EUROPEAN MEDICINES AGENCY
SCIENCE MEDICINES HEALTH

Curriculum Vitae

Personal information

Joao Jose Sousa

Work experience

1. Employer: Instituto Luso_Fármaco/Smith Kline Beechman
   - Start date: 091984
   - End date: 121986
   - Position: Production technical assitant
   - Activities: Production supervision
   - Country: Portugal
2. Employer: University of Coimbra
   - Start date: 011987
   - End date: 021997
   - Position: Assistant professor
   - Activities: Teaching; investigation
   - Country: Portugal
3. Employer: University of Coimbra
   - Start date: 031997
   - End date:
   - Position: Professor
   - Activities: Teaching Leading investigation group
   - Country: Portugal
4. Employer: Infarmed
   - Start date: 011997
   - End date:
   - Position: Pharmaceutical Expert of the Medicine Board
   - Activities: Evaluation of technical documentation provided for MA, Variations and Renewals through National, Mutual Recohnitions and decentralized Procedures
   - Country: Portugal

Education and training

1. Subject: Faculty of Pharmacy, University of Coimbra
   - Start date: 101978
   - End date: 071984
   - Qualification: Pharm. D
   - Organisation: Master in Pharmaceutical Sciences
   - Country: Portugal
2. Subject: School of Pharmacy, University of London
   - Start date: 091992
   - End date: 121996
   - Qualification: PhD
   - Organisation: PhD thesis on pharmaceutical sciences
   - Country: United Kingdom
3. Subject: University of Coimbra
   - Start date:
   - End date: 012007
   - Qualification: Aggregation
   - Organisation: Development of pharmaceutical dosage forms
   - Country: Portugal

Additional information

Publications

Books 1. Simvastatin delivery: Challenges and Opportunities Carla Vitorino, João Sousa, Alberto Pais, 2015. Nova Science Publishers, Incorporated, New York. 2. Nanotheranostics and Cancer: Where Are We Now?, 2018. Special Issue of Pharmaceutics Carla Vitorino, João Sousa e Alberto Pais. Book chapters 1. Silva Danielle N.A., João J.S Sousa, Campos M. G, _ Biological and Functional Properties of Bee Products for Medicinal Purposes _ Traditional and Folk Herbal Medicine: Recent Researches Vol. 2 , cap 18| 541_ 562. 2013 2. Carla Vitorino, António Almeida, João José Sousa, Alberto Pais, 2015. Chapter 3 _ Crossing the Skin Barrier: A Development Strategy. In: Carla Vitorino, João José Sousa, Alberto Pais (Eds), Simvastatin delivery: Challenges and Opportunities. Nova Science Publishers, Incorporated, New York. pp. 61_91. 3. Maria Mendes, João Sousa, Alberto Pais, Carla Vitorino*, 2018. Chapter 4 _ Clinical applications of nanostructured drug delivery systems: From basic research to translational medicine. In: Maria Letizia Focarete and Anna Tampieri (Eds), Core_Shell nanostructures for drug delivery and theranostics. Woodhead Publishing, pp. 43_116, https://doi.org/10.1016/B978_0_08_102198_9.00004_1 4. Jessica Silva, Ana Miranda, João Sousa, Alberto Pais, Carla Vitorino*, Process analytic2018. Impact of immunotherapy in the treatment of glioblastoma. In: Ming_Kung Yeh (Ed), Biopharmaceuticals. Intech http://dx.doi.org/10.5772/intechopen.78603, pp. 65_84. 5. João Basso, Maria Mendes, Jessica Silva, João Sousa, Alberto Pais, Carla Vitorino*, 2019. Biomimeting nanoparticles for brain tumor treatment: what has been done so far?. In: Hala Gali_Muhtasib, and Racha Chouaib (Eds), Nanoparticles for Cancer Treatment. Pan Stanford Publishing and CRC Press (Taylor & Francis), Singapore (DOI: 10.1201/9780429341250_4). 6. Jessica Silva, João Torres, Maria Mendes, João Sousa, Alberto Pais, Carla Vitorino*, 2019. Tailoring Drug and Gene Co_delivery Nanosystems for Glioblastoma Treatment. In: Dr. Manju Rawat Singh (Eds), Drug Delivery of bioactives. Elsevier, Netherlands (DOI: 10.1016/B978_0_12_819666_3.00005_5). 7. Maria Mendes, Antonella Barone, João Sousa, Alberto Pais, Carla Vitorino*, 2019. Chapter 16. Gold nanorods as theranostic nanoparticles for cancer therapy. In : M. Rai and B. Jamil, Editors., Nanotheranostics: Applications and Limitations, Springer International Publishing: Cham. p. 363_404,

https://doi.org/10.1007/978_3_030_29768_8_16. 8. João Basso, Maria Mendes, Ana Fortuna, Rui Vitorino, João Sousa, Alberto Pais, Carla Vitorino, 2020. Chapter 15: Nanotechnological approaches in cancer: the role of Celecoxib and Disulfiram. In: Kenneth To (eds), Drug Repurposing in Cancer Therapy: Approaches and Applications, Elsevier 9. João Basso, Maria Mendes, Maria Ferreira, João Sousa, Alberto Pais and Carla Vitorino. Recent in vitro models for the blood_brain_barrier. In: Dr. Carla Vitorino, Dr. Andreia Jorge, Dr. Alberto Pais (Eds), Nanoparticles for Brain Drug Delivery. Pan Stanford Publishing and CRC Press (Taylor & Francis), Singapore 10. Nanoparticles for Brain Drug Delivery Recent in vitro models for the blood_brain_barrier. In: Dr. Carla Vitorino, Dr. Andreia Jorge, Dr. Alberto Pais (Eds),. João Basso, Maria Mendes, Maria Ferreira, João Sousa, Alberto Pais and Carla Vitorino Pan Stanford Publishing and CRC Press (Taylor & Francis), Singapore Papers in peer reviewm journals 1. Produção e controlo de pellets de propranolol, HCl I. Obtenção de pellets activos por extrusão/esferonização J.J. Sousa, A. Sousa e J.M. Newton Revista Portuguesa de Farmácia, XLV, 1995, 60_69 2. Produção e controlo de pellets de propranolol, HCl II. Revestimento por filme J.J. Sousa, A. Sousa e J.M. Newton Revista Portuguesa de Farmácia, XLVI, 1996, 29_37 3. Influence of process conditions on drug release from pellets J.J. Sousa, A. Sousa, F. Podczeck, J.M. Newton Int. J. Pharm., 144, 1996, 159_169 4. Development and validation of an HPLC method for simultaneous determination of cis and trans_permethrin and piperonyl butoxide in pharmaceutical dosage forms R. Manadas, F. Veiga, J.J.Sousa, M.E. Pina J. Liq. Chrom. & Rel. Technol., 22 (12), 1999, 1867_1876 5. Factors influencing the physical characteristics of pellets obtained by extrusion_spheronization J.J. Sousa, A. Sousa, F. Podczeck, J.M. Newton Int. J. Pharm., 232, 2002, 91_106 6. The influence of core materials and film coating on the drug release from coated pellets J.J. Sousa, A. Sousa, M.J. Moura, F. Podczeck, J.M. Newton Int. J. Pharm., 233, 2002, 111_122 7. Physical properties of chitosan pellets produced by extrusion_spheronization: influence of formulations variables H. Santos, F. Veiga, M. Pina, F. Podczeck, J. Sousa Int. J. Pharm., 246 (1_2), 2002, 153_169 8. Comparison of dissolution profiles of ibuprofen pellets F.O. Costa, J.J.S Sousa, A.A.C.C Pais, S.J. Formosinho J. Cont. Rel., 89, 2003, 199_21 9. Analysis of formulation effects in the dissolution of ibuprofen pellets F.O. Costa, A.A.C.C Pais, J.J.S Sousa Int. J. Pharm. 270, 2004, 9_19 10. Compaction, compression and drug release characteristics of xanthan gum pellets of different compositions Santos, H., Veiga, F., Pina, M., Sousa, J.J. Eur. J. Pharm. Sci. 21, 2004, 271_281 11. Influence of cellulose ether polymers on ketoprofen release from hydrophilic matrix tablets Vueba, M., Batista Carvalho, L.A., Veiga, F., Sousa, J.J., M.E. Pina. Eur. J. Pharm. Biopharm., 58, 2004, 51_59 12. Obtenção de pellets por extrusão/esferonização farmacêutica. Parte I. Avaliação das variáveis tecnológicas e de formulação Santos, H., Veiga, F., Pina, M., Sousa, J.J. Rev. Bras. Cien. Farm., 40(4), 2004, 455_470 13. Compaction, compression and drug release properties of diclofenac sodium and ibuprofen pellets comprising xanthan gum as sustained release agent Santos, H., Veiga, F., Pina, M.E., Sousa, J. J. Int. J. Pharm., 295, 2005, 15_27 14. Role of cellulose ether polymers on ibuprofen release from matrix tablets Vueba, M., Batista Carvalho, L.A., Veiga, F., Sousa, J.J., Pina, M.E. Drug. 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Ciências Farmacêuticas/Brazilian Journal of Pharmaceutical Sciences, 42 (3), 2006, 309_318 24. In vivo friction study of human skin: influence of moisturizers on different anatomical sites Ramalho, A, CL Silva, AACC Pais and JJS Sousa Wear 263, 2007, 1044_1049 25. Stratum corneum hydration: phase transformations and mobility in stratum corneum, extracted lipids and isolated corneocytes Silva, CL, D Topgaard, V Kocherbitov, AACC Pais, JJS Sousa and E Sparr BBA – Biomembranes, 1768, 2007, 2647_2659. 26. Aggregation and gelation in hydroxypropylmethyl cellulose aqueous solutions Silva, S., Pinto, F., Antunes, F., Miguel, M., Sousa, J., Pais, A. J. Coll. Interface Sci., 327, 2008, 333_340 27. Drug release and skin permeation from lipid liquid crystalline phases. Costa_Balogh, F.O., Sparr, E., Sousa, J.J., Pais, A.A.C.C. Prog. Colloid. Polym. Sci 135, 2008, 119_129 28. 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stability assessment of liquid paediatric formulations containing sildenafil citrate Roque, F., Rama, A.C., Sousa, J.J. and Pina, M.E. Brazilian Journal of Pharmaceutical Sciences, 49 (2), 381_388, 2013 50. Design of a dual nanostructured lipid carrier formulation based on physicochemical, rheological, and mechanical properties Vitorino, C., Alves, L., Antunes, F.E., Sousa, J.J., Pais, A.A.C.C. J. Nanoparticles Res., 15:1993 (2013) 51. Co_encapsulating nanostructured lipid carriers for transdermal application: From experimental design to the molecular detail Vitorino, C. Almeida, J., Gonçalves, L.M., Almeida, A.J., Sousa, J.J. and Pais, A.A.C.C. Journal of Controlled Release, 167 (3), 301_314, 2013 52. A rapid reversed_phase HPLC method for the simultaneous analysis of olanzapine and simvastatin in dual nanostructured lipid carriers Vitorino, C. and Sousa, J.J. and Pais, A.A.C.C. Analytical Methods, 19, (5) 5058_5064, 2013 53. 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Sci., 93 (2016), 184_191 65. _ Sex differences in excipient effects: Enhancement in ranitidine bioavailability in the presence of polyethylene glycol in male, but not female, rats. Afonso_Pereira, F; Murdan, S; Sousa, J; Veiga, F; Basit, AW. Int. J. Pharm., 506 (1_2), 2016, 237_241 66. Expanding Transdermal Delivery with Lipid Nanoparticles: A New Drug_in_NLC_in_Adhesive Design Maria Mendes, Sandra Nunes, João J. Sousa, Alberto A. C. C. Pais, Carla Vitorino* Molecular Pharmaceutics, 14 (2017), 2099_2115 67. Breaching barriers in glioblastoma. Part I: Molecular pathways and novel treatment approaches Ana Miranda; María Blanco_Prieto; João J. Sousa; Alberto A. C. C. Pais; Carla Vitorino* International Journal of Pharmaceutics, 531:1 (2017) 372_88 doi: http://dx.doi.org/10.1016/j.ijpharm.2017.07.056 68. Breaching barriers in glioblastoma. Part II: Targeted drug delivery and lipid nanoparticles Ana Miranda; María Blanco_Prieto; João J. Sousa; Alberto A. C. C. Pais; Carla Vitorino* International Journal of Pharmaceutics, 531:1 (2017) 389_410 doi: http://dx.doi.org/10.1016/j.ijpharm.2017.07.049 69. Computational modelling in glioblastoma: from the prediction of BBB permeability to the simulation of tumour behaviour Ana Miranda, Tânia Cova, João J. Sousa, Carla Vitorino*, Alberto A. C. C. Pais Future Medicinal Chemistry, 10:1 (2018) 121_131 doi: 10.4155/fmc_2017_0128 70. Modeling of ultra_small lipid nanoparticle surface charge for targeting glioblastoma Maria Mendes, Ana Miranda, Tânia Cova, Lídia Goncalves, António Almeida, João J. Sousa, Maria Vale, Eduardo Marques, Alberto A. C. C. Pais, Carla Vitorino* European Journal of Pharmaceutical Sciences, 117 (2018) 255_269 doi: https://doi.org/10.1016/j.ejps.2018.02.024 71. Repurposing drugs for glioblastoma: From bench to bedside João Basso, Ana Miranda, João J. Sousa, Alberto A. C. C. Pais, Carla Vitorino* Cancer Letters, 428 (2018) 173_183 doi: https://doi.org/10.1016/j.canlet.2018.04.039 72. Unstructured formulation data analysis for the optimization of lipid nanoparticle drug delivery vehicles Jéssica Silva, Maria Mendes, Tânia Cova, João J. Sousa, Alberto A. C. C. Pais, Carla Vitorino* AAPS PharmSciTech. 19:5 (2018) 2383_94 doi: https://doi.org/10.1208/s12249_018_1078_0 73. Bioequivalence of topical generic products. Part 1: Where are we now? Margarida Miranda, João J. Sousa, Francisco Veiga, Catarina Cardoso, Carla Vitorino* European Journal of Pharmaceutical Sciences, 123 (2018) 260_267 doi: https://doi.org/10.1016/j.ejps.2018.07.050 74. Bioequivalence of topical generic products. Part 2. Paving the way to a tailored regulatory system Margarida Miranda, João J. Sousa, Francisco Veiga, Catarina Cardoso, Carla Vitorino* European Journal of Pharmaceutical Sciences, 122 (2018) 264_272 doi: https://doi.org/10.1016/j.ejps.2018.07.011 75. 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Sousa, Francisco Veiga?, Catarina Cardoso?, Carla Vitorino*? International Journal of Pharmaceutics 554 (2019) 21_35 doi: 10.1016/j.ijpharm.2018.10.070 80. Rethinking polymer_lipid hybrid nanoparticles for brain delivery Raquel Ana, Maria Mendes, João J. Sousa, Alberto Pais, Amilcar Falcão, Ana Fortuna, Carla Vitorino* International Journal of Pharmaceutics 554 (2019) 352_365 81. Safe_by_design development of a topical patch for drug delivery Mafalda Vaz, Carla Vitorino, João J. Sousa Brazilian Journal of Pharmaceutical Sciences (2019) 82. Development and full validation of an HPLC methodology to quantify atorvastatin and curcumin after their intranasal co_delivery to mice Jéssica Silva, João Basso, João Sousa, Ana Fortuna, Carla Vitorino* Biomedical Chromatography (2019) e4621. https://doi.org/10.1002/bmc.4621 Impact Factor: 1.748 83. The Role of Magnetic Nanoparticles in Cancer Nanotheranostics Maria Ferreira, João Sousa, Alberto Pais, Carla Vitorino* Materials 13 (2020) 266 doi:10.3390/ma13020266 86. Paediatric Medicines _ Regulatory Drivers, Restraints, Opportunities and Challenges Vieira, I, Sousa, JJ, Vitorino, C. Journal Pharm. Sci. 110, (4) 2020 1545_1556 https://doi.org/10.1016/j.xphs.2020.12.036 87. Regulatory issues for orphan medicines: A review Bouwman, ML; Sousa, JJS and Pina, MET Health Policy and Tech. 9, (1), March 2020, 115_121 https://doi.org/10.1016/j.hlpt.2019.11.008 88. Safe_by_design development of a topical patch for drug delivery Vaz, MB; Vitorino, C and Sousa, JJS Braz. J. Pharm. Sci. 56, 2020 https://doi.org/10.1590/s2175_97902020000118629 89. The Role of Magnetic Nanoparticles in Cancer Nanotheranostics Ferreira, M; Sousa, J; (...); Vitorino, C Materials 2020, 13(2), 266; https://doi.org/10.3390/ma13020266 90. A quality by design (QbD) approach in pharmaceutical development of lipid_based nanosystems: A systematic review Zagalo, D., Silva, B., Silva, C., Simões, S. Sousa, JJ J Drug Del Sci & Tech., 70 (2022), https://doi.org/10.1016/j.jddst.2022.103207

Projects

As Principal investigator 1. Coating of solid oral dosage forms Centro de Estudos Farmacêuticos da Faculdade de Farmácia de Coimbra Financiamento: Projecto financiado no âmbito do Programa Plurianual da FCT, entre 1987 e 1992 2. Development of the production technology of pellets as drug carriers Centro de Estudos Farmacêuticos da Faculdade de Farmácia de Coimbra Financiamento: Projecto financiado no âmbito do Programa Plurianual da FCT, entre 1993 e 2002 Função: Investigador responsável 3. Modulation of drug dissolution profile of generic and reference products as a tool for the establishment of in vivo/in vitro relationship Fundação para a Ciência e Tecnologia: Ref. PCTI/1999/FCB/33458. FCT Financiamento: Projecto não financiado 4. Transdermal devices Centro de Estudos Farmacêuticos da Faculdade de Farmácia de Coimbra Financiamento: Projecto financiado no âmbito do Programa Plurianual da FCT, para o triénio 2003_2005 5. Skin structure, permeation and transdermal systemsE FCT _ Ref. POCTI/SAU_FCF/58474/2004, Maio de 2004) Financiamento: Projecto não financiado Função: Investigador principal 6. New substances affecting the skin barrier: chemical modelling, pharmaceutical development, and clinical aspects Projecto submetido ao concurso da Universidade de Coimbra (Instituto de Investigação Interdisciplinar em

Março de 2005; Ref. III/BIO/27/2005 Financiamento: Projecto não financiado Função: Investigador principal 7. Strategic Project _ UI 177 _ 2011_2012) Project Reference: PEst_OE/SAU/UI0177/2011 Financiamento: Projecto financiado 4.4.2.2 As team member 1. Design and In Vitro/In Vivo Evaluation of Micromatricial Systems based on Biocompatible polymers Projecto Ref. PRAXIS/P/SAU/14117/1998) 2. Application of new Excipients on Delivery Kinetics Modulation for Controlled Release of Drugs. Programa PRAXIS XXI/98 – Ciências da Saúde da Fundação para a Ciência e a Tecnologia 3. Aplicação das ciclodextrinas e dos polímeros celulósicos na modelação da cinética da libertação controlada de fármacos Convénio CNPq (Brasil)/ICCTI (Portugal); Ref. 910122/98_9 4. Aumento da biodisponibilidade oral de fármacos peptídicos recorrendo à microencapsulação". Convénio Luso_Brasileiro ICCTI/CAPES (Maio de 2002) 5. Improvement of insulin oral availability through encapsulation in polyelectrolyte complex nanoparticles POCTI/SAU_FCF/59940/2004 _ Ciências da Saúde _ Farmacologia e Ciências Farmacêuticas Financiamento: Projecto financiado Função: Membro da equipa de investigação 6. Increased Bioavailability of Antidiabetic Drugs by Nanoencapsulation of Cyclodextrin Complexes _ Metabolic Characterization by 2H and 13C NMR. Isotopomer Analysis of Plasma Glucose. Projecto submetido ao concurso da Universidade de Coimbra (Instituto de Investigação Interdisciplinar em Março de 2005; III/BIO/68/2005). 7. Contact interactions between the skin and textiles Project Reference: PTDC/EME_PME/101689/2008 8. Anti_inflammatory mechanism and properties of medicinal plants: a multidisciplinary research for their validation and utilization as a source of phytopharmaceuticals Project Reference: PTDC/SAU_FCF/105429/2008 9. Interactions in polyelectrolyte complexes: simulation and experiment Project Reference: PTDC/QUI_QUI/101442/2008 Financiamento: Projecto financiado Função: Membro da equipa de investigação 10. "Extracção e isolamento de compostos de elevado potencial biológico de subprodutos da indústria corticeira" financiado pelo QREN – Projectos de I□DT Empresas em Co_Promoção, no âmbito do Programa Operacional de Factores de Competitividade (COMPETE), e gerido pela Agência de Inovação (AdI) Project Reference: QREN; Candidatura N.º 5455; SIGLA: BioActiveCork 11. Estudo e valorização do leite de cabra em aplicações cosméticas e alimentares Project Reference: ProDeR – Programa de Desenvolvimento Regional – Medida 4.1 "Cooperação para a Inovação" – PA 23888 – Parceria 371

Memberships

Ordem dos Farmacêuticos (Portuguese Pharmacists Association): (1984 _ ...) Pharmaceutical Sciences Group of the Royal Pharmaceutical Society of Great Britain (1996 _ ….) Controlled Release Society _ Spanish_Portuguese Local Chapter (nº 114) (1995 _ ….) American Association of Pharmaceutical Sciences (nº 020867) (1996 _ …) Sociedade Portuguesa de Ciências Farmacêuticas (nº 143) (1997 _ ….) Sociedade Portuguesa de Reologia (1999 – 2005) Associação para a Promoção e Desenvolvimento de Estudos Farmacêuticos e Ambientais (APRODEFA). (2000_2003) FABLAB Coimbra (Laboratório digital de prototipagem da NOVOTECNA – Associação para o Desenvolvimento Tecnológico) _ Outubro, 2011 _ ….

Other Relevant Information

PI of the Center for Pharmaceutical Sciences, University of Coimbra (2006_ present); Superviser of Post Doc thesis, PhD thesis and 5 Masdter thesis Vice_Dean of the Faculty of Pharmay Member of University Council