CARINHAS N, BERNAL V, YOKOMIZO AY, VICENTE T, CARRONDO MJT, OLIVEIRA R, **ALVES PM** (2008) Metabolic modeling and characterization of uninfected and infected Sf9 cultures – a basis for improving Baculovirus vectors production. 7th European Symposium on Biochemical Engineering Sciences (ESBES), Faro, Portugal
- 34 BERNAL V, CARINHAS N, YOKOMIZO AY, VICENTE T, OLIVEIRA R, CARRONDO MJT, **ALVES PM** (2008) Engineering challenges in the production of baculovirus vectors for gene therapy, 7th European Symposium on Biochemical Engineering Sciences (ESBES), Faro, Portugal.
- 33 BERNAL V, CARINHAS N, AMBRÓSIO R, CARRONDO MJT, OLIVEIRA R, **ALVES PM** (2008) An insight into the cell density effect in the baculovirus insect cell system by analysis of the dynamics of energetic metabolism, 5th European Federation of Biotechnology Meeting on Recombinant Protein Production, Baia de Porto Conte, Italy
- 32 ZEILINGER K, MIRANDA JP, **ALVES PM**, STACHELSCHIED H, LÜBBERSTEDT M, SCHREITER T, CARRONDO MJT, GERLACH JC (2008) Development of 3D-bioreactor test systems for hepatotoxicity and metabolism studies. 15th International Congress on In Vitro Toxicology, Stockholm, Sweden
- 31 ROLDÃO A, CARRONDO MJT, **ALVES PM**, OLIVEIRA R (2008) Stochastic Modelling of the Baculovirus/Insect Cells System: Prediction of Recombinant Protein Expression. 10th International Chemical Engineering Conference, Braga, Portugal.
- 30 ROLDÃO A, CARRONDO MJT, **ALVES PM**, OLIVEIRA R (2008) Predicting Recombinant Protein Expression in the Baculovirus/Insect Cells System: A Stochastic/Structured Modeling Approach ESF 2nd Functional Dynamics Conference, Rotenberg ob der Tauber, Germany.

- 29 PEIXOTO C, VICENTE T, CARRONDO MJT, **ALVES PM** (2008) Downstream Process of Complex Biopharmaceuticals at IBET, AKTA user day, GE Healthcare, Carcavelos, Portugal.
- 28 VICENTE T, MOTA JP, CARRONDO MJT, **ALVES PM** (2008) Optimizing recombinant baculoviruses purification – an emerging vector for the new therapies, Vaccine Scale-Up and Manufacturing, Brussels, Belgium.
- 27 LEITE SB, SERRA M, BRITO C, COSTA J, CARRONDO MJT, **ALVES PM** (2007) Novel Culture Systems for Human Stem Cells Proliferation and Neuronal Differentiation, 2nd International Meeting of the Portuguese Society for Stem Cells and Cellular Therapy, Coimbra, Portugal
- 26 SERRA M, LEITE SB, GORJUP E, VON BRIESEN H, CARRONDO MJT, **ALVES PM** (2007) Improvement of 3D Culture Systems for Expansion of Undifferentiated Adult Stem Cells in Fully Controlled Bioreactors, 2nd International Meeting of the Portuguese Society for Stem Cells and Cellular Therapy, Coimbra, Portugal
- 25 VIEIRA HLA, QUEIROGA CS, **ALVES PM** (2007) Neuronal apoptosis prevention by carbon monoxide (CO): preconditioning-like effect, 3rd ESN Conference on Advances in Molecular Mechanisms of Neurological Disorders, Salamanca, Spain.
- 24 COROADINHA AS, **ALVES PM**, CARRONDO MJT (2007) Impact of Stoichiometry on the Productivity and Quality of Complex Bioproducts: the case of Retroviral Vectors , 20th European Society for Animal Cell Technology Meeting, Germany.
- 23 MALPIQUE R, EHRHART F, KATSEN-GLOBA A, CARRONDO MJT, **ALVES PM**, ZIMMERMANN H (2007) Cryopreservation of Adherent cells: strategies to improve cell viability and neuronal differentiation after thawing, 20th European Society for Animal Cell Technology Meeting, Germany.
- 22 TEIXEIRA A, CARINHAS N, PORTUGAL C, CRESPO JG, **ALVES PM**, CARRONDO MJT, OLIVEIRA R (2007) Monitoring and optimal control of the fluxome in recombinant BHK cultures, 20th European Society for Animal Cell Technology Meeting, Germany
- 21 SERRA M, LEITE SB, SOUSA MQ, BRITO C, COSTA J, CARRONDO MJT, **ALVES PM** (2007) Novel Culture Systems for Human Stem Cells Proliferation and Neuronal Differentiation, Engineering cell Biology II, MIT, Columbia, USA.
- 20 ROLDÃO A., VIEIRA H.L.A., ESTEVÃO C, CARRONDO MJT, **ALVES PM**, OLIVEIRA R (2006) Modeling Rotavirus VLPs Production: Infection, Gene Expression and VLPs Assembly, Cell Culture Engineering X, Whistler, Canada.
- 19 FERREIRA TB, SILVA C, PERDIGÃO R, PEIXOTO CC, CARRONDO MJT, **ALVES PM** (2006), Adenovirus as a biopharmaceutical: optimization of vector production, purification and storage, Biospain Biotec 2006, Madrid, Spain.
- 18 RODRIGUES T, **ALVES PM**, CARRONDO MJT, CRUZ PE, (2006) Purification of a Murine Leukaemia Virus Based Gene Therapy Vector Using Membrane and Chromatographic Processes, PREP-2006 19th International Symposium, Exhibit & Workshops on Preparative / Process Chromatography, Baltimore, USA.
- 17 FERREIRA TB, PERDIGÃO R, CARRONDO MJT, **ALVES PM** (2006), Improving bioprocesses

for the production of adenovirus based vaccines, The 8th International Adenovirus Meeting, Zurich, Switzerland.

- 16 TEIXEIRA A, ALVES C, **ALVES PM**, CARRONDO MJT, OLIVEIRA R (2006) Dynamic optimization of a recombinant BHK-21 culture based on elementary flux analysis and hybrid parametric/nonparametric modeling, 4th Recombinant Protein Production Meeting: a comparative view on host physiology, Barcelona, Spain.
- 15 ROLDÃO A, VIEIRA HLA, ESTEVÃO C, CRUZ PE, OLIVEIRA R, CARRONDO MJT, **ALVES PM** (2005) Modeling integrated production of Rotavirus like particles in the Baculo insect cell system, 7th PEACE conference on Protein Expression in Animal Cells, Crete, Greece.
- 14 ROLDÃO A., VIEIRA H.L.A., ESTEVÃO C, CRUZ PE, CARRONDO MJT, ALVES PM, OLIVEIRA R (2005) Modeling Rotavirus-Like Particle Production: Baculovirus DNA Replication, mRNA Synthesis and Protein Production, ChemPor 2005 - 9th International Chemical Engineering Conference, Coimbra, Portugal.
- 13 TEIXEIRA A, CUNHA A, CLEMENTE J, **ALVES PM**, CARRONDO MJT, OLIVEIRA R (2005) Dynamic modeling and optimization of a mammalian cells process using hybrid grey-box systems. ICANNGA05 proceedings, Coimbra, Portugal.
- 12 TEIXEIRA A, ALVES C, **ALVES PM**, CARRONDO MJT, OLIVEIRA R (2005) Hybrid Metabolic Flux Analysis/Artificial Neural Networks Modelling of Bioprocesses, Rio, Brazil.
- 11 CARRONDO MJT, CRUZ PE, **ALVES PM** (2004) Retrovirus and Adenovirus Production, Purification and Storage: a Comparative View on Processes, 12th International Biotechnology Symposium, Santiago, Chile.
- 10 TEIXEIRA A, CUNHA A, CLEMENTE J, **ALVES PM**, CARRONDO MJT, OLIVEIRA R (2005) Dynamic modeling and optimization of a mammalian cells process using hybrid grey-box systems. ICANNGA05 proceedings, Coimbra, Portugal.
- 9 TEIXEIRA A, ALVES C, **ALVES PM**, CARRONDO MJT, OLIVEIRA R (2005) Hybrid Metabolic Flux Analysis/Artificial Neural Networks Modelling of Bioprocesses, Rio de Janeiro, Brazil.
- 8 CARRONDO MJT, CRUZ PE, **ALVES PM** (2004) Retrovirus and Adenovirus Production, Purification and Storage: a Comparative View on Processes, 12th International Biotechnology Symposium, Santiago, Chile.
- 7 VIEIRA HLA, PEIXOTO C, SOUSA MFQ, CARRONDO MJT., **ALVES PM** (2004) Stoichiometry and kinetics of production of viral proteins and assembly into VLP's: Tools for improved vector design, 3rd Recombinant Protein Production Meeting: a comparative view on host physiology, Tavira, Portugal.
- 6 FERREIRA TB, **ALVES PM**, FERREIRA AL, CARRONDO MJT (2004) Adenovirus production at high cell densities: The cell density effect, Vecto EuroTrain, 3rd European Conference and Course, Advanced Methods for Industrial Production, Purification and Characterization of Gene Vectors, Evry, France
- 5 **ALVES PM**, ROSA F, SOUSA M, MARANGA L, PEIXOTO C, CARRONDO MJT (2003) Production of VLP's with Baculo-Insect Cells Expression System: the case of a Rotavirus

vaccine, 18th European Society for Animal Cell Technology Meeting, Spain.

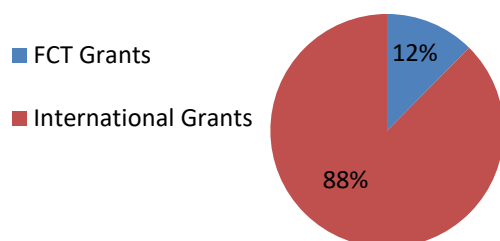
- 4 **ALVES PM**, GONÇALVES D, PEIXOTO C, FERREIRA TB, BENGALA AJ, CRUZ PE, CARRONDO MJT (2002) Production of Adenoviral Vectors for the development of a veterinary vaccine, Conferência Científica e Tecnológica em Engenharia, ISEL, Portugal.
- 3 CRUZ PE, MARTINS PC, **ALVES PM**, PEIXOTO C., SANTOS H., MOREIRA JL, CARRONDO MJT (1998) Factors Influencing Proteolytic Activity in Insect Cell Cultures, JAACT/ESACT Meeting, Japan.
- 2 **ALVES PM**, FLÖGEL U, BRAND A, LEIBFRITZ D, CARRONDO MJT, SANTOS H, SONNEWALD U (1996) Brain Cells Immobilization for *in vivo* NMR monitoring of Biochemical Processes, 14th ESACT meeting - European Society for Animal Cell Technology, Portugal
- 1 **ALVES PM**, MOREIRA JL, RODRIGUES JM, AUNINS JG, CARRONDO MJT (1994) BHK in Suspended Batch Cultures: Growth as Natural Aggregates and in Porous and Non-Porous Microcarriers, American Chemical Society Spring National Meeting, Advances in Animal and Insect Cell Culture, USA.

13.7. POSTER COMMUNICATIONS

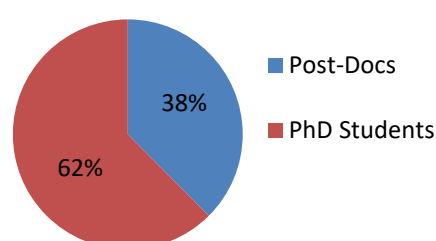
From 1991 to 2023 – co-author in more than **850** abstracts of poster communications presented in International Conferences.

14. RESEARCH FUNDING (RESEARCH PROJECTS WITH COMPANIES ARE NOT ACCOUNTED FOR)

Projects as Principal Investigator
Total: 10,8 M€



Students Fellowships
Total: 1.75 M€



TOTAL FUNDING: APPROX. 12,5 M€

NOTES:

- Only project grants obtained in competitive open calls were considered
- Co-supervision of students was considered (i.e. only 50% or 33% of the grants of co-supervised students was accounted)

14.1. PROJECTS AS PRINCIPAL INVESTIGATOR

14.1.1. INTERNATIONAL GRANTS

- 25 **2020-2024** BRAVE: Computational biomechanics and bioengineering 3D printing to develop a personalized regenerative biological ventricular assist device to provide lasting functional support to damaged hearts, H2020-EU.3.1.3, funded by EU
Workpackage leader
(0.8 M€ for ACTU, 8 M€ Total)
- 24 **2020-2023** ADDovenom: Novel Snakebite Therapy Platform of Unparalleled Efficacy, Safety and Affordability, H2020-FETOPEN-2018-2020, funded by EU
(0,5 M€ for ACTU, 3.7 M€ Total)
- 23 **2019-2021** TRANSVAC-DS: Design Study for a European Vaccine Infrastructure, H2020-INFRADEV-2018-2020, funded by EU
(0.2 M€ for ACTU, 1.8 M€ Total)
- 22 **2019-2022** STACCATO: European Industrial Doctorate for enhancing upstream biopharmaceutical manufacturing process development through single cell analysis, H2020-MSCA-ITN-2018, funded by EU
(0.5 M€ for ACTU, 3.0 M€ Total)

- 21 **2018-2020** CARDIOCONTRACT: Automated Cardiomyocyte Contractility Assay Instrument, EUROSTARS-2 - 12529/19/Q, funded by Eureka
(0.3 M€ for ACTU, 0.8 M€ Total)
- 20 **2018-2021** MuVHA: Multivalent inactivated vaccine against Heartwater in Africa, LEAP-AGRI-345, funded by EU
(0.1 M€ FOR ACTU, 0.8 M€ TOTAL)
- 19 **2018-2020** ProMeTeus: Membrane protein integrated technologies development for drug design, H2020-MSCA-RISE-2018, funded by EU
(0.1 M€ for ACTU, 0.5 M€ Total)
- 18 **2017-2020:** Discoveries Centre for Regenerative and Precision Medicine, Teaming Project with UCL and 4 Portuguese Universities, funded by EU (PI of ITQB NOVA partner)
(0.5 M€ for ACTU, 10.8 M€ Total)
- 17 **2017-2021:** TRANSVAC2, European vaccine research and development (R&D) infrastructure, funded by EU (Horizon2020)
(0.6 M€ for ACTU, 10.5 M€ Total)
- 16 **2016-2019:** ERAdicatPH, Understanding Hyperoxaluria Type 1 towards the development of Innovative Therapeutic Strategies (E-Rare)
(125 k€ for ACTU, 0.7 M€ Total)
- 15 **2014-2017:** INNOVATE, INvestigating NOvel VALuable bio-Therapeutics and Expression systems, ERA-IB-2/0007/2013 (ERANet)
(75 k€ for ACT Unit, 2 M€ Total)
- 14 **2013-2017:** EDUFLUVAC, combinatorial immunization strategy to educate the immune system towards cross recognition and coverage against antigenic drift in seasonal influenza virus exposure, funded by EU (FP7), **Workpackage leader**
(1.6 M€ for ACT Unit, 4.6 M€ Total)
- 13 **2013-2016:** EPIGENESIS, Health approaches to integrate Guadeloupe research on vector-borne and emerging diseases in the ERA: from characterization of emergence mechanisms to innovative approaches for prediction and control, funded by EU (FP7)
(50 k€ for ACT Unit, 3.5 M€ Total)
- 12 **2013-2017:** BRAINVECTORS, From Brain Gene Transfer Towards Gene Therapy: Pharmacological Assessment of AAV, CAV and LVV, Marie Curie Network, funded by EU (FP7)
(45 k€ for ACT Unit, 1.6 M€ Total)
- 11 **2012-2014:** SpeCCC, Specialised Cell Carrier Components, funded by EU (FP7), **Workpackage leader**

- (333 k€ for ACTUnit, 1 M€ Total)
- 10 **2011-2015:** ComplexINC, New Technologies and Production Tools for Complex Protein Biologics, funded by EU (FP7), **Workpackage leader**
(1.4 M€ for ACT Unit, 6 M€ Total)
 - 9 **2011-2014:** NanoGene, Stem cell generation and manipulation by nanoparticle mediated gene transfer for the safe clinical application of gene-modified cells, 2011-2014, ENMED/0001/2010, funded by EuroNanoMed ERA-Net
(70 k€ for ACT Unit, 2 M€ Total)
 - 8 **2010-2011:** Oncovir, E!4947, funded by Eureka, **Scientific Coordinator**
(300 k€ for ACT Unit, 0.7 M€ Total)
 - 7 **2010-2014:** CAREMI, Cardio Repair European Multidisciplinary Initiative, funded by EU (FP7)
(0.5 M€ for ACTUnit, 11 M€ Total)
 - 6 **2009-2012:** HYPERLAB, High Yield and Performance Stem Cell Lab funded by EU (FP7), **Workpackage leader**
(0.5 M€ for ACT Unit, 3 M€ Total)
 - 5 **2009-2012:** BRAINCAV, Nonhuman adenovirus vectors for gene transfer to the brain, funded by EU (FP7), **Workpackage leader**
(0.5 M€ for ACTUnit, 3 M€ Total)
 - 4 **2009-2011:** Global HIV Vaccine Criorepository funded by IBMT-Fraunhofer and Bill & Melinda Gates Foundation
(61 k€ for ACT Unit, 2 M€ Total)
 - 3 **2006-2009:** Baculogene, Baculovirus Vectors for Gene Therapy funded by EU (FP6 - 2007), **Workpackage leader**
(275 k€ for ACTUnit, 2.5 M€ Total)
 - 2 **2005-2007:** Epigenevac, Epidemiology and New Generation Vaccines for *Ehrlichia* and *Anaplasma* infections of Ruminants, funded by EU (FP6-2002-INCO-DEV-1)
(117 k€ for ACT Unit, 1.2 M€ Total)
 - 1 **2005-2007:** MarkVac: Development of Marker Vaccines, Companion Diagnostic Tests and Improvement of Epidemiological Knowledge to Facilitate Control of Rinderpest and Peste des Petits Ruminants Viruses, funded by EU
(145 k€ for ACT Unit, 1.5 M€ Total)

14.1.2. FUNDAÇÃO PARA A CIÊNCIA E TECNOLOGIA (FCT) GRANTS

- 9 **2016-2019:** Netdiamond: New targets in diastolic heart failure: from comorbidities to personalized medicine, PAC project, POCI-01-0145-FEDER-016385 funded by FCT (PI of IBET partner)
(170 k€ for ACTUnit, 2.5 M€ Total)
- 8 **2015-2019:** CardioRegen: Integrative studies from the embryo to Scalable Multipronged Generation of hESC-derived Myocardial progenitors for heart repair, HMSP-ICT/0039/2013, HMS program, funded by FCT (PI of IBET partner)
(100 k€ for ACTUnit, 300 k€ Total)
- 7 **2014-2016:** Cardiostem, Engineered cardiac tissues and stem cell-based therapies for cardiovascular applications, MITP-TB/ECE/0013/2013, funded by Programa MIT | Portugal-FCT (PI of IBET partner)
(261 k€ for ACTU, 1 M€ Total)
- 6 **2013-2015:** Combining siRNA and AAV therapy approaches to target human basal-like breast cancer: from vector development to anti-tumor efficacy evaluation, PTDC/BBB-BIO/1240/2012, funded by FCT
(200 k€)
- 5 **2010-2013:** Novel Cell Factories for the production of secreted complex bioproducts: a syntetic biology approach for improved product Stoichiometries, PTDC/EBB-EBI/102266/2008, funded by FCT
(190 k€)
- 4 **2009-2011:** Integrated strategy for expansion, neuronal differentiation and cryopreservation of human embryonic stem, PTDC/BIO/72755/2006, funded by FCT
(123 k€)
- 3 **2007-2009** Novel stroke model for neuroprotective research: bioreaction of primary brain cell aggregates funded by FCT (PTDC/BIO/69407/2006)
(170 k€)
- 2 **2004-2006** Integrated Strategy for the Production, Purification and Storage of Adenovirus, funded by FCT (POCTI/BIO/46515/2002)
(100 k€)
- 1 **2003-2006** Metabolic Trafficking between Neurons and Astrocytes under Stress Conditions Implicated in Neurological Disorders, funded by FCT, (POCTI/BIO/39214/2001)
(98 k€)

14.1.3. R&D PROJECTS WITH PHARMA AND BIOTECH COMPANIES

From 2007 30 scientific projects and/or research services funded by **Abbvie** (USA), **Apceth** (Germany), **Bayer Healthcare** (Germany), **Cellartis** (Sweden), **Centocor** (USA), **CEVEC** (Germany), **Genethon** (France), **Lonza** (UK), **Merck**

& Co (USA), Merck Healthcare (Germany, USA), Micromet (Germany), Novartis Pharma (Switzerland), PBS Biotech (USA), Pharmacelsus (Germany), Pieris (Germany), Redbiotec (Switzerland), Rubius (USA), Sanofi (Germany and USA), Sanofi Pasteur (France), Sartorius (Germany), Tecnimede (Portugal), VCN (Spain).

14.2. PROJECTS AS PARTICIPANT RESEARCHER

14.2.1. INTERNATIONAL GRANTS

- 7 **2011-2016:** PREDECT, New Models for Preclinical Evaluation of Drug Efficacy in common solid tumours, funded by IMI (Innovative Medicines Initiative)
- 6 **2006-2011:** CLINIGENE, European Network for the Advancement of Clinical Gene Transfer and Therapy, funded by EU (LSHB-CT-2006-018933)
- 5 **2006-2010:** VITROCELLOMICS, Reducing Animal Experimentation in Preclinical Predictive Drug Testing by Human Hepatic In Vitro Models Derived from Embryonic Stem Cell, funded by EU (PL018940)
- 4 **2004-2009:** CellPROM, Cell Programming by Nanoscaled Devices, Integrated Project FP6, funded by EU (NMP4-CT-2004-500039)
- 3 **2001-2004:** COWDRIA, Mass production of Cowdria ruminantium to produce a cost effective veterinary vaccine against heartwater, 8-ACP-TPS-040, funded by the EU
- 2 **2003-2005:** ROTASAFE, Novel strategies for a safe rotavirus vaccine, QLRT-2001-01249, funded by the EU
- 1 **2003-2005:** INSERTAGENE, Integrated Strategies for efficient therapeutic retrovirus based on modular cell lines, QLK3-CT-2002-01949, funded by the EU

14.2.2. FUNDAÇÃO PARA A CIÊNCIA E TECNOLOGIA (FCT) GRANTS

- 19 **2013-2015:** *Systems biotechnology for improved production of biopharmaceuticals in animal cells*, funded by FCT (PTDC/BBB-BSS/0518/2012)
- 18 **2013-2015:** *Integrative approaches to depict human cardiac stem cell receptome and its role in the cardiac regenerative process*, funded by FCT (PTDC/BBB-BIO/1414/2012)
- 17 **2012-2015:** *Development of improved suspension MDCK cell lines for the production of viral based bioproducts: manufacturing Influenza and Adenovirus*, funded by FCT (PTDC/EBB-EBI/118621/2010)
- 16 **2012-2015:** *Human central nervous system in vitro models for preclinical research: new tools for studying viral vector-mediated gene*, funded by FCT (PTDC/EBB-BIO/119243/2010)

- 15 **2012-2015:** *Probing adenovirus-host cell interactions: a systems biotechnology approach to improve production of gene delivery vectors*, funded by FCT (PTDC/EBB-BIO/119501/2010)
- 14 **2011-2014:** *3D in vitro models for reducing animal experimentation in pharmaceutical development: integrative approaches for prediction of hepatic drug metabolism and neurotoxicity*, PTDC/EBB-BIO/112786/2009, funded by FCT, Portugal.
- 13 **2010-2012:** *Preconditioning triggered by Carbon monoxide: new strategies to prevent brain damage due to hypoxia-ischemia and reperfusion*, PTDC/SAU-NEU/098747/2008, funded by FCT, Portugal.
- 12 **2010-2012:** *2D fluorometry: a powerful tool to improve mammalian cell process development*, PTDC/EBB-BIO/102750/2008, funded by FCT, Portugal.
- 11 **2010-2012:** *Baculome - Engineering cellular energetics for improvement of bioprocesses: metabolic modeling for enhanced vaccines production*, PTDC/EBB-BIO/103359/2008, funded by FCT, Portugal.
- 10 **2007-2010:** *Fundamentals of downstream processing of enveloped viruses: towards an integration of purification processes*, funded by FCT (PTDC/EQU-EQU/71645/2006)
- 9 **2010-2012:** *Retroviral like particles: improving potential as candidate vaccines for Hepatitis C*, PTDC/EBB-BIO/102649/2008, funded by FCT, Portugal.
- 8 **2007-2010:** *Manufacturing canine adenovirus vectors for gene therapy: development of MDCK CAV-2E1- transcomplementing cell lines*, funded by FCT (PTDC/BIO/69452/2006)
- 7 **2007-2010:** *Development of flexible cell lines for the Production of Retrovirus and Lentivirus for Gene Therapy*, funded by FCT (PTDC/BIO/69451/2006).
- 6 **2007-2010:** *Carbon monoxide as a neuroprotective agent against hypoxia-ischemia and reperfusion*, funded by FCT (PTDC/SAU-NEU/64327/2006)
- 5 **2005-2007:** *Cell Cryothera: Cell Cryopreservation for Therapy and Regenerative Medicine*, funded by FCT (010.6/A006/2005).
- 4 **2005-2007:** *Genetics, Stoichiometry and Kinetics of Multiple Protein Assembly: the case for a Rotavirus Like Particle*, funded by FCT (POCI/BIO/55975/2004)
- 3 **2005-2007:** *Advanced Control of BHK Cultivation Processes Based on Intracellular Metabolic Fluxes*, funded by FCT (POCI/BIO/57927/2004)
- 2 **2005-2007:** *THERAVECT, Production, Purification and Storage of Retroviral Vectors Produced by Modular Master Producer Cells*, funded by FCT, (010.6/A003/2005)
- 1 **2001-2003:** *Cell cycle control for better biotechnological methods in therapeutic protein production*, funded by FCT, Portugal (POCTI/BIO/35687/2000)

15. SUPERVISION OF RESEARCH STUDENTS

15.1. POST-DOCS

- 19 **Oct 2017-2021: Henrique Almeida**, Functionalizing biomaterials for cardiac differentiation *FCT Post Doc Fellowship*
- 18 **Sep 2016-2019: Lara Silva**, Glycosignatures: Analytical tools to discover cancer biomarkers by Mass Spectrometry, *iBET Post Doc Fellowship*
- 17 **Sep 2016-Aug 2017: Dussica Rados**, ¹³C flux analysis in study human macrophage metabolism, *iBET Post Doc Fellowship*
- 16 **Sep 2016-Aug 2018: Inês Isidro**, Biosystems and computational Biotechnology for Bioprocess understanding, *iBET Post Doc Fellowship*
- 15 **Feb 2013-May 2016: Patricia Alves**, Integrative approaches to decipher human Cardiac Stem Cells Receptome contribution to cardiac regeneration, *FCT Post Doc Fellowship*
- 14 **Mar 2013-Dec 2013: Claudia Santos**, Digested raspberries polyphenols for brain health: permeability and neuroprotection, *FCT Post Doc Fellowship*
- 13 **March 2010-Dec 2014: Rute Castro** (Co-supervision with Ana Coroadinha), Engineering retrovirus like particles as vaccine candidates for Hepatitis C, *FCT Post Doc Fellowship*
- 12 **Jan 2010-Dec 2014: Marco Patrone** (from 2010 to 2012 co-supervision with Margarida Archer), Molecular Biology approaches to Improve Difficult to Express Membrane Proteins Production in Insect Cells for X-Ray Crystallography Studies, *Marie Curie Fellowship*
- 11 **May 2009-Dec 2010: Gonçalo Real**, Production of Lentiviral transfer vectors, *iBET Post Doc Fellowship*
- 10 **Jan-Dec 2009: Lara Lacerda** (co-supervision with Rogerio Gaspar), Development of Carbon Nanotubes as Delivery Systems for Biomedical Applications, *FCT Post Doc Fellowship*
- 9 **Sep 2008-Aug 2009: Ana Palma Teixeira**, Metabolic Flux Analysis in Insect Cell Metabolism, *iBET Post Doc Fellowship*
- 8 **Oct 2007-Jun 2009: Catarina Brito**, 3D in vitro Models of Human Brain Cells, *FCT Post Doc Fellowship*
- 7 **April 2007-May 2009 Vicente Bernal** (co-supervision with Manuel Carrondo), Impact of Baculovirus infection on Insect Cell Metabolism, *FCT Post Doc Fellowship*
- 6 **April 2007-Dec 2008: Isabel Marcelino**, Proteomics for Characterization of *E Ruminantium* Candidate Vaccines, *FCT Post Doc Fellowship*

- 5 **Jan-Dec 2007: Adriana Yokomizo** (co-supervision with Manuel Carrondo), Baculovirus Production for Gene Therapy, FCT Post Doc Fellowship
- 4 **Feb 2006-June 2008: Joana Miranda**, 3D Approaches for Improvement of *in vitro* models for Toxicity tests, FCT Post Doc Fellowship
- 3 **June 2005-July 2006: Maria Barbosa**, Bioengineering Approaches for 3D cultures in Small Scale Bioreactors, FCT Post Doc Fellowship
- 2 **Dec 2004-April 2011: Helena Vieira**, Production of VLPs for Rotavirus Vaccination (1st Post-doc), CO₂ pre-conditioning and brain cell metabolism (2nd Post-doc), FCT Post Doc Fellowship
- 1 **Sep 2003-Aug 2005: Change Zhang** (co-supervision with Manuel Carrondo), Production of Adenovirus for PPR vaccination, FCT Post Doc Fellowship

15.2. PHD STUDENTS *(PhD Students were awarded with FCT PhD grants or PhD program grants)*

15.2.1. Thesis On Going

- 40 **Filipa Moura**, to be concluded 2026, Development of a scalable, stable cell line-based platform for manufacturing recombinant adeno-associated viruses (co-supervision with José Escandell).
- 39 **Margarida Rodrigues**, to be concluded 2024, Bioprocess engineering of ferritin-based nanoparticles as SARS-CoV-2 vaccine candidates (co-supervision with António Roldão).
- 38 **Pedro Vicente**, to be concluded 2023, Bioprocess Engineering of a human 3D Cell Model for Primary Hyperoxaluria Type 1, (co-supervision with Margarida Serra).

15.2.2. Thesis Concluded *(date indicate thesis conclusion)*

- 37 **2023: Marco Silvano**, Improving production of influenza VLP-based vaccines in insect cells using single cell analysis", (co-supervision with António Roldão), Marie Skłodowska-Curie Action STACCATO 813453 ESR 7
- 36 **2023: Nikolaus Virgolini**, Combining single-cell analysis with systems biology to fine-tune production of rAAV vectors in insect cells, (co-supervision with António Roldão and Ines Isidro), Marie Skłodowska-Curie Action STACCATO 813453 ESR 8
- 35 **2022: Francisca Arez**, Novel cell-based platform for drug screening targeting plasmodium hepatic infection, Universidade Nova de Lisboa, student from the Regenerative Medicine PhD Program, (co-supervision with Miguel Prudêncio, IMM-Instituto de Medicina Molecular da Universidade de Lisboa)
- 34 **2021: Liliana Rodrigues**, Development of process technologies for the valorization of fish processing waste streams: integration of natural deep

- eutectic solvents with supercritical CO₂ extraction (co-supervision with Ana Matias)
- 33 **2020: Daniel Pais**, Development of advanced monitoring and control tools for rAAV production in the insect cell system, FCT, Universidade Nova de Lisboa, student from the MIT-Portugal Program, (co-supervision with Ines Isidro)
 - 32 **2018: Marta Estrada**, Novel cell models to study breast tumour microenvironment and disease progression, ITQB, Universidade Nova de Lisboa Student from the MolBioSc PhD Program (co-supervision with Catarina Brito), November 2018
 - 31 **2018: Hugo Soares**, The importance of CD81 in the biogenesis of Chimeric and Native Hepatitis C virus-like particles, ITQB, Universidade Nova de Lisboa (co-supervision with Ana Sofia Coroadinha), October 2018
 - 30 **2018: Bernardo Abecassis**, Development of a Human Induced Pluripotent Stem Cell Derived Cardiac Model: From Bioprocess Intensification to Heterotypic Cell Cultures, Universidade Nova de Lisboa, student from the Regenerative Medicine PhD Program, (co-supervision with Margarida Serra), September 2018
 - 29 **2018: Marta Silva**, The key role of CCBE1 growth factor in cardiac lineage commitment, from human pluripotent stem cells towards cardiomyocytes, Universidade Nova de Lisboa, student from the Regenerative Medicine PhD Program, (co-supervision with Margarida Serra), September 2018
 - 28 **2018: Maria João Sebastião**, Towards novel stem cell and protein-based therapies for myocardium regeneration, FCT, Universidade Nova de Lisboa, student from the MIT-Portugal Program, (co-supervision with Margarida Serra and Patricia Alves), September 2018
 - 27 **2018: Catarina Pinto**, Combining shRNA and AAV-based therapeutic approaches to target human basal-like breast cancer: from vector development to anti-tumor efficacy evaluation, ITQB, Universidade Nova de Lisboa, Student from the MolBioSc PhD Program (co-supervision with Catarina Brito), July 2018,
 - 26 **2017: Claudia Correia**, Bioprocessing of human Pluripotent Stem Cells for cardiac cell therapy and pre-clinical research, FCT, Universidade Nova de Lisboa, student from the MIT-Portugal Program, (co-supervision with Margarida Serra), February 2017
 - 25 **2016: Bárbara Cunha**, Development of integrated strategies for the downstream processing of human stem cells for clinical application, FCT, Universidade Nova de Lisboa, student from the MIT-Portugal Program (co-supervision with Margarida Serra and Cristina Peixoto), November 2016
 - 24 **2016: Ana Sofia Almeida**, Carbon Monoxide modulation of neuronal differentiation, ITQB, Universidade Nova de Lisboa (co-supervision with Helena Vieira from CEDOC-FCM, Universidade Nova de Lisboa), September 2016
 - 23 **2016: Tiago Martins da Costa Duarte**, Probing CHO cells metabolism using metabolomics and fluxomics tools, ITQB, Universidade Nova de Lisboa (co-

supervision with Ana Teixeira), June 2016

- 22 **2016: Daniel Simão**, Development of human central nervous system 3D in vitro models for preclinical research, FCT, Universidade Nova de Lisboa, student from the MIT-Portugal Program (co-supervision with Catarina Brito), December 2015
- 21 **2015: Ana Carina Silva**, Strategies for improved Adenovirus and PPR vaccine production in different cell lines, from bioprocess development to final formulation, ITQB, Universidade Nova de Lisboa, December 2015
- 20 **2015: Francisca Monteiro**, Rational design of insect cell-based vaccine production, Bridging metabolomics with mathematical tools to study virus-host interactions, ITQB, Universidade Nova de Lisboa (co-supervision with Vicente Bernal from Universidad Murcia, Spain), September 2015
- 19 **2015: Sofia Rebelo**, Development of 3D in vitro models for prediction of hepatic metabolism and toxicology, FCT, Universidade Nova de Lisboa, student from the MIT-Portugal Program (co-supervision with Catarina Brito) June 2015
- 18 **2015: Fabiana Fernandes** Establishment and evaluation of a flexible insect cell line for rapid production of recombinant proteins, FCT, Universidade Nova de Lisboa, student from the MIT-Portugal Program (co-supervision with Ana Teixeira and Kristala Prather from MIT, USA), May 2015
- 17 **2015: Paulo Fernandes**, Bioprocess design of canine adenovirus vectors for gene therapy applications, ITQB, Universidade Nova de Lisboa (co-supervision with Ana Sofia Coroadinha), March 2015
- 16 **2012: Rui Tostões**, Process Engineering of Liver Cells for Drug Testing Application, FCT, Universidade Nova de Lisboa, student from the MIT-Portugal Program (co-supervision with Manuel Carrondo and Daniel Wang from MIT, USA), February 2012
- 15 **2012: Cláudia Queiroga**, Disclosing Carbon Monoxide Protection in Cerebral Ischemia, insight into the cellular mechanisms, ITQB, Universidade Nova de Lisboa (co-supervision with Helena Vieira), October 2012
- 14 **2012: Sofia Leite**, Novel Approaches for Culturing Hepatocytes for Drug Testing Applications, ITQB, Universidade Nova de Lisboa, January 2012
- 13 **2011: Nuno Carinhas**, Systems Biotechnology of baculovirus-producing insect cells, ITQB, Universidade Nova de Lisboa (co-supervision with Rui Oliveira), September 2011
- 12 **2011: Ana Isabel Amaral**, Metabolic Flux Analysis of Neural Cell Metabolism in Primary Cultures, ITQB, Universidade Nova de Lisboa, September 2011
- 11 **2011: Margarida Serra**, Process Engineering of Stem Cells for Clinical Application, ITQB, Universidade Nova de Lisboa, February, 2011
- 10 **2010: Tiago Vicente**, Downstream processing development of enveloped viruses for clinical applications, ITQB, Universidade Nova de Lisboa (co-supervision with Manuel Carrondo), September 2010

- 9 **2010: Leonor Norton**, Expression of antibodies and retroviral vectors from defined chromosomal sites, strategies towards reliable production systems, ITQB, Universidade Nova de Lisboa (co-supervision with Hansjörg Hauser from HZI-Helmholtz-Zentrum für Infektionsforschung, Germany), April 2010
- 8 **2010: Ana Teresa Serra**, Biochemical characterization and development of functional ingredients, ITQB, Universidade Nova de Lisboa, (co-supervision with Catarina Duarte), March 2010
- 7 **2010: Rita Malpique**, Novel cryopreservation strategies towards reliable production systems, ITQB, Universidade Nova de Lisboa (co-supervision with Heiko Zimmermann from IBMT/Fraunhofer, Germany), February 2010
- 6 **2009: Sónia Adelaide Sá Santos Rocha**, In Vitro models for metabolic studies of Brain insults, ITQB, Universidade Nova de Lisboa, October 2009
- 5 **2009: Maria Cândida Mellado**, Triple-layered rotavirus-like particles production, a focus on in-vitro assembly and disassembly, ITQB, Universidade Nova de Lisboa (co-supervision with Manuel Carrondo), September 2009
- 4 **2008: Cristina Peixoto Lisboa**, Challenges in the purification of Complex Biopharmaceuticals, ITQB, Universidade Nova de Lisboa, December 2008
- 3 **2007: Cláudia Istrate**, Host and Immune Responses to Natural and Experimental Rotavirus Infection, ITQB, Universidade Nova de Lisboa (co-supervision with Manuel Carrondo), April 2007
- 2 **2007: Tiago Ferreira**, Adenovirus as Biopharmaceutical, optimization of vector production, ITQB, Universidade Nova de Lisboa (co-supervision with Manuel Carrondo), March 2007
- 1 **2007: Isabel Marcelino**, Development of a Vaccine Candidate against Heartwater, ITQB, Universidade Nova de Lisboa (co-supervision with Manuel Carrondo), March 2007

15.3. MASTER STUDENTS *(date indicate thesis conclusion)*

- 9 **Dec 2011: Marta Silva**, Master in Molecular Biology and Genetics, FCUL, New tools for improving culture strategies for Hepatocyte differentiation
- 8 **Dec 2011: João Vidigal**, Master Cellular Biology and Biotechnology, FCUL, Development of an insect cell factory for the production of complex biopharmaceuticals using a synthetic biology approach.
- 7 **Dec 2010: Cláudia Correia**, Master Biotechnology, FCT NOVA – Microencapsulation technology: a powerful tool for hESCs expansion and cryopreservation.
- 6 **Dec 2010: Daniel Simão**, Master Molecular Genetics and Biomedicine, FCT NOVA, Novas Linhas Celulares Humanas para Produção de Adenovírus com Aplicação em Terapia Génica.

- 5 **Dec 2009: Francisca Monteiro**, Master Applied Microbiology, FCUL, Estudo do efeito da densidade celular no sistema baculovirus-célula de insecto: Uma perspectiva metabólica.
- 4 **Dec 2009: Paulo Fernandes**, Master Applied Microbiology, FCUL, Produção de vectores de adenovírus caninos: optimização do processo na perspectiva de aumento de escala.
- 3 **June 2009: Marcos Sousa**, Master Biologic Engineering, UAlg, Optimização da estratégia de fed-batch para produção de anticorpos monoclonais em sistema de expressão transiente.
- 2 **Dec 2008: Maria Armanda Rodrigues**, Master Cellular Biology and Biotechnology, FCUL, Desenvolvimento de sistemas 3D de culturas primárias de hepatócitos para teste de drogas
- 1 **Sep 2005: Catarina Estevão**, Master Biotechnology (Biochem Engineering), ISTUL, Genetics, stoichiometry and kinetics of multiple protein production: the case of rotavirus-like particles.

15.4. SHORT TERM INTERNATIONAL GRADUATE STUDENTS

- 5 **2012: Mihailo Mirkovic**, Master Student, Center for Human Molecular Genetics at the Biological Faculty, University of Belgrade, 6 month internship
- 4 **2010: Ivette Pacheco**, Master Student, Biochemical Sciences. Instituto de Biotecnología, Universidad Nacional Autónoma de México (UNAM), 1 year
- 3 **2009: Sanja Martens**, Erasmus Master Student, Hamburg University of Applied Sciences, Germany
- 2 **2007: Monica Martinez Martinez**, MSc Student, Madrid Complutense University, Spain, 3 months
- 1 **2005: Sebastien Sart**, MSc student Biotechnology, Genethon, France, 2 months internship

15.5. UNDERGRADUATE STUDENTS (date indicate BSc thesis conclusion)

- 19 **2009: Luisa Osório**, Cellular and Molecular Biology, FCUL, 7 months internship
- 18 **2007: Daniela Ferreira**, Biochemistry, FCUL, final year graduation thesis
- 17 **2006: Mónica Barreto**, Applied Chemistry, FCT-UNL, 6 months internships
- 16 **2006: Inês Delgado**, Applied Chemistry, FCT-UNL, 6 months internships
- 15 **2006: Ricardo Perdigão**, Biochemistry, FCUL, final year graduation thesis
- 14 **2006: Ana Isabel Alves**, Biochemistry, UAlg, final year graduation thesis
- 13 **2005: Sofia Leite**, Biochemistry, FCUL, final year graduation thesis

- 12 **2005: Ana Amaral**, Biochemistry, FCUL, final year graduation thesis
- 11 **2005: Andreia Carvalho**, Applied Chemistry, FCT-UNL, final year graduation thesis, 6 months internship
- 10 **2005: Ana Catarina Parente Pereira**, Biology, FCUL, final year graduation thesis
- 9 **2004: Ana Lucia Ferreira**, Biological Eng, UAlg, final year graduation thesis final year graduation thesis
- 8 **2003: Carina Silva**, Biochemistry, FCUL, final year graduation thesis
- 7 **2003: Célia Verissimo**, Biochemistry, FCUL, final year graduation thesis
- 6 **2002: Marcos Sousa**, Biological Eng, UAlg final year graduation thesis
- 5 **2001: Delia Gonçalves**, Biochemistry, UAlg, final year graduation thesis
- 4 **2000: Miguel Monteiro**, Biochemistry, FCUL, final year graduation thesis
- 3 **1999: Isabel Marcelino**, Biochemistry, UAlg, final year graduation thesis
- 2 **1998: Luís Fonseca**, Biochemistry, FCUL, final year graduation thesis (co-supervision with Helena Santos)
- 1 **1995: Rita Nunes**, Biochemistry, FCUL, final year graduation thesis (co-supervision with Helena Santos)

15.6. GRADUATE STUDENTS (BI FELLOWSHIPS)

16 Ana Tátá (2008-2009), **15** Raquel Ambrósio (2008), **14** Vasco Filipe (2007), **13** Tiago Vicente (2006), **12** Ana Amaral (2006), **11** Margarida Serra (2004), **10** Rita Malpique (2004), **9** António Roldão (2004), **8** Ana Lúcia Ferreira (2004) **7** Sónia Sá Santos (2003), **6** Tiago Ferreira (2002), **5** Andre Bengala (2001-2002), **4** Tiago Braga da Costa (2001), **3** Filipa Rosa (2001-2003), **2** Isabel Marcelino (1999-2000), **1** Angela Almeida (1997-1998).

16. AWARDS AND RECOGNITIONS

16.1. PM ALVES AWARDS AND RECOGNITIONS

- 15 **2024** ECI Advancing Manufacture of Cell and Gene Therapies Award, USA
- 14 **2021** Elected Member of the American National Academy of Engineering
- 13 **2021** Ciência 2021 Commissioner, invitation by the Portuguese Minister of Science, Technology and Higher Education, Prof Manuel Heitor
- 12 **2021** Gold Medal of Merit from Oeiras Municipality, June 2021
- 11 **2018** Expert Member of the Scientific Committee of IMI
- 10 **2017** Expert Member of the Scientific Advisory Committee ESAC - EU ECVAM

- 9 **2017** Chairman of the European Society for Animal Cell technology (elected by the ESACT Executive Committee)
- 8 **2017** Recognized as one of the 100 Top Portuguese Women Scientists by Centro Ciência Viva, Portugal (exhibition in Pavilhão do Conhecimento, <http://www.cienciaviva.pt/mulheresnaciencia/index.asp?id=345>)
- 7 **2013** Expert Member of the Advisory Group for Horizon 2020 – Health
- 6 **2009** Scientific Merit Award from New University of Lisbon
- 5 **2009** MIT Visiting Researcher, FCT/MIT Portugal Program (3 months)
- 4 **2008** Scientific Merit Award from Santander Totta/ New University of Lisbon
- 3 **2005** Scientific Award from the Portuguese association of French Doctorates
- 2 **1995** PhD fellowship, FCT/Programa Ciência (to 1999)
- 1 **1991** Yong Researcher fellowship, FCT/Programa Ciência (to 1992)

Plus from 1991-2021 more than 40 travel awards to attend international conferences

16.2. VISITING SCIENTISTS IN PM ALVES LAB

- 6 **2023: Prof Yonghyun (John) Kim**, University of Alabama, USA, 6 months
- 5 **2015: Dr Eric Kremer**, CNRS-Montellier, France, 6 months
- 4 **2014: Dr Liliane Tenenbaum**, Lausanne Univ. Hospital, Switzerland, 2 months
- 3 **2008: Dr Claudio Prieto**, Universidad Nacional del Litoral (UNL). 1 month
- 2 **2005: Dr Ronaldo Zucatelli Mendonça**, Butantan Institute, Brasil, 2 months
- 1 **2003: Dr Oscar Taboga**, INTA, Argentina, 2 months

16.3. TEAM AWARDS

16.3.1. Students PhD Thesis Awards

- 2 **Best 2012 PhD Thesis Prize ITQB NOVA, Portugal:** Disclosing Carbon Monoxide Protection in Cerebral Ischemia: Insights into the cellular mechanisms. **PhD student: Cláudia Queiroga**, Supervisors: Helena L.A. Vieira and **Paula M. Alves**
- 1 **Best 2010 PhD Thesis of Helmholtz Centre for Infection Research, Germany:** Expression of Antibodies and Retroviral Vectors from Defined Chromosomal Sites: Strategies towards Reliable Production Systems. **PhD Student: Leonor Norton**, Supervisors: Hansjörg Hauser and **Paula M. Alves**

16.3.2. Students Posters Awards

FROM 2017 TO 2023 SEVERAL PHD STUDENTS WERE AWARDED WITH POSTER PRIZES AND ALSO BEST ORAL PRESENTATIONS

- 14 2017: Best Poster Snapshot:** B Abecasis, T Aguiar, E Arnault, R Costa, P Gomes-Alves, A Aspegren, M Serra, PM Alves, Expansion of 3D human induced pluripotent stem cell aggregates in bioreactors: bioprocess intensification and scaling-up approaches, Scale-Up and Manufacturing of Cell-based Therapies V held in San Diego, California, USA. January 2017
- 13 2017: 3rd Poster Prize:** D Sequeira, RC Correia, MJT Carrondo, A Roldao, AP Teixeira, PM Alves, A modular strategy for multi-HA influenza VLPs production: combining stable and baculovirus-mediated expression in insect cells, 25th ESACT Meeting, Lausanne, Switzerland, May 2017
- 12 2016: Poster in the Spotlight:** MF Estrada, SP Rebelo, VE Santo, EJ Davies, S Abreu, MT Pinto, W Sommergruber, PM Alves, E Anderson, C Brito, Mimicking disease progression features by modulation of the tumor microenvironment in stirred-tank culture systems, EACR24 (24th Biennial Congress of the European Association for Cancer Research), Manchester, UK, July 2016
- 11 2015: Best Student Poster Award:** B Cunha, C Peixoto, MM Silva, MJT Carrondo, M Serra, PM Alves, Filtration methodologies for the concentration and washing of human mesenchymal stem cells, Scale-up and Manufacturing of Cell-Based Therapies, January 2015
- 10 2014: Best Overall Poster Prize:** F Monteiro, V Bernal, A Hamdi, P Drncova, M Chaillet, I Berger, PM Alves, Tweaking insect cell platforms for the production of multivalent VLPs: Metabolic profiling, pathway analysis and bioprocess optimization, Vaccine Technology V, Playa del Carmen, Mexico, June 2014
- 9 2013: Best Abstract Award:** D Simão, C Pinto, M Serra, A Teixeira, G Schiavo, EJ Kremer, PM Alves, C Brito, Modeling human neuronal functionality in vitro: 3D culture for neural differentiation and maturation, 8th International Meeting of the SPCE-TC, Faro, Portugal, May 2013
- 8 2009: 3rd Best Poster Prize:** AF Rodrigues, M Carmo, AI Amaral, PM Alves, AS Coroadinha, Lipid Metabolism as a Basis for Improved Manufacturing of Complex Bioproducts-The case of Retroviral Vectors, ESACT 2009, Dublin, Ireland, June 2009
- 7 2009: 2nd Best Poster Prize:** R Malpique, L Osório, D Ferreira, F Ehrhart, H Zimmermann and PM Alves, Improved Cryopreservation Protocols for Brain Cells, ESACT 2009, Dublin, Ireland, June 2009
- 6 2009: Best Poster Award:** R Malpique, D Ferreira, F Ehrhart, A Katsen-Globa, MJT Carrondo, H Zimmermann, PM Alves, Cryopreservation of adherent cells: strategies to improve cell viability and function after thawing, 2nd World Congress of the Tissue Engineering and Regenerative Medicine International Society, Seul, South Korea, August 2009

- 5 **2008: Merck Best Poster Award:** R Malpique, F Ehrhart, A Katsen-Globa, MJT Carrondo, H Zimmermann, PM Alves, Cell Culture and Cryopreservation in an Alginate Environment: Applications in Cell-Based Therapies and Toxicology Testing, Cell Culture Engineering XI, Sunshine Coast, QLD, Australia, April 2008
- 4 **2008: Merck Best Student Poster Award:** C Mellado, AL Simplício, A Lopes, MJT Carrondo, PM Alves, Novel techniques for characterization of double and triple-layered rotavirus-like particles, Vaccine Technology II, Albufeira, Portugal, June 2008
- 3 **2007: 1st Best Poster Prize:** T Vicente, M Sousa, C Peixoto, MJT Carrondo, PM Alves, Understanding anion exchange membrane chromatography: optimization of Rotavirus-Like Particles purification, 14th International Conference on Biopartitioning and Purification, Lisbon, Portugal, June 2007
- 2 **2006: 2nd Best Poster Prize:** T Rodrigues, A Carvalho, A Roldão, MJT Carrondo, PM Alves, PE Cruz, Screening Anion-Exchange Chromatographic Matrices for Isolation of Onco-Retroviral Vectors, European Downstream Technology Forum, Göttingen, Germany, May 2006
- 1 **2003: 1st Best Poster Prize:** PM Alves, S Sá Santos, LL Fonseca, MAR Monteiro, MJT Carrondo, Alternative Approaches to Culture Brain Cells in Stirred Tank Bioreactors, First World Congress on Regenerative Medicine, Leipzig, October 2003

17. EVALUATION ACTIVITY

17.1. EDITORIAL ACTIVITY

- 2023** Guest Editor Special Issue Biotechnology & Bioengineering:
Advanced Cell Technologies: Making Protein, Cell, and Gene Therapies a Reality
- 2015-(...)** Associate Editor Journal of Biotechnology
- 2009-(...)** Member of the Editorial Board of BMC Biotechnology
- 2008-(...)** Member of the Editorial Board of Journal of Biotechnology

17.2. EXPERT REVIEWING FOR INTERNATIONAL AGENCIES AND INSTITUTIONS

- 2021-(...)** Member of the Panels for Linköping University
- 2017-(...)** Member of the Evaluation Board Next Generation Biologics Program, Vinnova, Sweden
- 2016-(...)** Member Evaluation Panel of Science Foundation Ireland Projects, Ireland
- 2011** Member of the Health Evaluation Panel for LabEX - Laboratories of Excellence - National Research Agency, France.

- 2010-(...)** Member of the Evaluation Panel for bilateral project grants, Fundação para a Ciência e Tecnologia, Portugal.
- 2009** Member of the Evaluation panel for BSRC – Biotechnology and Biological Sciences Research Council - BRIC Bioprocessing Research Industry Club, United Kingdom.
- 2006-(...)** Research Grants Expert evaluator for: European Research Council, JPND, Eureka, European Commission (FP7), The Wellcome Trust (UK), NSF-National Science Foundation (USA), ETMR-Scotland (UK), A-Star (Singapore), BSRC (UK), ANR (France), Vinnova (Sweden),

17.3. JOURNAL PEER REVIEW

Trends in Biotechnology	Stem Cells	Nature Comm
Advances in Biotechnology	Stem Cells Transl Med	Scientific Reports
Nature Biotechnology	Brain Research	Science
Biotechnology & Bioengineering	J Neurochemistry	PLoS ONE
Metabolic Engineering	Hepatology In Vitro	Others
Biotechnology Journal	Toxicology	
Journal of Biotechnology	Tissue Engineering	
BMC Biotechnology	Vaccine	
Biotechnology Progress,	JBC	
Biotechnology Letters	Biomaterials Biochemistry	
Applied Microbiology & Biotech	Cytotechnology	
New Biotechnology		

18. ORGANIZATION OF INTERNATIONAL SCIENTIFIC CONFERENCES & ADVANCED COURSES

18.1. ORGANIZATION OF SCIENTIFIC CONFERENCES

- 2022** **Conference Chair** – ESACT – 27th Meeting of the European Society for Animal Cell Technology, 24-28 May 2022, Lisbon Portugal, 1018 participants
- 2021** **Conference Commissioner** (together with commissioners Marta Oliveira, European Space Port and David Braga Malta, LiMM) “Ciência21 – Encontro com a Ciência e Tecnologia em Portugal - *The science that creates the future and transforms the economy*, 28-30 June 2021, FCT and Ciência Viva, Lisbon Portugal, approx. 860 participants were present plus 11000 participants on-line
- 2019** **Conference Chair** – Eppendorf Stem Cell Community Day, November 21, Cascais Portugal, approx. 100 participants
- 2017** **Conference Chair** (with Suzanne Farid from University College London – UK, Chetan Goudar, Amgen-USA and Veena Warikoo, Axcella Health-USA), Integrated Continuous Biomanufacturing, Engineering Conferences

International, 17-21 September 2017, Cascais, Portugal, approx. 200 participants

2015 **Conference Chair** – 9th Annual Meeting of the Portuguese Society for Stem Cells and Cell Therapies, 15-16 October 2015, Oeiras, Portugal – 130 participants

2008, 2010 & 2012

Conference Chair (with Barry Buckland and John Aunins from Merck & Co - USA and Katrin Jansen from Wyeth), Vaccine Technology Meeting, Engineering Conferences International, approx. 200 participants *per* edition

18.2. ORGANIZATION OF INTERNATIONAL ADVANCED COURSES

2021 & 22 **Course Organizer** (with Eric Kremer from CNRS, France and Joaquim Vives from Banc de Sang e Teixits, Spain) of the ESACT Bioprocessing and Manufacturing of Gene and Cell Therapy Products (2021), Lafranc, Barcelona – 5 days course, 30 participants *per* year

2017 **Course Organizer** (with Mariela Bollati, Marcelo Comini and Martina Crispo from Institut Pasteur de Montevideo) of Cells and Animal Models for Drug Discovery, Institut Pasteur de Montevideo, Uruguay, 30 participants

2014 & 15 **Course Organizer** (with Hansjorg Hauser from HZI and Christa Burguer from Merck Serono, Germany) of the ESACT Cells for Compound Screening (2014 and 2015), Lafranc, Barcelona – 3 days course, 15 participants *per* year- 2 editions

2014 **Course Organizer** (with Barry Buckland from Biologics B-USA and Tarit Mukhopadhyay from University College London), Vaccines Bioprocess Development and Commercialization, mbi-Modular training for the bioprocess industries, UCL, 14-16 April 2014, Oeiras, Portugal, approx. 50 participants

2011/(...) **Course Organizer** (with Francesc Godia from UAB - Spain) of the ESACT Animal Cell Technology Course. Lafranc, Barcelona – 4 days course, 30 participants *per* year – 13 editions (annually from 2011 to present)

2012 **Summer School Course Organizer** (with Seurat Research Initiative), Towards the Replacement of in vivo Repeated Dose Systemic Toxicity Testing, 4-8 June, Oeiras, Portugal, approx. 50 participants

19. PARTICIPATION IN COMMITTEES IN INTERNATIONAL CONFERENCES

19.1. AS MEMBER OF SCIENTIFIC COMMITTEES

- 2024** **Member of the Scientific Committee**, 28th European Society for Animal Cell Technology Meeting, Edinburg, UK, June 2024
- 2023** **Member of the Scientific Committee**, RPP-Recombinant Protein Production, EFB, Girona 17-19 October 2023
- 2023** **Member of the Scientific Committee**, Cell Culture Engineering, Cancun, Mexico, 23-28 April 2023
- 2022** **Member of the Scientific Committee**, Vaccine Technology, Sitges, Spain, 12-17 June 2022
- 2022** **Member of the Scientific Committee**, Advancing Manufacture of Cell and Gene Therapies Conference, San Diego, USA, 6-10 February 2022
- 2019** **Member of the Scientific Committee**, Advancing Manufacture of Cell and Gene Therapies Conference, San Diego, USA, 27-31 January 2019
- 2019** **Member of the Scientific Committee**, Cell culture technologies: bridging academia and industry to provide solutions for patients, 26th European Society for Animal Cell Technology Meeting, Lausanne, Switzerland, May 2019
- 2017** **Member of the Scientific Committee**, Cell Technologies for Innovative Therapies, 25th European Society for Animal Cell Technology Meeting, Lausanne, Switzerland, May 2017
- 2016** **Member of the Scientific Committee**, Brain without Borders, November 2016, Coimbra, Portugal
- 2015** **Member of the Scientific Committee** 10th Annual Meeting of the Portuguese Society for Stem Cells and Cell Therapies 12-14 October 2017, Covilhã, Portugal
- 2014** **Member of the Scientific Committee** of the Heart With/Out Borders, Cardiovascular Development, Disease and Repair International Conference, Porto, Portugal, November 2014
- 2011** **Member of the Advisory Committee**, PEACE – Protein Expression in Animal Cells Conference, 25-29 September 2011, Cascais, Portugal
- 2011** **Member of the Scientific Committee**, 6th Annual Meeting of the Portuguese Society for Stem Cells and Cell Therapies, April 2011, Cantanhede, Portugal
- 2008** **Member of the Scientific Committee**, 5th Recombinant Protein Production Meeting: an integrated view of host physiology, Sardinia, Italy, September 2008.

- 2004** **Member of the Scientific**, 3rd Recombinant Protein Production Meeting: A Comparative View on Host Metabolism, Tavira, Portugal, November 2004. approx. 180 participants

19.2. AS MEMBER OF ORGANIZING COMMITTEES

- 2018** **Member of the Organizing Committee**, Vaccine Technology, Quebec, Canada, June 2018, approx. 200 Participants

- 2015** **Member of the Organizing Committee** of ESACT C2P2: Cells, Culture, Patients, Products – 24th Meeting of the European Society for Animal Cell Technology, Barcelona, Spain, May 2015, approx. 1000 participants

2014 & 2016

Member of the Organizing Committee of the Vaccine Technology, Mexico June 2014 and Portugal 2016, approx. 180 participants

2014, 2015, 2017, 2022 & 2024

Member of the Organizing Committee of the Scale-up and Manufacturing of Cell Based Therapies, San Diego, USA, January 2014, 2015, 2017 and 2022 approx. 200 participants

- 2008** **Member of the Organizing Board**, 21st Annual and International Meeting of the Japanese Society for Animal Cell Technology, Fukuoka, Japan, November 2008, approx. 150 participants

- 2004** **Member of the Organizing Committee**, 3rd Recombinant Protein Production Meeting: A Comparative View on Host Metabolism, Tavira, Portugal, November 2004. approx. 180 participants

19.3. AS SESSION CHAIR

- 2024** **Co-Chair** of the session “In-Process and Analytical Control Strategies for Cell and Gene Therapies”, Scale-up and Manufacturing of Cell Based Therapies, San Diego, USA, February 2024

- 2023** **Co-Chair** of the session “Production of Viral Vectors and other Emerging Therapeutic Modalities”, Cell Culture Engineering, Cancun, Mexico, 23-28 April 2023

- 2022** **Co-Chair** of the session “Bioprocessing advances in vaccine development and manufacture”, Vaccine Technology, Sitges, Spain, June 2022

- 2022** **Co-Chair** of the session “Advances in viral vector manufacturing”, Scale-up and Manufacturing of Cell Based Therapies, San Diego, USA, February 2022

- 2018** **Co-Chair** of the session “Therapeutic Vaccines”, Vaccine Technology, Quebec, Canada, June 2018

- 2017** **Chair** of the session “Designing more Efficient cell-expression Systems“, BioproNet, 4th Annual Meeting, Warwick, UK, October 2017
- 2017** **Chair** of the session “Biotechnology” 12th Young European Scientist – YES - Meeting, Faculdade de Medicina da Universidade do Porto, Porto, Portugal, September 2017
- 2017** **Co-Chair** of the session “Vaccine Design: From Prevention to Therapeutic Approaches”, Biochemical and Molecular Engineering, Newport Beach, USA, July 2017
- 2017** **Co-Chair** of the session “Cell Culture Based Vaccines”, 25th European Society for Animal Cell Technology Meeting, Lausanne, Switzerland, May 2017
- 2017** **Co-Chair** of the session “Gene editing, vector production, synthetic biology, and genetic modification of cells”, Scale-up and Manufacturing of Cell Based Therapies, San Diego, USA, 15-19 January 2017
- 2016** **Co-Chair** of the session “Biomaterials in Neural Tissue Engineering”, Brain without Borders, Coimbra, Portugal, November 2016,
- 2015** **Co-Chair** of the session “Upstream Processing”, Integrated Continuous Manufacturing, Berkeley, October 2015.
- 2014** **Co-Chair** of the session “Stem Cell Research”, ESTIV, 18th International Congress on In vitro Toxicology, Egmond aan Zee, The Netherlands, 10-13 June 2014
- 2014** **Co-Chair** of the session “Process Development Challenges for Allogeneic Product” , Scale-up and Manufacturing of Cell Based Therapies, San Diego, USA, 5-9 January 2014
- 2013** **Co-Chair** of the session “Cell Therapies and Vaccines”, 23th European Society for Animal Cell Technology Meeting, Lille, France, June 2013
- 2011** **Chair** of the session, “Scale up and Technology Transfer”, Vaccines Europe Informa Life Sciences Conference, December 2011
- 2011** **Co-Chair** of the session “Environmental Controls/Bioprocessing”, PEACE – Protein Expression in Animal Cells Conference, Cascais, Portugal, 25-29 September 2011
- 2011** **Co-Chair** of the session “Methods and Tools for Managing the Complexity”, ChemPor – 11th International Chemical and Biological Engineering Conference, Lisbon, Portugal, 5-7 September 2011
- 2011** **Co-Chair** of the session “Scale up Stem Cell Production”, 6th Annual Meeting of the Portuguese Society for Stem Cells and Cell Therapies, April 2011, Cantanhede, Portugal
- 2010** **Co-Chair** of the session “Vaccine Target Identification & Validation”, Vaccine Technology Meeting III, Puerto Vallarta, Mexico, June 2010.
- 2009** **Co-Chair** of the Session “Health and Pharmaceutical Biotechnology” of MicroBiotec09, Algarve, Portugal, November 2009.

- 2008** **Chair** of the session “From molecules and genes to therapies: Industrial ACT perspectives”, 21st JAACT Meeting, Fukuoka, Japan, November 2008.
- 2008** **Co-Chair** of the session “Folding, assembly and secretion of complex protein entities”, 5th Recombinant Protein Production Meeting: an integrated view of host physiology, Sardinia, Italy, September 2008
- 2008** **Co-Chair** of the session “Manufacturing vaccines”, Vaccine Technology Meeting II Albufeira, Portugal, June 2008.
- 2004** **Co-Chair** of the session “Protein Post-translational Modifications” 3rd Recombinant Protein Production Meeting: A Comparative View on Host Metabolism, Tavira, Portugal, November 2004.

19.4. AS POSTER SESSION CHAIR AND IN POSTER JURY COMMITTEES

- 2017** **Member of the Poster Award Jury.** BioPronet Meeting, Warwick, October 2017
- 2017** **Member of the Poster Award Jury.** 9th International Conference on Recombinant Protein Production, Dubrovnik, April 2017
- 2015** **Member of the Poster Award Jury.** Integrated Continuous Biomanufacturing, Berkeley, ECI Conference, October 2015
- 2017** **Member of the Poster Award Jury.** Heart Without Borders, Portugal, November 2014
- 2014** **Member of the Poster Award Committee.** Cell Culture Engineering, Quebec, Canada, May 2014
- 2013** **Member Poster Award Committee,** Scale up and Manufacturing of Cell Based Therapies, San Diego, January 2013
- 2008** **Member of the Poster Award Committee.** Cell Culture Engineering, Brisbane, Australia, April 2008.
- 2006** **Chair of the Poster Award Committee,** Vaccine Technology I Conference, Puerto Vallarta, Mexico, June 2006.
- 2005** **Chair of the Poster Award Committee,** 19th European Society for Animal Cell Technology Meeting, Harrogate, United Kingdom, June 2005.
- 2004** **Member of the Poster Award Committee,** 3rd Recombinant Protein Production Meeting: A Comparative View on Host Metabolism, Tavira, Portugal, November 2004.
- 2003** **Chair of the Poster Award Committee,** 18th European Society for Animal Cell Technology Meeting, Granada, Spain, May 2003.

19.5 IN OTHER CONFERENCES AND MEETINGS & AS MODERATOR

Since 2015 invited to moderate more than 10 session/round tables in NOVA Univ Events, ECI conferences and other international events.

- 2015** **Member of the Organizing Committee** of the NOVA Saúde Meetings, from NOVA University (**Moderator of the Session**, International Projects in Health at NOVA), Lisbon
- 2009** **Moderator of the Session** A Inovação as Serviço da Saúde e do Doente, Apifarma Conference, March 20019, Lisbon

20. MEMBERSHIPS

- 2021** Member of the United States National Academy of Engineering (NAE)
- 2010** Member of the Portuguese Society for Stem Cells and Cell Therapy
- 2008** Member of the International Society for Protein Expression in Animal Cells
- 2007** Member of the European Society of Neurochemistry
- 2006** Member of the American Association for the Advancement of Science
- 2005** Member of the American Society for Cell Biology
- 1995** Member of the Portuguese Society for Biochemistry
- 2003** Member of the European Society for Animal Cell Technology (ESACT), Elected in June 2005 to the ESACT Executive Committee. Re-elected June 2007. Elected Secretary June 2009
- 2000** Member of the Portuguese Society for Biotechnology
- 1995** Member of the Portuguese Society for Biochemistry (Member of FEBS)

21. ESTABLISHED COLLABORATIONS

21.1. INTERNATIONAL

- 36** **Ursula Sonnewald**, NTNU, Norway (12 joint publications)
Brain Cell Metabolism
- 35** **Eric Kremer**, CNRS, France (10 joint publications)
Vectorology and Gene therapy
- 34** **John Aunins**, Seres, USA, previously Merck & Co, USA (9 joint publications)
Bioprocess Development for Biopharmaceuticals
- 33** **Heiko Zimmerman**, IBMT-Fraunhofer Institute, Germany (8 joint publications plus co-supervision of 1 PhD student)
Cell Cryopreservation
- 32** **Hansjorg Hauser**, Helmholtz Zentrum für Infektionsforschung (HZI), Germany (6 joint publications plus co-supervision of 1 PhD student)

- Molecular Biology and Cell Line Development*
- 31 Jorgen Heshler & Tomo Saric**, University of Cologne, Germany (6 joint publications)
Stem Cells Biology
- 30 Otto Merten**, Miltenyi Biotec, France (7 joint publications)
Bioprocess Development for Gene therapy vectors
- 29 Dominique Martinez**, CIRAD-EMVT, France (4 joint publications)
Epidemiology - Tick borne Diseases
- 28 Nathalie Vachier**, CIRAD-EMVT, Guadeloupe (4 joint publications)
Vaccinology - Tick borne Diseases
- 27 Dagmar Wirth**, MHH, Hannover, Germany (4 joint publications)
Cell line Development
- 26 Antonio Bernard**, CNB-CSIC, Spain (4 joint publications)
Cardio Proteomics
- 25 Sandra Coecke**, ECVAM-EC, Italy (3 joint publications) Alternative Models for Drug Screening
- 24 Carl-Frederik Mandenius**, Linköping University, Sweden (3 joint publications)
Biosensors Technology
- 23 Carlos Pereira**, Instituto Butantan, Brazil (3 joint publications).
Baculovirus and vaccine production
- 22 Hagen von-Brisen**, IBMT-Fraunhofer Institute, Germany (3 joint publications)
Stem Cells Biology
- 21 Ibraim Domian**, Harvard Medical School, USA (3 joint publications)
Cardiac Stem Cell Biology
- 20 Imre Berger**, University of Bristol, UK, previously EMBL, France (2 joint publications)
Baculovirus Molecular Biology
- 19 Petter Björquist**, NovaHEP, previously Cellartis, Sweden (4 joint publications)
Stem Cells Biology
- 18 Felipe Prosper**, Univ Navarra, Spain (1 joint publications)
Cardiac Stem Cell Biology and Car-Ts
- 17 Yvonne Genzel**, Max Plank Magdberg, Germany (3 joint publications)
Virus Production and Systems Biology
- 16 Tomo Saric**, University of Cologne, Germany (2 joint publications)
iPSC
- 15 Wheishu Hu**, University of Minnesota, USA (2 joint publications)
Genomics and Transcriptomics
- 14 Alex Xenopoulos**, Merck Millipore, US (3 joint publications)
Downstream Process Development
- 13 Marcel Leist**, University of Konstanz, Germany (3 joint publications)
Neural Stem Cell Biology
- 12 Stefan Kochanek**, University of Ulm, Germany (2 joint publications)
Human Cell Lines for Biopharmaceuticals
- 11 Giampietro Schiavo**, UCL, UK (2 joint publications)
Cell Biology
- 10 Uwe Marx**, TissUse, Germany (2 joint publications)

Organ-on-a-chip Technologies

- 9 **Tommy Anderson**, AstraZeneca, Sweden (1 joint publication)
Toxicology & Drug Screening
- 8 **Anders Aspegren**, Takara Bio Europe, Sweden (1 joint publication)
Stem Cell Biology
- 7 **Luis Bordalo**, Capricor, USA, previously Coretherapix, Spain (1 joint publications)
Cardiac Stem Cell Biology
- 6 **Geneviève Libeau**, CIRAD-EMVT, France (1 joint publication)
Vaccine Development and Immunology
- 5 **Laura Palomares & Octavio Ramirez**, Instituto de Biotecnología UNAM, Mexico (1 joint publication)
VLPs characterization
- 4 **Didier Poncet**, INRA-CNRS, France, (1 joint publication)
Virology
- 3 **Kristala Prather**, MIT, USA (1 joint publication plus co-supervision of 1 PhD student)
Synthetic Biology
- 2 **Polly Roy**, London School Hygiene & Trop Med, UK (1 joint publication)
VLP's for Vaccine Development
- 1 **Danny Wang**, MIT, USA (1 joint publication plus co-supervision of 1 PhD student)
Bioprocess Engineering

21.2. IN PORTUGAL

- 17 **Rui Oliveira**, Departamento de Química, FCT NOVA (23 joint publications plus co-supervision of 1 PhD student)
Systems Biology
- 16 **José Paulo Mota**, Departamento de Química, FCT NOVA (12 joint publications)
Purification of Biologics
- 15 **Helena Vieira**, FCT NOVA (17 joint publications plus co-supervision of 2 PhD students)
Apoptosis and Autophagy, neural development and CO pre-conditioning
- 14 **Julia Costa**, ITQB NOVA, Glycobiology Lab (7 joint publications)
Glycobiology & Glycosignatures
- 13 **António Cunha and João Clemente**, iBET BioPilot Plant Unit (3 joint publications)
Bioprocess/Scale-up (up to 30L)
- 12 **Ana Varela Coelho**, ITQB NOVA, Mass Spectrometry Lab (5 joint publications)
MS based Bioanalytics
- 11 **Claudia Santos**, Molecular Nutrition lab (3 joint publications)
Polyphenols and assays for Neuroprotective assessment
- 10 **Elvira Fortunato**, FCT NOVA (2 joint publications)
Biomaterials

- 9 **José Belo**, CEDOC, NOVA Medical School (2 joint publications under revision plus co-supervision of 1 PhD student)
Stem Cells and Cardiac differentiation
- 8 **Catarina Duarte**, iBET, Nutraceuticals Lab (2 joint publications plus co-supervision of 1 PhD student)
Bioactivity Screening of Food Extracts
- 7 **Eurico Melo**, ITQB NOVA, Micro-heterogeneous Systems Lab (2 joint publications)
Adenovirus encapsulation
- 6 **Ana Luisa Simplício**, iBET, Biopharmaceuticals Analysis Lab (2 joint publications)
Analytical tools for VLP's characterization
- 5 **Lino Ferreira**, Faculdade Medicina da Universidade de Coimbra (3 joint publications plus co-supervision of 1 PhD student)
Stem Cells and Biomaterials
- 4 **Carlos Romão**, ITQB-NOVA, Organometallic Chemistry Lab, (1 joint publications plus 1 joint Patent)
Cell Based Assays of Anti-tumor Drugs
- 3 **Miguel Prudêncio**, IMM (1 joint publication plus co-supervision of 1 PhD student)
Cell Based Models for Malaria
- 2 **Joana Paredes**, I3S (1 joint publication)
Cancer models and vectorology
- 1 **Jocelyne Demengeot** and **Carlos Penha-Gonçalves**, IGC (2 joint publication)
Immunology and Analytics Development

D: ACADEMIC ACTIVITY

22. PHD COURSES

- 9 **Jan 2012 - present:** Member of the Directive Board of the ITQB NOVA PhD Program in Molecular Biosciences
- 8 **Jan 2012 - present:** Member of the Scientific Board of the IST/IMM/ITQB NOVA/IBET PhD Program Regenerative Medicine
- 7 **2014-2018:** Coordinator of the Curricular Core Unit “Frontiers in Biotechnology” (1,5 ECTS) of the ITQB NOVA PhD Program in Molecular Biosciences (with Manuel Carrondo)
- 6 **2014-present:** Coordinator of the Curricular Unit “Technologies for Pharmaceutical Development” (1,5 ECTS) of the ITQB PhD Program in Chemical and Biological Sciences & Engineering
- 5 **2014-2018:** lectures (1,5h) on “Viral Vaccines and VLPs” in the Animal Cell Technology Course of the PhD Program in Regenerative Medicine
- 4 **2014-2016:** Coordinator of the Curricular Unit “Stem Cell Process Engineering” (6 ECTS) of the PhD Program in Regenerative Medicine (with Sampaio Cabral)
- 3 **2009-2013:** Coordinator of the Curricular Unit “Biotechnology” 3 ECTS (2009-2011) and of the Curricular Unit Free Option 3 ECTS (2009-2013) of the ITQB PhD Program in Chemical and Biological Sciences & Engineering (with Adriano Henriques)
- 2 **2007-2018:** Lecturer of the MIT-Portugal PhD Program, Bioengineering Program:
 - Lectures on “Cells for Production of Biopharmaceuticals” (1,5h) and Stem Cell Handling” (1,5h) in the Cell and Tissue Engineering Course (2007-2008).
 - Lecturers on “Assembly of Viral Nanoparticles” (1h) in the Bionanotechnology and Biomaterials Course (2007-2008).
 - Lectures on “Animal Cells for the production of Complex Biopharmaceuticals” (1,5h) and “Scale-down Models” (1h) in the BioProcess Engineering Course (2008/2009, 2012).
 - Lecture on “Bioengineering Approaches for production of Human Cells for pre-clinical research and cell therapy” (1h) (2015-present),
 - Hosted several Lab rotations (3 months each) from MIT-Portugal PhD Program, in Bioengineering (1-2 student *per* year)

- 1 **2002-2007:** Lecturer of “Animal Cell Technology” (1,5h) in the Biotechnology course of the ITQB Post Graduate Program

Invited to lectures on Animal Cell Technology, Stem Cells Bioengineering and ATMPs development in PhD Programs at Universidade de Coimbra (Faculdade de Medicina e Faculdade de Farmácia).

23. MASTER COURSES

23.1. CONCEPTION, COORDINATION AND TEACHING

- 8 **2014-present:** Biochemistry for Health Master (ITQB NOVA and FCT NOVA) – conception, coordination and teaching the “Biopharmaceuticals” course (3 ECTS)
- 7 **2014-present:** Biochemistry Master (FCT NOVA) – teaching Animal Cell Biotechnology Course - similar contents of the Animal Cell Technology part of Biotechnology A course started in 2009 (see #4 below) (3 ECTS)
- 6 **2014-present:** Genetic and Molecular Biology Master (FCT NOVA) – teaching Animal Cell Biotechnology Course - similar contents of the Animal Cell Technology part of Biotechnology A course started in 2009 (see #4 below) (3 ECTS)
- 5 **2014-present:** Biotechnology Master (FCT NOVA) – teaching Animal Cell Biotechnology Course - similar contents of the Animal Cell Technology part of Biotechnology A course started in 2009 (see #4 below) (3 ECTS)
- 4 **2009-2014:** Genetic and Molecular Biology Master (FCT NOVA) – conception, coordination and teaching the “Biotechnology A” course (6 ECTS)
- 3 **2007-present:** Chemical and Biochemical Engineering Master – conception, coordination and teaching the “Animal Cell Technology” module in Biochemical Engineering II Course (3 ECTS)
- 2 **2014-2016:** Hosted Lab Rotations for Biochemistry for Health Master Students
- 1 **2005 to present:** supervised the Masters thesis of 9 MSc students from different Master courses

23.2. INVITED LECTURES IN MASTER COURSES

- 6 **2013-present:** Invited lecturer on “Animal Cell Technology and Novel therapies” in the Science Communication Masters Course of ITQB and FCSH from NOVA University
- 5 **2009-2012:** Invited lecturer on “Stem Cells Bioengineering” in the following Masters Courses: i. “Biologia Evolutiva e do Desenvolvimento”, ii “Biologia Molecular e Genética” and iii “Biologia Celular”, Faculdade de Ciências, Universidade de Lisboa
- 4 **2009-2012:** Invited lecturer on “Stem Cells Bioengineering” in the following Masters Courses: i. “Biologia Evolutiva e do Desenvolvimento”, ii “Biologia Molecular e Genética” and iii “Biologia Celular”, Faculdade de Ciências, Universidade de Lisboa
- 3 **2008:** Invited lecturer on “Viral Nanoparticles” in the Master Course Introduction to Bionanotechnology , IBB/CBME, Universidade do Algarve
- 2 **2006,2009:** Invited lecturer on “Biopharmaceutics Production using Animal Cell Technology” and “Novel Technologies for Vaccine Production” in the Master course Regulação e Avaliação do Medicamento e Produtos de Saúde (RAMPS), Faculdade de Farmácia, Universidade de Lisboa.
- 1 **2003-2005:** Invited lecturer on “Animal Cells Biotechnology” in the Master Course “Biologia e Conservação”, Faculdade de Ciências, Universidade de Lisboa.

24. BACHELOR COURSES

- 2 **2008-2012:** Invited Lecturer on “Animal Cells Biotechnology” of the Biotechnology Course in the BsC of Biology, Instituto Superior de Agronomia, Universidade de Lisboa (6 h/year)
- 1 **1999-2002:** Conception, coordination and teaching “Animal Cell Culture Techniques” Course of the Bachelor in Chemistry and Environment Sciences Piaget – Instituto Superior de Estudos Interculturais e Transdisciplinares, Almada, teaching all the theoretical and practical classes of the course (6 ECTS)

25. ADVANCED INTERNATIONAL POSTGRADUATE COURSES

- 7 **2019** Lecture on “New Trends in Red Biotech Product Development” in the Post Graduation Course StarUp Research NOVA, Leading Scientists to Innovation, ITQB NOVA and NOVA School of Business & Economics, January 2019

- 6 **2015-present** Lecture on “Integrated Bioprocesses for Vaccine Production”, ESACT Animal Cell Technology Course, Llafranc, Barcelona (annually from 2015 to present)
- 5 **2014** Lecture on “Stable insect cells lines for VLPs Production” and organizer of the Case Study Session in Vaccine Bioprocess development on the Vaccines Bioprocess development and Commercialization Course , mbu-Modular Training for bioprocess industries, organized by UCL, Oeiras, April 2014
- 4 **2014-2015** Lecture on “3D Advanced Models for pre-clinical research”, ESACT Cells for Compound Screening Course, Llafranc, Barcelona
- 3 **2011-present** Lecture on “Integrated Bioprocesses for Stem Cells”, ESACT Animal Cell Technology Course, Llafranc, Barcelona (annually from 2011 to present)
- 2 **1999** Conception and teaching the module “Immobilization of Animal Cells for *in vivo* NMR Spectroscopy” in the Practical Course on Cell Culture Technology for Health Applications organized by GBF-Gesellschaft für Biotechnologische Forschung (Germany) and iBET, Oeiras, March 1999, ***voted by the students the best lecturer of the course***
- 1 **1996** Conception and teaching two modules: “Mammalian Cell Culture: the basics” and “Primary Cultures of Neuronal Tissue” in the Advances in Animal Cell Culture Course, organized by ECACC-European Collection of Animal Cell Cultures (United Kingdom) and iBET, Oeiras, September 1996

26. PHD THESIS JURY PARTICIPATIONS

26.1 AS MAIN OPPONENT (INTERNATIONAL)

- 38 **Christina Hausjell**, New tools for process control of baculovirus-insect cell based production of biopharmaceuticals, University of Natural Resources and Life Sciences, Vienna, Austria, September 2023
- 37 **Jesús Lavado**, Bioprocess Engineering for HIV-1 GAG VLP Production in HEK293 Cells, Universitat Autònoma de Barcelona, Spain, September 2021
- 36 **Rasoul Al-Majmaie**, Gold Nanoparticles in Photodynamic Therapy: New alternatives for Subcellular Localization and Apoptosis Detection, University College Dublin, Ireland, April 2015
- 35 **Xiaoli Chen**, Development of a Culture Platform for the Expansion of Pluripotent Human Embryonic Stem Cells with the use of Nanopolymers, University Queensland-Australia, Australia (remote), October 2015
- 34 **Laura Cervera**, Strategies for Improving Production Levels of HIV-1 VLPs by Transient transfection of HEK 293 Suspension Cultures, Universitat Autònoma de Barcelona, Spain, March 2015

- 33 Sebastin Sart**, Controlled expansion and differentiation of mesenchymal stem cells in microcarrier-based stirred bioreactor, Universite Catolique Louvain, Belgique, April 2011
- 32 Larz Optiz**, Development and Characterization of Affinity- and Pseudo-affinity-based Methods for Cell Culture-derived Influenza Virus Capturing, Max Planck Institute for Dynamics of Complex Technical Systems, Marburg University, Germany, July 2010
- 31 Iris Gull**, Novel tools for automated cell handling: biocompatibility and cryopreservation using Caco-2 cells, University of Vienna, Austria, May 2008
- 30 Cláudia Piana**, Proliferation and differentiation of Caco-2 cells: impact of surface-engineered supports at the protein and gene expression level, University of Vienna, Austria, May 2008

26.2. AS MAIN OPPONENT (PORTUGAL)

- 29 Barbára da Silva Mendes**, Micro/Nano-structures Hydrogels Based on Platelet Lysate for Tissue Engineering and Regeneration, I3Bs, Universidade do Minho, July 2020
- 28 Maria Constança Dias Carvalho**, Animal use in Major Depressive Disorder: a necessary evil? Assessing the past to improve the future, Faculdade de Ciências da Universidade de Lisboa, July 2020
- 27 Diogo de Sousa Pinto**, Towards the Development of a Mesenchymal Stem/Stromal Cell Product with Enhanced Therapeutic Features for Myocardial Infarction, Instituto Superior Técnico, Universidade Tecnica de Lisboa, Portugal, November 2018
- 26 Sofia Ribeiro**, Metabolic Control of Neuronal Activity by Fuel Substrate Switching: a Role for BAD, Faculdade de Farmácia da Universidade de Coimbra, Portugal, December 2015
- 25 Isabel Onofre**, Dissecting the Pathogenesis of Machado-Joseph Disease in a new Human Disease Model derived from Induced Pluripotent Stem Cells, Faculdade de Farmacia da Universidade de Coimbra, Portugal, July 2016
- 24 Ana Rita Costa**, Expression and characterizaton of a therapeutic monoclonal antibody in mammalian Cells, Escola Engenharia da Universidade do Minho, Portugal, March 2013
- 23 Maria João Leite**, Production of Virus like Particles for Molecular Therapy, Instituto Superior Técnico, Universidade Técnica de Lisboa, Portugal, April 2006
- 22 Elsa Abranches**, Ex Vivo Expansion and Neural Differentiation of Mouse Embryonic Stem Cells, Instituto Superior Técnico, Universidade Técnica de Lisboa, Portugal, February 2006

26.3 AS MEMBER OF THE JURY (PORTUGAL))

- 21 **Cláudia Saraiva**, MicroRNA-124-loaded nanoparticles as a new promising therapeutic tool for neural stem cell-bases brain repair strategies, Faculdade de Ciências e Tecnologia, Universidade Nova de Lisboa, 2017
- 20 **Ana Francisca Lima**, Biophysical modulation of cell fate through chromatin remodeling, Faculdade de Ciências e Tecnologia, Universidade Nova de Lisboa, 2017
- 19 **Patricia Pereira**, miRNA-29 Bioseparation and Target Delivery Strategies for Alzheimer Disease, Ciências, Universidade da Beira Interior, 2015
- 18 **Ricardo Perdigão Henriques**, The role of the miR-200 family in the epithelial-to-mesenchymal transition (EMT), ITQB, Universidade Nova de Lisboa, 2015
- 17 **Ana Filipa Rodrigues**, Integrated functional Genomics for Improved manufacture of Recombinant Enveloped Virus, ITQB, Universidade Nova de Lisboa, 2013
- 16 **Luisa Pedro**, Molecular Determinants of Virus-Like Nanoparticles Assembly in vitro and in Animal Cell Cultures, Faculdade de Ciência se Tecnologia, Universidade do Algarve, 2012
- 15 **Helena Maria dos Santos Costa**, Mechanism of Interleukin-8 induction by Human Cytomegalovirus UL76 protein ITQB, Universidade Nova de Lisboa, 2012
- 14 **Cristina Escrevente**, Protein glycosylation of exosomes from ovarian carcinoma cells: Structures and biological roles, ITQB, Universidade Nova de Lisboa, 2011
- 13 **Rui Peixoto**, Trans-Synaptic Signaling by Activity-Dependent Cleavage of Neuroligin-1, ITQB, Universidade Nova de Lisboa, 2011
- 12 **António Roldão**, Production Optimization of RLPs: a systems Biology Approach, at ITQB-UNL, Universidade Nova de Lisboa, 2010
- 11 **Claudia Pereira**, Indenyl Complexes of Niobium and Molybdenum, at ITQB, Universidade Nova Lisboa, 2004
- 10 **Ricardo Gouveia**, The neuronal L1 Cell adhesion Molecule, at ITQB-UNL, Universidade Nova de Lisboa, 2009
- 9 **Marlene Carmo**, Gammaretroviral and Lentiviral vectors for Gene Therapy, ITQB, Universidade Nova de Lisboa, Universidade Nova de Lisboa, 2009
- 8 **Ana Teixeira**, Bridging Systems Biology and Bioprocess Engineering: Application to Mammalian Cell Cultures, at FCT, Universidade Nova de Lisboa, 2008
- 7 **Teresa Rodrigues**, Purification of Retroviral Vectors for Gene Therapy, at ITQB, Universidade Nova de Lisboa, 2008
- 6 **Catarina Brito**, Fucosyltransferase IX: characterization and biological role, at ITQB, Universidade Nova de Lisboa, 2007
- 5 **Luis Maria Lopes da Fonseca**, Metabolism of Primary Astrocytes Studied by NMR: metabolic trafficking and neuroprotection, at ITQB, Universidade Nova de Lisboa, 2006

- 4 Joana Miranda**, Identification and Characterization of Immunodominant Proteins of *Theileria uilenbergi* to Be Used in the Diagnosis of Ovine Theileriosis in China, at ITQB, Universidade Nova de Lisboa, 2006
- 3 Ana Sofia Coroadinha**, Improved Strategies for the Development of Retroviral Gene Therapy Vectors, ITQB, Universidade Nova de Lisboa, 2005
- 2 Victor Lino de Sousa**, Study of the Localization of Fucosyltransferase III, at ITQB, Universidade Nova de Lisboa, 2004
- 1 Ana Verónica Carvalhal**, Mammalian Cell Growth Arrest for Biopharmaceutical Production Improvement, ITQB, Universidade Nova de Lisboa, 2003

27. OTHER JURY PARTICIPATIONS

Jury Member: Emma Petiot, Habilitation a Diriger des Recherches, Specialite: Biochimie & Bioprocedes, Bioprocedes de culture cellulaire: application a la production de virus et la medicine regenerative, Université Claude Bernard LYON, France, 2020

E: OUTREACH AND OTHER ACTIVITIES

OUTREACH:

2021: Participation in the TEDxPortov: “Vaccines” (webinar and discussion Panels)

2020 and 2021: Participation 5 min video: “Vaccines” in the *Exhibition “Viruses”*, Pavilhão Ciência Viva

2018: Participation in the seminar series “The story behind the CV”, i3Bs, March 2018, Porto, *target: Pos-doc and Lab Heads of i3Bs*

2018 and 2016: Hosting the delegation of approx. 30 master students from the Masters of Biomedical Engineering of the Technical University of Delft: 1 day presentations and tours to ACT Unit and Pilot Plant facilities

2010-2017: Participation in several Programs at National Portuguese TV, Radio and Newspaper interviews (e.g. TV Ciencia on line, TV News, Radio Programs) for dissemination of projects running at ACT unit, debates on R&D in Biopharmaceuticals, *target: general public*

2006: Invited Conference: “Novel Therapies, Novel Vaccines”, in Ciclo de Debates organized by Clube Começar de Novo , November 2006, Lisbon: Target: *retired women (top management and professors) from different organizations, institutes and academia*

2005-2010: Participation at several “Ciência Aberta” initiatives (organized by Ministério da Ciência and Tecnologia, Fundação para a Ciência e Tecnologia), *target: students from secondary schools and universities.*

2005: Member from the Organizing Committee of ITQB NOVA Open day: Conception and coordination of the 3 first editions (with Ana Sanchez and Margarida Archer): *Target: general public from Oeiras municipality*

2004-2017: more than 10 presentations about “Novel Therapies and Biologics” at Secondary schools located in Oeiras and Carcavelos region: *target high school students of Science & Technology*

2000-present: *Lectures about Animal Cell Technology applications in Biotechnology in secondary school visiting ITQB. Guided visits to the Animal Cell Technology Laboratory, Target: Students from Portuguese Secondary Schools*

1996-1999: Member of the Organizing Committee of the PhD students lunch Seminars at ITQB (with Manuela Pereira and Karina Xavier) *Target: ITQB PhD students*

SCIENCE FOR CHILDREN – EDUCATIONAL INITIATIVES:

2004: Member of the Organizing Committee of the Drawing contest for Children “If I was I scientist I ...” organized by ITQB and Câmara Municipal de Oeiras, *Target: Children from Oeiras Municipality.*

2001-2006: presenting “a scientist visits the kindergarden” at Colégio Marista de

Carcavelos, target children from 3-5 years old

2010-2017: Active participation in several Educational Science Programs for children (e.g. Television: Canal Panda – education on vaccination benefits to children), *target: children*

TRAINING FOR AFRICAN DEVELOPING COUNTRIES

2005: Enrolled in training & internship programs organized by Cirad- Montpellier France: hosted technicians from Ethiopia, Burkina Faso, Mali and Kenya to be trained in the Basics of Animal Cell Culture Techniques (cell based assays, manipulation of viruses)

OTHER ACTIVITIES

2007-present: Hosted more than 50 seminars by invited researchers at ITQB NOVA: in António Xavier Seminar Series and iNOVA4Health Series: target: ITQB (and IGC, INIAV, CEDOC) Scientists and Students

2005-2008: Organized the initiative Yoga @ ITQB NOVA : weekly yoga classes lunch time: access to all ITQB NOVA collaborators

2004-2006: Member of the ITQB analytical services unit committee: appointed as representative of the Technology Division.

2002-2006: Invited to collaborate as Portuguese National Contact point for Biotechnology and Health at the 6th Framework Program (European Commission)

1999: Member of the working group for discuss the legislation on Estatuto do Bolseiro promoted by the President of the Portuguese Republic – Dr Jorge Sampaio