

## Curriculum Vitae

Personal information Antonio Jose Almeida

### Work experience

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1. Employer: Universidade de Lisboa, Faculdade de Farmácia
  - Start date: March 1988
  - End date: current
  - Position: Full Professor
  - Activities: Teaching at pregraduate and postgraduate levels; Research in pharmaceutical technology, protein and antigen delivery, and nanomedicines
  - Country: Portugal

### Education and training

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1. Subject: Pharmaceutical Sciences
  - Start date: July 2005
  - End date: July 2005
  - Qualification: Habilitation
  - Organisation: Faculty of Pharmacy, University of Lisbon
  - Country: Portugal
2. Subject: Pharmaceutical Technology
  - Start date: September 1990
  - End date: November 1993
  - Qualification: PhD
  - Organisation: Aston University, Birmingham
  - Country: United Kingdom
3. Subject: Pharmacy
  - Start date: August 1987
  - End date: current
  - Qualification: Qualified Pharmacist
  - Organisation: Portuguese Pharmaceutical Society (Ordem dos Farmacêuticos)
  - Country: Portugal
4. Subject: Pharmaceutical Sciences
  - Start date: October 1981
  - End date: July 1987
  - Qualification: Degree in Pharmaceutical Sciences (Industrial Pharmacy)
  - Organisation: Faculty of Pharmacy, University of Lisbon
  - Country: Portugal

### Additional information

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#### Publications

##### BOOK

- Vitorino C, Sousa JJ, Almeida AJ, Miranda M (2023). *Time-proof Perspectives on Bioequivalence*. Nova Science publishers. ISBN: 979-8-88697-604-5. Doi: <http://dx.doi.org/10.52305/wknm2164>.

##### BOOK CHAPTERS

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- Cruz MEM, Almeida AJ, Corvo ML (2003). Sistemas de libertação controlada de fármacos. In: Lima N, Mota M (eds), *Biotecnologia: Fundamentos e Aplicações*. Lidel Edições Técnicas, Lisboa (ISBN: 972-757-197-2), pp 359-376.
- Simões S, Ribeiro HM, Almeida AJ (2012). Microemulsões e nanoemulsões. In: Souto EB, Lopes CM (eds) *Novas Formas Farmacêuticas para a Administração de Fármacos*. Edições Univ. Fernando Pessoa, Porto (ISBN: 978\_989\_643\_078\_8), pp 271\_296.
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- Almeida AJ, Grenha A (2014). Technosphere®: an inhalation system for pulmonary delivery of biopharmaceuticals. In: Neves J, Sarmento B (eds), *Mucosal Delivery of Biopharmaceuticals: Biology, Challenges and Strategies*. Springer, New York (ISBN: 978-1-4614-9523-9), pp 483-498.
- Louro AH, Bettencourt A, Gonçalves LM, Almeida AJ, Silva MJ (2015). The role of nanogenotoxicology studies in safety evaluation of nanomaterials. In: Thomas S, Grohens Y, Ninan N (eds). *Nanotechnology Applications in Tissue Engineering*. Elsevier Inc. (ISBN: 978-0-323-32889-0), pp 263-284.
- Bettencourt A, Almeida AJ (2015). Poly(methyl methacrylate) (PMMA): drug delivery carrier applications. In: Mishra MK, (ed), *Encyclopedia of Biomedical Polymers and Polymeric Biomaterials*. CRC Press-Taylor & Francis, (ISBN 13: 978-1-4398-9879-6), vol 11, pp 6511-6525.
- Vitorino C, Almeida AJ, Sousa JJ, Pais AACC (2015). Crossing the skin barrier: a development strategy. In: Pais AACC, Sousa JJ, Vitorino C (eds), *Simvastatin Delivery: Challenges and Opportunities*. Nova Science Publishers, Inc., New York (ISBN: 978-1-63482-148-3), pp 61-91.
- Gaspar D, Peres C, Florindo H, Almeida AJ (2016). Mucosal immunization using polyester-based particulate systems. In: Ravi Kumar MNV (ed), *Handbook of Polyester Drug Delivery Systems*. Pan

- Stanford Publishing Pte. Ltd., Singapore (ISBN: 978\_9814669658), pp 521-561.
- Marto J, Jorge I, Almeida AJ, Ribeiro HM (2016). Novel starch\_derived topical delivery systems. In: Ascenso A, Ribeiro, H, Simões S (eds), *Carrier-Mediated Dermal Delivery: Applications in the Prevention and Treatment of Skin Disorders*. Pan Stanford Publishing Pte Ltd., Singapore (ISBN: 9789814745581), pp 175-217.
  - Vitorino C, Almeida AJ (2016). Solid lipid nanoparticles (SLN) and nanostructured lipid carriers (NLC) as topical delivery systems for antioxidants. In: Ascenso A, Ribeiro, H, Simões S (eds), *Carrier-Mediated Dermal Delivery: Applications in the Prevention and Treatment of Skin Disorders*. Pan Stanford Publishing Pte Ltd., Singapore (ISBN: 9789814745581), pp 217-263.
  - Gaspar DP, Almeida AJ (2018). Surface\_functionalized lipid nanoparticles for site\_specific drug delivery. In: Pathak YV (ed), *Surface Modification of Nanoparticles for Targeted Drug Delivery*. Springer Inc, USA (ISBN: 978-3030061142). pp 73-98.
  - Marto J, Ribeiro HM, Almeida AJ (2019). Starch\_based nanocapsules as drug carriers for topical drug delivery. In: Nguyen-Tri P, Do TO, Nguyen TA (eds), *Smart Nanocontainers: Fundamentals and Emerging Applications*. Elsevier Inc, (ISBN: 9780128167700), pp 287-294.
  - Mota AM, Sousa A, Figueira M, Amaral M, Sousa B, Rocha J, Fattal E, Almeida AJ, Reis CP (2020). Natural\_based consumer health nanoparticles: medicines, cosmetics and food supplements. In: Hussain CM (ed), *Handbook of Functionalized Nanomaterials for Industrial Applications*. Elsevier Inc, Amsterdam, (ISBN: 978-0-12-816787\_8), pp 527-578.
  - Mota AH, Santos\_Rebelo A, Almeida AJ, Reis CP (2021). Therapeutic implications of nanopharmaceuticals in skin delivery. In: Yata V, Ranjan S, Dasgupta N, Lichtfouse E (eds), *Nanopharmaceuticals: Principles and Applications*, Springer, Cham. (ISBN: 978\_3-030-44924-7), Vol 1, pp 205-272.
  - Ascenso A, Simões S, Marto J, Ribeiro HM, Almeida AJ (2021). Colloidal disperse systems: microemulsions and nanoemulsions. In: Eloy JO, Abriata JP, Marchetti JM (eds.), *Nanocarriers for Drug Delivery. Nanomedicine and Nanotechnology*. Springer, Cham. (ISBN 978-3-030-63388-2) pp 73-81.

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- Alpar HO, Almeida AJ (1994). Identification of some physicochemical characteristics of microspheres, which influence the induction of the immune response following mucosal delivery. *Eur J Pharm Biopharm*, 40: 198-202.
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- Almeida AJ, Alpar HO (1996). Nasal delivery of vaccines. *J Drug Targeting*, 3: 455-467.
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- Cerdeira AM, Goucha P, Almeida AJ (1998). Hydroxypropyl methylcellulose phthalate beads containing a model non\_steroid anti\_inflammatory drug. *Int J Pharm*, 164: 147-154.
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- Souto E, Almeida AJ, Müller RH (2007). Lipid nanoparticles (SLN®, NLC®) for cutaneous drug delivery: structure, protection and skin effects. *J Biomed Nanotechnol*, 3: 317-331.
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- Vitorino C, Almeida AJ, Sousa JJ, Lamarche I, Gobin P, Marchand S, Couet W, Olivier, JC, Pais AACC (2014). Passive and active strategies for transdermal delivery using co-encapsulating nanostructured lipid carriers: in vitro vs in vivo studies. *Eur J Pharm Biopharm.* 86: 133-144.
- Rodrigues MA, Tiago JM, Padrela L, Matos HA, Nunes TG, Pinheiro L, Almeida AJ, Gomes de Azevedo E (2014). New thermoresistant polymorph from CO<sub>2</sub> recrystallization of minocycline hydrochloride. *Pharm Res.* (2014) 31: 3136-3149.
- Caetano LA, Almeida AJ, Gonçalves LMD (2014). Approaches to tuberculosis mucosal vaccine development using nanoparticles and microparticles: a review. *J Biomed Nanotechnol.* 10: 2295-2316.
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- Santos Ferreira I, Gonçalves LMD, Kasper S, Bétrisey B, Kikhney J, Moter A, Trampuz A, Bettencourt AF, Almeida AJ (2015). Activity of daptomycin and vancomycin-loaded poly\_epsilon\_caprolactone microparticles against mature staphylococcal biofilms. *Int J Nanomed.* 10: 4351-4366.
- Marto J, Gouveia L, Jorge IM, Duarte A, Gonçalves LM, Silva SMC, Antunes FE, Pais AACC, Oliveira E, Almeida AJ, Ribeiro HM (2015). Starch-based Pickering emulsions for topical drug delivery: a QbD approach. *Colloid Surface B.* 135: 183-192.
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## Projects

### PATENTS

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### PARTICIPATION IN RESEARCH PROJECTS

- Desenvolvimento de novas formas farmacêuticas de liberação prolongada. PEDIP II (1995\_1997). Coordinator. Desenvolvimento de uma vacina contra a gurma dos equídeos. SINDEPEDIP (1997-2000).

- Coordinator.
- Sistemas transportadores para diagnóstico e terapêutica imageológicos associados à circulação linfática pulmonar. FCT-Praxis XXI 2/2.1/SAU/1305/95 (1997-2000). Participant.
  - Produção, caracterização e estudos de libertação de produtos farmacêuticos encapsulados usando fluidos supercríticos. FCT-POCTI/1999/EQU/34961 (2001-2004). Participant.
  - Therapeutic systems for the treatment of mycobacterial infections. FCT-POCTI/FCB/36416/99 (2002-2006). Participant.
  - New approach on the development of an efficient vaccine against streptococcal infection by modulating the conditions of expression, production, purification and formulation. FCT-POCI/BIO/59147/2004; PPCDT/BIO/59147/2004 (2005-2008). Coordinator.
  - Protein Microencapsulation using supercritical fluids. FCT-POCI/EQU/55911/2004; PPCDT/EQU/55911/2004 (2005\_2008). Participant.
  - Integrated methodologies for the development of bi and three-valent DNA-vaccines against *Helicobacter pylori*. FCT\_PTDC/BIO/69242/2006 (2007-2010). Participant.
  - Controlled freezing to improve the stability and delivery of therapeutic proteins. FCT-PTDC/EQU-EQU/104318/2008 (2010-2013). Participant.
  - The use of nanobiomaterials for structural and functional protection of human phenylalanine hydroxylase: towards a new approach to phenylketonuria treatment. FCT-PTDC/EBB\_BIO/101237/2008 (2010-2013). Coordinator.
  - A challenge for the treatment of parasitic diseases: rational design of Trifluralin derivatives and appropriate nanoformulations. FCT-PTDC/CVT/098290/2008 (2010-013). Participant.
  - Poliananobiofilm: Polymeric therapeutic nanoparticles containing an antimicrobial agent: new opportunities for the development of anti-biofilm agents to treat prosthetic joint infections. FCT-EXCL/CTM/NAN/0166/2012 (2012-2015). Participant.
  - Fighting TB: Development of microparticulate systems to target alveolar macrophages in tuberculosis therapy. FCT\_PTDC/DTP-FTO/0094/2012 (2012-2015). Participant.
  - Dualbiosome - Estratégia nanotecnológica para o tratamento de infecções pulmonares crónicas em doentes com fibrose quística. Financiado pelo Programa Gilead Génese (PGG/029/2013). Coordinator.
  - Human phenylalanine hydroxylase and nanobiomaterials: a novel enzyme reposition therapy approach to PKU. National PKU Alliance (USA). Co-coordinator.
  - LungShield: Medical Device for NBQr defence. Ministério da Defesa (CINAMIL 02-2018). Coordinator.
  - Dual nanostructured lipid carriers as a multifunctional platform for brain tumor therapy. FCT (PTDC/CTM\_NAN/2658/2014). Participant.
  - ProtCrop4Health: Novos co formulantes verdes para o desenvolvimento de produtos fitofarmacêuticos promotores de uma agricultura sustentável e da melhoria da saúde humana. Programa Operacional Regional de Lisboa (LISBOA-01-0247-FEDER-024016). Participant.
  - Manipulation of lysosomal cathepsins and their inhibitors cystatins in human macrophages as a host directed therapeutic strategy for tuberculosis and co-infection with HIV. FCT-PTDC/SAU-INF/28182/2017 (2018-2021). Participant.
  - Sea4CS: Desenvolvimento de microencapsulados com biopolímeros de origem marinha. Programa Operacional Regional de Lisboa (LISBOA-01-0247-FEDER-045208), (2020-2022). Participant.
  - Medifar 2020: Desenvolvimento de uma formulação inovadora para aplicação tópica de Minoxidil, previamente encapsulado em sistemas coloidais de base lipídica. Programa Operacional Regional de Lisboa (LISBOA-01-0247-FEDER-045290), 2020-2022. Participant.
  - Vax2Muc – Next generation vaccines against gastrointestinal mucosal pathogens, using *Helicobacter pylori* as model pathogen. HORIZON EUROPE Health. Investigador Principal. Grant Agreement N°101080486 (2023-2028).

## Memberships

### OTHER POSITIONS

- Member of the Steering Committee, Laboratório Nacional de Medicamentos (National Laboratory for Medicines), Portugal, since 2022.
- Head of the Faculty's Scientific Board, University of Lisbon, Faculty of Pharmacy, Portugal, since 2018.
- Senator of the University of Lisbon, Portugal, since 2018.
- Head of the *Advanced Technologies for Drug Delivery* (@DD) research group, Research Institute for Medicines (iMed.Ulisboa), Univ. Lisbon (<https://imed.ulisboa.pt/labs/antonio-almeida-lab/>), since 2011.
- Visiting Professor of the doctoral programme, Faculty of Pharmacy, Univ. Seville, Spain, since 2007.
- Visiting Professor at: Faculty of Pharmacy, Univ. Navarra, Pamplona, Spain (2007); Fac. Pharmacy, Univ. Florence, Italy (2008); Fac. Pharmacy, Univ. Santiago de Compostela, Spain (2008 and 2012).
- Quality Expert of the Committee for Human Medicines Evaluation at the Portuguese National Authority of Medicines and Health Products (INFARMED), since 1996.
- Visiting Scientist at the Freie Universität Berlin, Institut für Pharmazie, Berlin, Germany, 1995-1996.

### EDITORIAL BOARDS

- Member of the editorial board of *Journal of Biomedical Nanotechnology* (since 2007); *Journal of Drug Delivery Science and Technology* (since 2008); *Journal of Microencapsulation* (since 2010); *AAPSPharmSciTech* (since 2016); *Pharmaceutics* (since 2020).

### HONOURS AND AWARDS

- IPSEN Award – Innovation for Patient Care, IPSEN Portugal and Portuguese Association of Hospital Pharmacists, 2023.
- World's Top 2% Scientists, J. Baas, K. Boyack e J. P.A. Ioannidis, University of Stanford, 2022. <https://elsevier.digitalcommonsdata.com/datasets/btchxktzyw/5>, 2022, 2023, 2024.
- Best Paper Award 2019 - Silva MM et al. Marine Drugs. doi:10.3390/md15120370. 2020.
- Scientific Award "Prof. Aluísio Marques Leal", Portuguese Association of Hospital Pharmacists, 2019.
- Dor-Bene Farmacêutica Award – Best scientific clinical project, 2016.
- Grunenthal/ASTOR Award, Grunenthal Foundation, 2015.
- Military Commendation for Distinguished Service, Military Laboratory, Portuguese Army, 1989.

## Other Relevant Information