



Curriculum Vitae

Abel Martin Gonzalez Oliva

Abel Martin Gonzalez Oliva studied Agronomy in Universidad de Buenos Aires/Argentina and moved to Germany where he completed a MSc (1986) and a Doktor (PhD) in Agrartechnik (agricultural technology) in 1989 at the Universität Hohenheim. He moved to Portugal in 1989 and joined the Instituto de Tecnologia Química e Biológica/ Universidade Nova de Lisboa, initiating his activity as a researcher in the field of biosensors development. Since 2005 he led the Biomolecular Diagnostic Laboratory. Today Abel Oliva has extensive expertise in the research areas of reconstructed human skin, namely in vitro 3D human skin and melanoma models. The group developed a skin-on-a-chip setup (epidermis and dermis) for long-term in vitro assays. During last years has been developing non-animal models for physiological assays, permeation and drug delivery tests. He has long experience with the development of biosensors for diagnosis and monitoring; fabrication of microdevices; design of microfluidic chips for cell sorting and cell characterization and the design and construction of organ-on-a-chip approaches (skin and vascular tissue). Abel Oliva has an h-Index of 17 and published 50 papers in peer review journals and 3 book chapters. He supervised several PhD students, MSc students and research training of national and foreign visitor students. He is member of the ITQB-NOVA Scientific Council, coordinator of the "Nano-processes for life sciences" curricular unit of the PhD programme MolBios of the ITQB-NOVA; since 2014 is coordinator of the post-graduation courses and since 2005 lecturer of Biosensors for several master courses at the Faculdade de Ciências/Universidade Nova de Lisboa.

Identificação

Identificação pessoal

Nome completo

Abel Martin Gonzalez Oliva

Género

Masculino

Data de nascimento

1957/07/21

Nomes de citação

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<https://www.itqb.unl.pt/research/technology/biomolecular-diagnostics> (Profissional)

<https://www.itqb.unl.pt/labs/biomolecular-diagnostic> (Profissional)

Domínios de atuação

Ciências Agrárias - Biotecnologia Agrária e Alimentar - Biotecnologia Agrária e Biotecnologia Alimentar

Ciências da Engenharia e Tecnologias - Engenharia Médica

Ciências Naturais - Ciências Biológicas - Outras ciências biológicas

Idiomas

Idioma	Conversação	Leitura	Escrita	Compreensão	Peer-review
Espanhol; Castelhano (Idioma materno)					
Português	Utilizador proficiente (C2)	Utilizador proficiente (C2)	Utilizador proficiente (C2)	Utilizador proficiente (C2)	Utilizador proficiente (C2)
Alemão	Utilizador proficiente (C1)	Utilizador proficiente (C1)	Utilizador proficiente (C1)	Utilizador proficiente (C1)	Utilizador independent e (B2)
Inglês	Utilizador independent e (B2)	Utilizador independent e (B2)	Utilizador independent e (B2)	Utilizador independent e (B2)	Utilizador independent e (B2)

Formação

Grau

Classificação

1986/06/01 - 1989/03/01 Concluído	Agrartechnik (Doktor (PhD)) Especialização em landwirtschaft wissenschaft Universität Hohenheim Fakultät Agrarwissenschaften, Alemanha <i>"Einfluss Verschiedener Parameter auf die Trenneigenschaften des Planetentrommel-sortierers bei der Korn-Spreu-Trennung" (TESE/DISSERTAÇÃO)</i>	cum laude
1984/09/01 - 1986/05/31 Concluído	Agrartechnik (Master) Especialização em Agrartechnik Universität Hohenheim Fakultät Agrarwissenschaften, Alemanha <i>"Entwicklung eines Rechnergesteuerten Mesßsystem zur Bestimmung des Druckprofiles an Mähdrescherreinigungsanlage" (TESE/DISSERTAÇÃO)</i>	Sehr gut
1977/03/01 - 1984/03/31 Concluído	Engenharia agronómica (Licence) Especialização em Produccion agrícola Universidad de Buenos Aires Facultad de Agronomía, Argentina <i>"Entwicklung eines Rechnergesteuerten Messsystem zur Bestimmung des Druckprofiles an Maehdrescherreinigungsanlage" (Development of a Measuring System to Determinate the Static Pressure Profile in the Cleaning System of Harvester Combines). Master Thesis. Ins" (TESE/DISSERTAÇÃO)</i>	bom

Percorso profesional

Ciência

1989/11/01 - Atual	Investigador Auxiliar (carreira) (Investigação) Universidade Nova de Lisboa Instituto de Tecnologia Química e Biológica, Portugal
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Projetos

Projeto

	Designação	Financiadores
2018 - 2020	Mecanismos moleculares de internalização e processamento de melanina por queratinócitos PTDC/BIA-CEL/29765/2017 Investigador Universidade Nova de Lisboa, Portugal	Fundação para a Ciência e a Tecnologia, Portugal

2017/06/01 - 2019/12/31	Developing novel modulators of skin pigmentation 201707-05-038 Investigador iNOVA4Health, Portugal	Fundação para a Ciência e a Tecnologia, Portugal
2016/06/01 - 2019/05/31	Acoplamento de Fluídos Iônicos inspirados na Natureza e Sistemas Aquosos Bifásicos Microfluídicos para a Purificação de Anticorpos Monoclonais PTDC/QEQ-FTT/3289/2014 Investigador Universidade Nova de Lisboa, Portugal BioResources 4 Sustainability, Portugal	Fundação para a Ciência e a Tecnologia, Portugal
2015/03/01 - 2017/12/31	Development of a non-invasive method to measure blood glucose through the skin without need of calibration 201504-01-009 UID/Multi /04462/2013 Investigador Universidade Nova de Lisboa Instituto de Tecnologia Química e Biológica, Portugal	iNOVA4Health, Portugal
2013/06 - 2015/05	Development of microfluidic platform for single cell studies Provided by PTCRIS: 126191 126191 PTDC/BBB-IMG/1225/2012 PTDC/BBB-IMG/1225/2012 Investigador responsável Universidade Nova de Lisboa Instituto de Tecnologia Química e Biológica, Portugal	Ministério da Ciência Tecnologia e Ensino Superior, Portugal
2010/04/01 - 2014/09/30	PIROVAC Improvement of current and development of new vaccines for theileriosis and babesiosis of small ruminants KBBE-3-245145-PIROVAC Investigador Forschungszentrum Borstel Leibniz-Zentrum für Medizin und Biowissenschaften, Alemanha	European Commission, Bélgica
2013/06/03 - 2014/06/02	InCell - Optical fiber tweezers for single cell manipulation and analysis EXPL/BBB-IMG/0500/2012 Investigador Instituto de Engenharia de Sistemas e Computadores Tecnologia e Ciência, Portugal	Fundação para a Ciência e a Tecnologia, Portugal
2010/03 - 2013/08	Hybrid electro-optical microfluidic device for single cell analysis PTDC/SAU-BEB/102247/2008 Investigador responsável Universidade Nova de Lisboa Instituto de Tecnologia	Ministério da Ciência Tecnologia e Ensino Superior, Portugal

Química e Biológica, Portugal

2009/09 - 2012/03	Development of ultra-sensitive detection methods and plant nano-vaccines for the fungi <i>Fusarium</i> spp. using nanotechnological devices. NANO/NTec-SQA/0131/2007 Investigador responsável Fundação para a Ciência e a Tecnologia, Portugal	Fundação para a Ciência e a Tecnologia, Portugal
2005/07/01 - 2009/04/30	Molecular characterization of Latin American and Mediterranean <i>Babesia bovis</i> and <i>B. bigemina</i> strains and its application for the development of improved control strategies 3691 Investigador Universidad de Alcala de Henares, Espanha	European Commission Sixth Framework Programme, Bélgica
2005/07/01 - 2008/08/30	INCOME 515915 Investigador Forschungszentrum Borstel Leibniz-Zentrum für Medizin und Biowissenschaften, Alemanha	European Commission Seventh Framework Programme for Research and Technological Development International Cooperation, Bélgica
2006/01/01 - 2007/12/31	Optical Fibre Sensors for Distributed Monitoring of Dissolved Oxygen and Temperature POCI/AMB/56132/2004 Investigador Instituto de Engenharia de Sistemas e Computadores, Portugal	Fundação para a Ciência e a Tecnologia, Portugal

Produções

Publicações

- Artigo em conferência
- 1 P C de Barros, Dragana; Reed, Patricia; Pinho, Mariana G.; Oliva, Abel. "Antimicrobial and Cytotoxic Effect of Nanostructured Lipid Carriers for Dermal Applications". Trabalho apresentado em *3rd International Biotechnology & Research Conference, on line conference*, 2020.
Publicado
 - 2 Rodrigues Ribeiro, R.S.; Queiros, R.B.; Ecoffet, C.; Soppera, O.; Oliva, A.; Guerreiro, A.; Jorge, P.A.S.. "Rapid fabrication of polymeric micro lenses for optical fiber trapping and beam shaping". 2014.
10.1117/12.2060374

- 3 Tillak, J.B.; Bernacka-Wojcik, I.; Barata, D.; Jorge, P.A.S.; Águas, H.; Oliva, A.G.. "Towards single cell spectroscopy and refractometry in microfluidic chip platforms". 2011.
10.1117/12.892180
- 4 Jorge, P.A.S.; Caldas, P.; Rosa, C.C.; Oliva, A.G.; Marques, M.B.; Santos, J.L.. "Optical temperature measurement configuration for fluorescence based oxygen sensors". 2004.
10.1117/12.566591

Artigo em revista

- 1 Pinto, Fátima; Fonseca, Luis P.; Souza, Sofia; Oliva, Abel; de Barros, Dragana P.C.. "Topical distribution and efficiency of nanostructured lipid carriers on a 3D reconstructed human epidermis model". *Journal of Drug Delivery Science and Technology* 57 (2020): 101616. <http://dx.doi.org/10.1016/j.jddst.2020.101616>.
10.1016/j.jddst.2020.101616
- 2 S. L. Souza; G. Graça; A. Oliva. "Characterization of sweat induced with pilocarpine, physical exercise, and collected passively by metabolomic analysis". *Skin Research and Technology* (2018): <https://doi.org/10.1111/srt.12412>.
10.1111/srt.12412
- 3 Oliva, Abel. "Editorial for Special Issue: Advances in Microfluidic Devices for Cell Handling and Analysis". *Micromachines* (2017): <http://www.mdpi.com/2072-666X/8/6/184>.
10.3390/mi8060184
- 4 Gonçalves, M.; De Carvalho, M.; Peixoto, C.; Alves, P.; Barreto, C.; Oliva, A.; Pinto, S.; et al. "Phosphoneurofilament heavy chain and vascular endothelial growth factor as cerebrospinal fluid biomarkers for ALS". *Amyotrophic Lateral Sclerosis and Frontotemporal Degeneration* 18 1-2 (2017): 134-136. <http://www.scopus.com/inward/record.url?eid=2-s2.0-84981485527&partnerID=MN8TOARS>.
10.1080/21678421.2016.1212894
- 5 Pereira, F.M.; Bernacka-Wojcik, I.; Ribeiro, R.S.R.; Lobato, M.T.; Fortunato, E.; Martins, R.; Igreja, R.; et al. "Hybrid microfluidic platform for multifactorial analysis based on electrical impedance, refractometry, optical absorption and fluorescence". *Micromachines* 7 10 (2016): <http://www.scopus.com/inward/record.url?eid=2-s2.0-84994806266&partnerID=MN8TOARS>.
10.3390/mi7100181
- 6 Oliva, Abel. "Characterization of a papain-like cysteine protease essential for the survival of *Babesia ovis* merozoites". *Ticks and Tick-borne Diseases* (2015): <http://www.sciencedirect.com/science/article/pii/S1877959X1530008X>.
10.1016/j.ttbdis.2015.09.002
- 7 Ribeiro, R.S.R.; Soppera, O.; Oliva, A.G.; Guerreiro, A.; Jorge, P.A.S.. "New Trends on Optical Fiber Tweezers". *Journal of Lightwave Technology* 33 16 (2015): 3394-3405. <http://www.scopus.com/inward/record.url?eid=2-s2.0-84938376204&partnerID=MN8TOARS>.
10.1109/JLT.2015.2448119
- 8 Oliva, Abel. "Highly sensitive method for diagnostic of subclinical *Babesia ovis* infection". *Ticks and Tick-borne Diseases* (2014):
10.1016/j.ttbdis.2014.07.005
- 9 Oliva, Abel. "Quantum dots and superparamagnetic nanoparticles interaction with pathogenic fungi: internalization and toxicity profile". *ACS Appl. Mater. Interfaces* (2014):
10.1021/am501029g

- 10 György, E.; Pérez del Pino, A.; Roqueta, J.; Sánchez, C.; Oliva, A.G. "Processing and immobilization of chondroitin-4-sulphate by UV laser radiation". *Colloids and Surfaces B: Biointerfaces* 104 (2013): 169-173. <http://www.scopus.com/inward/record.url?eid=2-s2.0-8487223389&partnerID=MN8TOARS>.
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- 11 Santos, A.R.; Miguel, A.S.; Macovei, A.; Maycock, C.; Balestrazzi, A.; Oliva, A.; Fevereiro, P.. "CdSe/ZnS Quantum Dots trigger DNA repair and antioxidant enzyme systems in *Medicago sativa* cells in suspension culture". *BMC Biotechnology* 13 (2013): <http://www.scopus.com/inward/record.url?eid=2-s2.0-84890470926&partnerID=MN8TOARS>.
10.1186/1472-6750-13-111
- 12 Renneker, S.; Abdo, J.; Salih, D.E.A.; Karagenç, T.; Bilgiç, H.; Torina, A.; Oliva, A.G.; et al. "Can *Anaplasma ovis* in Small Ruminants be Neglected any Longer?". *Transboundary and Emerging Diseases* 60 SUPPL.2 (2013): 105-112. <http://www.scopus.com/inward/record.url?eid=2-s2.0-84887343940&partnerID=MN8TOARS>.
10.1111/tbed.12149
- 13 György, E.; Pérez Del Pino, A.; Roqueta, J.; Ballesteros, B.; Miguel, A.S.; Maycock, C.; Oliva, A.G.. "Synthesis and characterization of CdSe/ZnS core-shell quantum dots immobilized on solid substrates through laser irradiation". *Physica Status Solidi (A) Applications and Materials Science* 209 11 (2012): 2201-2207. <http://www.scopus.com/inward/record.url?eid=2-s2.0-84869790023&partnerID=MN8TOARS>.
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- 14 Gordo, J.; Máximo, P.; Cabrita, E.; Lourenço, A.; Oliva, A.; Almeida, J.; Filipe, M.; et al. "Thymus mastichina: Chemical constituents and their anti-cancer activity". *Natural Product Communications* 7 11 (2012): 1491-1494. <http://www.scopus.com/inward/record.url?eid=2-s2.0-84869784814&partnerID=MN8TOARS>.
- 15 György, E.; Pino, A.P.D.; Roqueta, J.; Ballesteros, B.; Miguel, A.S.; Maycock, C.D.; Oliva, A.G.. "Synthesis and laser immobilization onto solid substrates of CdSe/ZnS core-shell quantum dots". *Journal of Physical Chemistry C* 115 31 (2011): 15210-15216. <http://www.scopus.com/inward/record.url?eid=2-s2.0-79961231496&partnerID=MN8TOARS>.
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- 16 Campos, E.; Moura, T.F.; Oliva, A.; Leandro, P.; Soveral, G.. "Lack of Aquaporin 3 in bovine erythrocyte membranes correlates with low glycerol permeation". *Biochemical and Biophysical Research Communications* 408 3 (2011): 477-481. <http://www.scopus.com/inward/record.url?eid=2-s2.0-79955766444&partnerID=MN8TOARS>.
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- 17 Silva, M. G.; Ueti, M. W.; Norimine, J.; Florin-Christensen, M.; Bastos, R. G.; Goff, W. L.; Brown, W. C.; Oliva, A.; Suarez, C. E.. "Babesia bovis expresses Bbo-6cys-E, a member of a novel gene family that is homologous to the 6-cys family of Plasmodium". *Parasitology International* 60 1 (2011): 13-18.
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- 18 Santos, A.R.; Miguel, A.S.; Tomaz, L.; Malhó, R.; Maycock, C.; Vaz Patto, M.C.; Fevereiro, P.; Oliva, A.. "The impact of CdSe/ZnS Quantum Dots in cells of *Medicago sativa* in suspension culture". *Journal of Nanobiotechnology* 8 (2010): <http://www.scopus.com/inward/record.url?eid=2-s2.0-77957367727&partnerID=MN8TOARS>.
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- 20 Silva, M.G.; Ueti, M.W.; Norimine, J.; Florin-Christensen, M.; Bastos, R.G.; Goff, W. L.; Brown, W.C.; Oliva, A.; Suarez, C.E.. "Babesia bovis expresses a neutralization-sensitive antigen that contains a microneme adhesive repeat (MAR) domain". *Parasitology International* 59 2 (2010): 294-297. <http://www.scopus.com/inward/record.url?eid=2-s2.0-77951652955&partnerID=MN8TOARS>.
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- 21 Silva, M.G.; Henriques, G.; Sánchez, C.; Marques, P.X.; Suarez, C.E.; Oliva, A.. "First survey for Babesia bovis and Babesia bigemina infection in cattle from Central and Southern regions of Portugal using serological and DNA detection methods". *Veterinary Parasitology* 166 1-2 (2009): 66-72. <http://www.scopus.com/inward/record.url?eid=2-s2.0-70350349014&partnerID=MN8TOARS>.
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- 23 Criado-Fornelio, A.; Buling, A.; Asenzo, G.; Benitez, D.; Florin-Christensen, M.; Gonzalez-Oliva, A.; Henriques, G.; et al. "Development of fluorogenic probe-based PCR assays for the detection and quantification of bovine piroplasmids". *Veterinary Parasitology* 162 3-4 (2009): 200-206.
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- 24 Nascimento, E.M.; Nogueira, N.; Silva, T.; Braschler, T.; Demierre, N.; Renaud, P.; Oliva, A.G.. "Dielectrophoretic sorting on a microfabricated flow cytometer: Label free separation of Babesia bovis infected erythrocytes". *Bioelectrochemistry* 73 2 (2008): 123-128. <http://www.scopus.com/inward/record.url?eid=2-s2.0-48949087848&partnerID=MN8TOARS>.
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- 25 Braschler, T.; Demierre, N.; Nascimento, E.; Silva, T.; Oliva, A.G.; Renaud, P.. "Continuous separation of cells by balanced dielectrophoretic forces at multiple frequencies". *Lab on a Chip - Miniaturisation for Chemistry and Biology* 8 2 (2008): 280-286. <http://www.scopus.com/inward/record.url?eid=2-s2.0-38849092068&partnerID=MN8TOARS>.
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- 26 Ahmed, J.S.; Oliva, A.G.; Seitzer, U.. "Animal health: harmonisation and distribution of pathogen detection and differentiation tools". *Transboundary and Emerging Diseases* 55 5-6 (2008): 187-189. <http://www.scopus.com/inward/record.url?eid=2-s2.0-51049096575&partnerID=MN8TOARS>.
10.1111/j.1865-1682.2008.01038.x
- 27 Silva, M.G.; Helali, S.; Esseghaier, C.; Suarez, C.E.; Oliva, A.; Abdelghani, A.. "An impedance spectroscopy method for the detection and evaluation of Babesia bovis antibodies in cattle". *Sensors and Actuators, B: Chemical* 135 1 (2008): 206-213. <http://www.scopus.com/inward/record.url?eid=2-s2.0-56249083518&partnerID=MN8TOARS>.
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- 28 Küttel, C.; Nascimento, E.; Demierre, N.; Silva, T.; Braschler, T.; Renaud, P.; Oliva, A.G.. "Label-free detection of Babesia bovis infected red blood cells using impedance spectroscopy on a microfabricated flow cytometer". *Acta Tropica* 102 1 (2007): 63-68. <http://www.scopus.com/inward/record.url?eid=2-s2.0-34249307247&partnerID=MN8TOARS>.
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- 29 Nascimento, E.; Silva, T.; Oliva, A.. "Identification, characterization and manipulation of Babesia-bovis-infected red blood cells using microfluidics technology.". *Parassitologia* 49 Suppl 1 (2007): 45-52. <http://www.scopus.com/inward/record.url?eid=2-s2.0-38449108989&partnerID=MN8TOARS>.
- 30 Silvestre, Ó.F.; Silva, M.G.; Oliva, A.G.; Cruz, H.J.. "Spherical vs. granular immobilization support selection and performance on an optical flow cell immunosensor based on the fluorescence of cyanine 5". *Preparative Biochemistry and Biotechnology* 36 4 (2006): 333-353. <http://www.scopus.com/inward/record.url?eid=2-s2.0-33748710417&partnerID=MN8TOARS>.
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- 32 Miranda, J.; Bakheit, M. A.; Liu, Z.; Yin, H.; Mu, Y.; Guo, S.; Beyer, D.; et al. "Development of a recombinant indirect ELISA for the diagnosis of Theileria sp (China) infection in small ruminants". *Parasitology Research* 98 6 (2006): 561-567.
10.1007/s00436-005-0105-8
- 33 Jorge, P.A.S.; Caldas, P.; Da Silva, J.C.G.E.; Rosa, C.C.; Oliva, A.G.; Santos, J.L.; Farahi, F.. "Luminescence-based optical fiber chemical sensors". *Fiber and Integrated Optics* 24 3-4 (2005): 201-225. <http://www.scopus.com/inward/record.url?eid=2-s2.0-18144402429&partnerID=MN8TOARS>.
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- 34 Jorge, P.A.S.; Caldas, P.; Rosa, C.C.; Oliva, A.G.; Santos, J.L.. "Optical fiber probes for fluorescence based oxygen sensing". *Sensors and Actuators, B: Chemical* 103 1-2 (2004): 290-299. <http://www.scopus.com/inward/record.url?eid=2-s2.0-14744287900&partnerID=MN8TOARS>.
10.1016/j.snb.2004.04.086
- 35 Silva, M.; Cruz, H.; Rossetti, O.; Arese, A.; Oliva, A.. "Development of an optical immunosensor based on the fluorescence of Cyanine-5 for veterinarian diagnostics.". *Biotechnology Letters* 26 12 (2004): 993-997. <http://www.scopus.com/inward/record.url?eid=2-s2.0-16644370365&partnerID=MN8TOARS>.
- 36 Rosa, C.C.; Cruz, H.J.; Vidal, M.; Oliva, A.G.. "Optical biosensor based on nitrite reductase immobilised in controlled pore glass". *Biosensors and Bioelectronics* 17 1-2 (2002): 45-52. <http://www.scopus.com/inward/record.url?eid=2-s2.0-0036134830&partnerID=MN8TOARS>.
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- 37 Cruz, H.J.; Rosa, C.C.; Oliva, A.G.. "Immunosensors for diagnostic applications". *Parasitology Research* 88 SUPPL. 1 (2002): <http://www.scopus.com/inward/record.url?eid=2-s2.0-0036315450&partnerID=MN8TOARS>.
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- 40 Vidal, M.I.; Stiene, M.; Henkel, J.; Bilitewski, U.; Costa, J.V.; Oliva, A.G.. "A solid-phase enzyme linked immunosorbent assay using monoclonal antibodies, for the detection of african swine fever virus antigens and antibodies". *Journal of Virological Methods* 66 2 (1997): 211-218. <http://www.scopus.com/inward/record.url?eid=2-s2.0-0030849669&partnerID=MN8TOARS>.
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- Livro
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Atividades

Orientação

	Título/Tema Papel desempenhado	Curso (Tipo) Instituição / Organização
2021/01/01 - 2024/06/30	Full humanized 3D melanoma skin model for physiological studies of tumor aggressiveness. This project aim is to produce an innovative three-dimensional (3D) melanoma model with cells involved in tumor immune response to study the underlying mechanisms affecting melanoma progression, invasion, and metastasis. The effect of current therapies, dabrafenib and pembrolizumab, also will be addressed. Orientador	Biociências Moleculares (Doutoramento) Universidade Nova de Lisboa Instituto de Tecnologia Química e Biológica, Portugal
2020/04/01 - 2021/12/20	3D reconstruções human skin-on-a-chip modelo for anti-inflammatory drug evaluation. The aim of this master thesis will be the development of a inflammation model in invitro developed human skin, as a tool for testing antinflammatory compounds. Orientador	Biologia Humana e Ambiente (Mestrado) Universidade de Lisboa Faculdade de Ciências, Portugal
2020/09/01 - 2021/09/30	Aplicação tópica de bioflavonoides em epiderme humana reconstruída in vitro usando nanopartículas lipídicas. O trabalho de mestardo esta focado na utilização de miniemulsões para a produção de NLCs (Nanostructured Lipid Carriers) para o estudo de "drug delivery" em moelos de epiderme human reconstruída (RHE). Coorientador	Biologia Humana e Ambiente (Mestrado) Fundação da Faculdade de Ciências da Universidade de Lisboa, Portugal
2016/03/01 - 2021/09/30	Fully-humanized Skin-on-a-chip for medical applications. This project aims at developing an innovative microfluidic system to grow and sustain a physiologically relevant human skin model and to access its potential applications. Coorientador	Biociências Moleculares (Doutoramento) Universidade Nova de Lisboa Instituto de Tecnologia Química e Biológica, Portugal

2019/06/01 - 2021/06/30	Desenvolvimento de um modelo 3D in vitro de melanoma cutâneo completamente humanizado com células mononucleadas de sangue periférico (PBMCs). Coorientador	Biociências Moleculares (Mestrado) Universidade Nova de Lisboa Instituto de Tecnologia Química e Biológica, Portugal
2019/09/01 - 2021/03/31	Development of 3D skin model for studies of the autosomal recessive spastic ataxia of Charlevoix-Saguenay (ARSACS). This work aims the development of an Autosomal recessive spastic ataxia of Charlevoix-Saguenay (ARSACS) model in a invitro skin model. Coorientador	biologia molecular e genetica (Mestrado) Fundação da Faculdade de Ciências da Universidade de Lisboa, Portugal
2020/02/01 - 2021/02/24	Development of an in vitro platform for a 3D microphysiological systems of human iPS-derived endothelial cells. This work aims the development of a chip for co-culture of cells to build up a 3D microvascular network. Coorientador	Engenharia de Materiais (Mestrado) Universidade Nova de Lisboa Faculdade de Ciências e Tecnologia, Portugal
2019/10/01 - 2021/02/24	Development of substrates for reconstructed human dermis based on polyhydroxyalkanoates (PHAs) and FucoPol. This work demonstrated the potential of naturally derived P (HBHVHHx)/FucoPol scaffolds for the reconstruction of human dermis. Coorientador	Biotecnologia Universidade Nova de Lisboa Faculdade de Ciências e Tecnologia, Portugal
2017/09/01 - 2019/10/18	Study of the effects of the culture condition in the permeation of reconstructed human skin. This work provides a preliminary insight into how these permeation parameters can be adjusted to produce an in vitro human epidermal equivalent that better resembles the in vivo human epidermis. Although it is clear that further study is needed as permeability values are still far from those observed in vivo. Coorientador	(Mestrado) Fundação da Faculdade de Ciências da Universidade de Lisboa, Portugal
2017/09/01 - 2019/02/28	SuberSkin - plant defensive polymers in wound healing. Coorientador	Bioquímica para a Saúde (Mestrado) Universidade Nova de Lisboa Instituto de Tecnologia Química e Biológica, Portugal
2016/04/01 - 2017/09/12	Metabolomic analysis of the reconstructed epidermis cultivation protocol as a tool to improve the skin barrier properties. In this work, a	(Mestrado) Fundação da Faculdade de Ciências da Universidade de Lisboa, Portugal

metabolomic analysis of the supernatant of the culture process (exometabolome) was performed by proton nuclear magnetic resonance spectroscopy (¹H-NMR) and high-performance liquid chromatography (HPLC). The uptake and secretion rates for both the expansion of keratinocytes in monolayer culture and the reconstructed epidermis were determined for the several metabolites observed by NMR, and for the amino acids.

Coorientador

2014/09/01 -
2016/04/28

Development and Experimentation of New Tools for Bioassays with Red Blood Cells. The aim of this work was to develop new tools for handling and studying of erythrocytes. In this context, biological nanoprobe were developed, combining Quantum Dots nanoparticles with specific antibodies to detect proteins in erythrocytes. Also, a microfluidic platform was designed and constructed to evaluate the cytotoxic effect in single-cell analysis of used QDs.

Orientador

Biociencia (Mestrado)

Universidade Nova de Lisboa, Portugal

2015/04/01 - 2015/12/09

Microfluidics: A New Look At Cell Migration Analysis. Studying the effect of the surrounding environment of the embryonic stem cells development is of highly relevance to understand its physiology. Different single-cell microchips were designed and manufactured to study the migration of mouse embryonic fibroblasts (MEFs) cells coated and not coated with fibronectin in response to an increase of serum concentration in the culture medium.

Orientador

(Mestrado)

Universidade Nova de Lisboa
Faculdade de Ciências e Tecnologia,
Portugal

2011/09/01 - 2012/10/10

Espectroscopia de impedância aplicada à caracterização de células parasitadas numa plataforma de microfluídica. Este trabalho está focado essencialmente na descrição da implementação da componente electrónica num dispositivo de microfluídica de diagnóstico molecular para caracterização de células parasitadas, tal como na microfabricação dos dispositivos em si.

Coorientador

Ciências da Engenharia - Engenharia Biomédica e Biofísica (Mestrado)

Universidade de Lisboa Faculdade de Ciências, Portugal

2007/03/01 - 2012/09/07	Quantum Dots: Synthesis, Functionalization and Bioconjugation for Biological Applications. This work was based in the development of Quantum Dots (QDs) for biological applications and to study the impact of CdSe/ZnS core-shell QDs in cytotoxicity and genotoxicity areas as well as their application in the electronic field will be also addressed in this doctoral work. Quantum dots, SILAR method, biocompatible, bioconjugation, immunofluorescence assays, Babesia bovis, cytotoxicity, genotoxicity and MAPLE technique. Coorientador	(Doutoramento) Universidade Nova de Lisboa Instituto de Tecnologia Química e Biológica, Portugal
2006/04/01 - 2009/04/30	Development of a new Babesia bovis diagnostic method and identification of new vaccine candidates Orientador	Bioquímica (Doutoramento) Universidade Nova de Lisboa Instituto de Tecnologia Química e Biológica, Portugal
2002/06/01 - 2006/02/15	Identification and characterization of immunodominant proteins of Theileria uilenbergi to be used in the diagnosis of ovine theileriosis in China Orientador	Bioquímica (Doutoramento) Universidade Nova de Lisboa Instituto de Tecnologia Química e Biológica, Portugal
1994/02/01 - 1998/09/20	Desenvolvimento de um imunossensor para o diagnóstico da peste suína africana Orientador	Bioquímica (Doutoramento) Universidade Nova de Lisboa Instituto de Tecnologia Química e Biológica, Portugal

Júri de grau académico

	Tema Tipo de participação	Nome do candidato (Tipo de grau) Instituição / Organização
2020/09/15	Biocatalysis in microfluidic systems: Biosensing and rapid-screening applications. The work discusses the development of an enzymatic synthesis platform, a portable device for plant health assessment and platforms to contribute towards the development of colon cancer treatments. Arguente principal	Eduardo João Silva Brás (Doutoramento) Universidade de Lisboa Instituto Superior Técnico, Portugal
2020/02/28	Thin-Film Silicon Microelectromechanical Systems for Mass Sensing and Biosensing Applications. This work discusses the development of cantilever for bioassays and MEMS including the construction by micro and nanomachining.	Rui Miguel Raposo Pinto (Doutoramento) Universidade de Lisboa Instituto Superior Técnico, Portugal

Arguente principal

2019/12/03	Optical Neurostimulation Spine Endoprosthesis. The research and experiments performed in this work hold a "proof-of-concept" utility and serve as starting point for further development of the technologies applied to stimulate neural systems. Arguente principal	Ricardo Morgado Marques (Mestrado) Universidade de Lisboa Instituto Superior Técnico, Portugal
2019/12/03	Low cost rapid prototyping of a microfluidic bioreactor for electrochemical sensing of 3D cancer cell cultures. This work describes the development of a microfluidic bioreactor to enable real time monitoring of cells in a 3D tissue engineered scaffold. Arguente principal	Pedro Miguel Quintas da Conceição (Mestrado) Universidade Nova de Lisboa Faculdade de Ciências e Tecnologia, Portugal
2018/12/12	Microfluidic separation using aqueous two phase systems Arguente principal	Daniel Filipe Camarneiro Silva (Doutoramento) Universidade de Lisboa Instituto Superior Técnico, Portugal
2018/12/12	Microfluidic separation using aqueous two phase systems. métodos de separação e purificação de biomoléculas já estabelecidos com o uso de ATPS num dispositivo microfluidico. O método escolhido para ser integrado no sistema foi a electroforese. Arguente	Daniel Filipe Camarneiro Silva (Doutoramento) Universidade de Lisboa Instituto Superior Técnico, Portugal
2017/12/11	Droplet Microfluidic Systems for Directed Evolution Arguente principal	Guilherme Araújo de Andrade (Mestrado) Universidade de Lisboa Instituto Superior Técnico, Portugal
2017/11/13	Magnetic components and microfluidics optimization on a Lab-on-a-Chip platform Arguente principal	João Ferreira Gil (Mestrado) Fundação da Faculdade de Ciências da Universidade de Lisboa, Portugal

Comissão de avaliação

	Descrição da atividade Tipo de assessoria	Instituição / Organização	Entidade financiadora
2008/03/20 - Atual	Avaliador propostas de projetos de I&DT em Co-promoção no âmbito do QREN e Portugal 2020 Avaliador	Agência Nacional de Inovação SA, Portugal	Agência Nacional de Inovação SA, Portugal

Curso / Disciplina lecionado

	Disciplina	Curso (Tipo)	Instituição / Organização
2014/12/01 - Atual	Post-Graduation program and University Extension Courses. ITQB NOVA offers several research training options each corresponding to a number of credits (ECTS) to be awarded as University Extension or Post-Graduation Courses. Summer students may apply to a short "Introduction to the Research Lab" course.	University Extension Courses & Postgraduate Programme on Research Practice (Pós-Graduação)	Universidade Nova de Lisboa Instituto de Tecnologia Química e Biológica, Portugal
2005/09/01 - 2020/03/31	Biossensores. Esta cadeira confere aos alunos uma visão genérica dos conceitos subjacentes à concepção e produção de biossensores (sensores analíticos baseados na conjugação entre componentes biológicos e transdutores físico-químicos), bem como as suas variações tecnológicas, as principais aplicações e os actuais e futuros desafios. São objectivos específicos da cadeira introduzir os alunos às novas tecnologias sensoriais no âmbito da biotecnologia nomeadamente no que concerne à sua miniaturização.	Engenharia de Micro e Nanotecnologias (Mestrado)	Universidade Nova de Lisboa Faculdade de Ciências e Tecnologia, Portugal
2019/11/18 - 2019/11/22	Nano-processes for life sciences. Módulo do Curso de Doutoramento "MolBios". O objetivo geral de aprendizagem é o de sensibilizar o aluno para a importância das nanotecnologias em geral e em particular das suas aplicações ao estudo e controlo de processos biomoleculares in vitro, ex vivo e in vivo.	Biociências Moleculares (Doutoramento)	Universidade Nova de Lisboa Instituto de Tecnologia Química e Biológica, Portugal

Membro de comissão

	Descrição da atividade Tipo de participação	Instituição / Organização
2015/12/01 - Atual	Coordinator of the ITQB-NOVA Postgraduate Programme on Research Practice and the Research Training Courses.	Universidade Nova de Lisboa Instituto de Tecnologia Química e Biológica, Portugal

ITQB NOVA offers several research training options each corresponding to a number of credits (ECTS) to be awarded as University Extension or Post-Graduation Courses. Selected students carry out their scientific training integrated in one of the research laboratories at ITQB NOVA (or within the Oeiras Associated Laboratory).

Coordenador

2006/03/01 - Atual

Member of the Sciecntific Council of the
ITQB-UNL Antonio Xavier
Membro

Universidade Nova de Lisboa Instituto
de Tecnologia Química e Biológica,
Portugal
