

Curriculum Vitae- Paula M Alves

June 2021

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1. Synopsis

Paula M Alves is the CEO of iBET and Professor at NOVA University of Lisbon (ITQB and FCT). She received her Ph.D. at Biochemical Engineering from the NOVA University of Lisbon, in 2001, and her B.S in Biochemistry from the Sciences Faculty of the University of Lisbon, in 1991. Working in Animal Cell Technology since 1990, her PhD contributed to the establishment of 3D in vitro models of Brain Cells for metabolic trafficking studies. She did part of her PhD studies at the NMR Centers of Sintef-Trondheim Hospital and of Bremen University. In 2009, she was visiting researcher in Professor Daniel Wang Lab at MIT.

Professor Alves' research integrates cell metabolism understanding with biochemical engineering for the improvement of bioprocesses efficiency also focusing on the development of new tools and technologies for pre-clinical research. Her 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) expand systems biology approaches to improve the processes involved in the research described in (i) and (ii).

Professor Paula Alves is currently the Chairperson of the ESACT (European Society for Animal Cell Technology) and Member of the IMI (Innovative Medicines Initiative) Scientific Council and of EURL-ECVAM (EU Reference Laboratory for Alternatives to Animal Testing). She was a member of the Advisory Board of Horizon 2020 Societal Challenge 1 – European Commission, between 2013 and 2018. She has published over 250 papers, 32 book chapters and supervised 35 PhD students, 18 post-docs and several master theses. In 2009 she received the Scientific Merit Award from NOVA University of Lisbon.

2. Name

Paula Marques Alves

Married, two children (boys 23 and 20 years old)

Date of Birth

Born 26 July 1967 in Lisbon

Nationality

Portuguese

Present Work Address

ITQB-UNL and IBET,
Animal Cell Technology Unit, Av da República, Ed ITQB/IBET
Estação Agronómica Nacional, Apartado 12
P-2781-901 Oeiras, Portugal

Web page

<http://tca.itqb.unl.pt>, www.ibet.pt

Researcher ID link

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Researcher ID [C-1070-2008](#)
ORCID ID [0000-0003-1445-3556](#)
Google Scholar <http://scholar.google.pt> Paula M Alves
Scopus Author ID: 57190020857

EDUCATION

- 2001** *PhD Biochemical Engineering*, ITQB - Instituto de Tecnologia Química e Biológica, NOVA University of Lisbon.
- 1991** *Diploma Biochemistry*, Faculty of Sciences, University of Lisbon

3. POSITIONS

- 2017-(...)** Chairperson of the ESACT - European Society for Animal Cell Technology.
- 2015-(...)** Member of the Board, GenIBET Biopharmaceuticals, Portugal
- 2015-17** Member of the National Scientific Council for Health Sciences, FCT Fundação para a Ciência e Tecnologia, Portugal
- 2013-16** Vice-President ESACT - European Society for Animal Cell Technology.
- 2013-17** Chairman of the General Assembly of the SPCE-TC- Portuguese Society for Stem Cells and Cell Therapy, Portugal
- 2012-(...)** CEO, iBET, Portugal
- 2011-(...)** Invited Associate Professor, Science and Technology Faculty, New University of Lisbon, Portugal.
- 2009-10** CSO, GenIBET Biopharmaceuticals, Portugal
- 2009-(...)** Principal Investigator, ITQB NOVA University of Lisbon
- 2008-09** Member of the Board, GenIBET Biopharmaceuticals, Portugal
- 2008-(...)** Executive Director, IBET, Portugal
- 2007-(...)** Director, Animal Cell Technology Unit, Head of Cell Bioprocesses Laboratory, ITQB-UNL/IBET, Portugal
- 2007-(...)** Lecturer, MIT-Portugal Program
- 2006-09** Assistant Investigator, ITQB NOVA University of Lisbon, Portugal
- 2005-06** Principal Investigator, ITQB/IBET/IGC Associated Laboratory, Portugal
- 2001-06** Co-Director, Animal Cell Technology Laboratory, ITQB-UNL/IBET
- 2001-05** Assistant Investigator, ITQB/IBET/IGC Associated Laboratory, Portugal
- 1995-2000** PhD Student, ITQB-New NOVA University of Lisbon, Portugal

4. ADVISORY POSITIONS

- 2018-(...)** Member of the IMI (Innovative Medicines Initiative)
- 2017-(...)** Member of the ESAC - EURL ECVAM Scientific Advisory Committee
- 2017** Member of the Jury of Sartorius & Science Prize for Regenerative Medicine & Cell Therapy, Science AAAS
- 2016-(...)** 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
- 2014** Member of the Advising Working Group for the EU Joint Program - JPND, Neurodegenerative Disease Research Group, Berlin
- 2013-(...)** Member of the Advisory Group for Horizon 2020 Societal Challenge 1- European Commission, Brussels.
- 2009-(...)** Member of the Steering Committee of the Harvard Medical School Portugal Program
- 2008-(...)** iBET representative in “Health Cluster Portugal” board

5. INSTITUTIONAL ACTIVITY

- 2015-(...)** Member of the Directive and Scientific Boards of iNOVA4Health Research Unit (Fundação Ciência e Tecnologia)
- 2015-(...)** Member of the Board, NOVA Saúde, Rectory, NOVA University
- 2014-(...)** Member of the Institute Board, ITQB NOVA University
- 2013-(...)** Member of the Board, Bio-entrepreneur Committee, NOVA University
- 2013-(...)** 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-(...)** Member Scientific Council, ITQB NOVA
- 2009-(...)** Principal Investigator, ITQB NOVA
- 2008-(...)** Member Pedagogic Council, PhD Program, ITQB NOVA

6. EXPERT REVIEWING FOR INTERNATIONAL AGENCIES AND INSTITUTIONS

- 2017-(...)** Member of the Evaluation Board Next Generation Biologics Program, Vinnova, Sweden
- 2016-(...)** Member of the 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),

7. WORKING PERIODS ABROAD

- June-Sep 2009** Visiting Scholar, MIT, Massachusetts Institute of Technology (working with Prof Daniel Wang and Prof Kristala Prather), Chemical Engineering Dept., USA.
- April 2002** Research and Development Department (working with Dr Otto Merten), Genethon, France.
- May 1998** Biochemistry/NMR Laboratory, Biochemistry Department of Cambridge University (working with Prof Kevin Brindle), United Kingdom.
- Sept-Nov 1995** NMR Laboratory of the Chemistry Department of Bremen University (working with Prof Dieter Leibfritz), Germany.
- Jan-June 1994** Biomedical Laboratory of Magnetic Resonance Center (working with Prof Ursula Sonnewald), Sintef, Trondheim Hospital, Norway.
- Oct-Dec 1992** Biotechnology Laboratory of Animal Cells (working with Dr Bryan Griffiths), PHLS/CAMR, United Kingdom.

8. SCIENTIFIC COURSES

- 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 INTERESTS

Since 1995, Alves PM has focused her research on understanding cell metabolism to improve the efficiency of bioprocesses and at developing new tools and technologies for pre-clinical research. More recently (2005) this expertise was expanded to generate expansion and differentiation of stem cells (human embryonic and adult) in bioreactors. The Unit she coordinates uses Animal Cell Technology for research and development in particular for (i) production of complex biopharmaceuticals such as viral vectors, vaccines and recombinant proteins (ii) development of 3D culture systems for toxicity testing - using primary cultures of hepatocytes and brain cells - and for expansion and differentiation of stem cells in bioreactors (iii) expand systems biology approaches to organize the complexity of the processes involved in the research described in (i) and (ii).

10. ROLE IN RESEARCH PROJECTS

Principal Investigator

2017-2021 TRANSVAC2, European vaccine research and development (R&D) infrastructure, funded by EU (Horizon2020)

2017-2021 Discoveries Centre for Regenerative and Precision Medicine, Teaming Project with UCL and 4 Portuguese Universities, funded by EU (PI of ITQB NOVA partner)

2016-2019 ERAdicatPH, Understanding Hyperoxaluria Type 1 towards the development of Innovative Therapeutic Strategies (E-Rare)

2014-2017 INNOVATE, INvestigating NOvel VALuable bio-Therapeutics and Expression systems, ERA-IB-2/0007/2013 (ERANet)

2014-2018 "CARDIOSTEM", Engineered cardiac tissues and stem cell-based therapies for cardiovascular applications, MITP-TB/ECE/0013/2013, funded by Programa MIT | Portugal-FCT, Portugal.

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.

2013-2016 "EPIGENESIS", One Health approach 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).

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, Portugal.

2012-2014 "SpeCCC", Specialised Cell Carrier Components", funded by EU (FP7) - Workpackage leader.

2011-2015 "ComplexINC", New Technologies and Production Tools for Complex Protein Biologics", funded by EU (FP7) - Workpackage leader.

2010-2014 "CAREMI" - Cardio Repair European Multidisciplinary Initiative", funded by EU (FP7).

2009-2012 "HYPERLAB" - High Yield and Performance Stem Cell Lab" funded by EU (FP7) - Workpackage leader.

- 2009-2012** "BRAINCAV" - Nonhuman adenovirus vectors for gene transfer to the brain", funded by EU (FP7) - Workpackage leader.
- 2009-2011** "Global HIV Vaccine Criorepository" by IBMT-Fraunhofer plus Bill & Melinda Gates Foundation.
- 2009-2011** "Integrated strategy for expansion, neuronal differentiation and cryopreservation of human embryonic stem", funded by FCT, Portugal (PTDC/BIO/72755/2006).
- 2007-2009** "Novel stroke model for neuroprotective research: bioreaction of primary brain cell aggregates" funded by FCT, Portugal (PTDC/BIO/69407/2006).
- 2006-2009** "BACULOGENE", Baculovirus Vectors for Gene Therapy, funded by EU (FP6 - 2007) - Workpackage leader.
- 2005-2007** "EPIGENEVAC", Epidemiology and New Generation Vaccines for *Ehrlichia* and *Anaplasma* infections of Ruminants, funded by EU (FP6-2002-INCO-DEV-1 - EPIGENEVAC).
- 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 (RP/PPR - MARKVAC).
- 2004-2006** "Integrated Strategy for the Production, Purification and Storage of Adenovirus", funded by FCT, Portugal (POCTI/BIO/46515/2002).
- 2016-2019** ERAdicatPH, Understanding Hyperoxaluria Type 1 towards the development of Innovative Therapeutic Strategies (E-Rare)
- 2003-2006** "Metabolic Trafficking between Neurons and Astrocytes under Stress Conditions Implicated in Neurological Disorders", funded by FCT, Portugal (POCTI/BIO/39214/2001).
- From 2003** 17 funded by pharmaceutical and/or biotechnology international companies.
- Co-Principal Investigator** (from 2001) 2 funded by FCT, Portugal; 5 funded by EU
- Team Member** (from 2000) 15 funded by FCT, Portugal; 6 funded by EU

11. INVITED KEYNOTES LECTURES

- 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

12. INVITED LECTURES IN INTERNATIONAL CONFERENCES

- 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. INVITED LECTURES AT PHARMA & INDUSTRY

- 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

14.AWARDS

- 2021** Gold Medal of Merit from the Oeiras Municipality
- 2017** Recognized as one of the 100 Top Portuguese Women in Science
- 2009** Scientific Merit Award from NOVA University of Lisbon
- 2008** Scientific Merit Award from Santander Totta/ New University of Lisbon
- 2005** Scientific Award from the Portuguese association of French Doctorates.
From the more than 400 posters presented in international
- 2003-(...)** conferences awarded with: four 1st, two 2nd and one 3rd best poster prizes.

15. PROFESSIONAL SOCIETIES

- ✧ Member of the European Society for Animal Cell Technology (ESACT), since 2003, Elected in June 2005 to the ESACT Executive Committee. Re-elected June 2007. Elected Secretary June 2009. Elected Chairperson of ESACT in June 2017.
- ✧ Member of the Portuguese Society for Biochemistry since 1995, of Portuguese Society for Biotechnology since 2005 and of the Portuguese Society for Stem Cells and Cell Therapy since 2010.

- ✧ Member of the European Society of Neurochemistry, since 2007.
- ✧ Member of the American Society for Cell Biology, since 2005.
- ✧ Member of the American Association for the Advancement of Science, since 2006.
- ✧ Elected as a foreign member of the US National Academy of Engineering, one of the 3 branches of the US National Academies, since February 2021.
- ✧ Commissioner to “Ciência 2021” – Annual Meeting of Science, Technology and Innovation in Portugal, appointed by the Minister of Science & Technology.

16. OTHER CV HIGHLIGHTS

- (i) **SUPERVISION:** 35 PhD Students (32 thesis defended), 18 Post-Docs (from 2005-to date), 9 Master Students, 19 Diploma thesis
- (ii) **MEMBER OF JURY PHD THESIS:** 27 juries in Portuguese Universities (6 as main opponent) and 7 juries abroad (as principal opponent) – Irish, Belgian, German, Spanish, Austrian and Australian Universities.
- (iii) Meeting Co-chair of **Vaccine Technology** (2008; 2010; 2012) and of **Integrated Continuous Biomanufacturing** (2017) - ECI series conferences; Member of the Scientific Advisory Board of the **ESACT**, **PEACE** and **RecProtein** International Meetings; Co-Coordinator of the **ESACT Animal Cell Technology Course** (2011-2018- annually), Barcelona); Meeting Chair of 9th International Meeting of the Portuguese Society of Stem Cells and Cell therapies (Oct 2015).
- (iv) **Post-graduation teaching** in activities (PhD Programs, Master Courses, International Advanced Courses) at several Portuguese Universities. 10 invited lectures in international advanced courses.
- (v) Approx. 25 invited lectures in Portuguese Universities, Institutes and Hospitals;
- (vi) Dissemination of own research results in international conferences: approx. 100 oral communications (selected from submitted abstracts) and over 500 posters presented.
- (vii) Science and Society Activities: Participation at the “Ciência Aberta” initiatives (organized by Ministry of Ciência and Tecnologia), at several TV programs and debates about ethical issues associated to the use of stem cells and the implementation of the “Three Rs Principle”. Founding Member of the Organizing Committee of ITQB Open Day.

17. PUBLICATIONS

REFEREED ARTICLES (*CORRESPONDING AUTHOR)

2021

277 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*, in press.

DOI:

276 Tenreiro M, Louro AF, **Alves PM**, Serra M (2021). Next generation of heart regenerative therapies: progress and promise of cardiac tissue engineering. *Npj Regenerative Medicine* (in press)

DOI:

- 275** Sebastião MJ, Serra M, Gomes-Alves P, **Alves PM** (2021) Stem Cells characterization: 'Omics reinforcing analytics. Submitted to Current Opinion in Biotechnology (in press)
*
DOI:
- 274** Arez F, Rodrigues AF, Brito C, **Alves PM** (2021) Bioengineered Liver Cell Models of Hepatotropic Infections”, *Viruses* 13, 773.
*
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