

Curriculum Vitae

Personal information **Dolores Serrano**

Work experience

Employer: Universidad Complutense de Madrid

Start date: since 2015 till now (Lecturer-Senior Lecturer- Professor)

Activities: Research on innovative medicines, formulation development and manufacturing.

Country: Spain

Employer: Trinity College DUBLIN

- Start date: 092013
- End date: 092015
- Position: Postdoctoral Research Fellow
- Activities: Development of innovative medicines
- Country: Ireland

Education and training

Subject: Universidad Complutense of Madrid

- Start date: 072009
- End date: 072013
- Qualification: PhD
- Organisation: Oral, topical and parenteral formulations of amphotericin B for the treatment of fungal and parasitic infections
- Country: Spain

- Subject: Universidad Complutense of Madrid

- Start date: 072008
- End date: 072019
- Qualification: Master in Pharmacy and Pharmaceutical Technology
- Country: Spain

Additional information

Publications

1. B Esteban-Cartelle, DR Serrano, C Pérez Menéndez-Conde, N Vicente-Oliveros, A Álvarez-Díaz, J Fortun-Abete, P Martín-Davila (2024). Stability of meropenem in portable elastomeric infusion devices: which protocol should be implemented in clinical practice? Microbiology spectrum 12 (2), e02063-23.
2. AA Biswas, MR Dhondale, AK Agrawal, DR Serrano, B Mishra, D Kumar (2024). Advancements in microneedle fabrication techniques: artificial intelligence assisted 3D-printing technology. Drug Delivery and Translational Research, 1-22.
3. O González-González, MP Ballesteros, JJ Torrado, DR Serrano (2023). Application of Accelerated Predictive Stability Studies in Extemporaneously Compounded Formulations of Chlorhexidine to Assess the Shelf Life. Molecules 28 (23), 7925.
4. SS Celi, R Fernández-García, AI Afonso-Urich, MP Ballesteros, AM Healy, DR Serrano (2023). Co-Delivery of a High Dose of Amphotericin B and Itraconazole by Means of a Dry Powder Inhaler Formulation for the Treatment of Severe Fungal Pulmonary Infections. Pharmaceutics 15 (11), 2601.
5. SKS de Lima, ÍN Cavallone, DR Serrano, BJ Anaya, A Lalatsa, M Dalastra, J Henrique, D da Silva, G Pustiglione, B Soarea, R de

- Britto, LF Domingues (2023). Therapeutic activity of a topical formulation containing 8-hydroxyquinoline for cutaneous leishmaniasis. *Pharmaceutics* 15 (11), 2602.
6. A Kara, D Kumar, AM Healy, A Lalatsa, DR Serrano (2023). Continuous manufacturing of cocrystals using 3d-printed microfluidic chips coupled with spray coating. *Pharmaceutics* 16 (8), 1064.
 7. I Yuste, FC Luciano, BJ Anaya, P Sanz-Ruiz, A Ribed-Sánchez, E Gonzalez, DR Serrano (2023). Engineering 3D-Printed Advanced Healthcare Materials for Periprosthetic Joint Infections. *Antibiotics* 12 (8), 1229.
 8. BJ Anaya, JR Cerda, RM D'Atri, I Yuste, FC Luciano, A Kara, HK Ruiz, MP Ballesteros, DR Serrano (2023). Engineering of 3D printed personalized polypills for the treatment of the metabolic syndrome. *International Journal of Pharmaceutics* 642, 123194.
 9. O González-González, E Leal, M Martín-Martínez, L Bautista, MP Ballesteros, JJ Torrado, DR Serrano (2023). Guiding Clinical Prescription of Topical Extemporaneous Formulations of Sodium Cromoglycate Based on Pharmaceutical Performance. *Pharmaceutics* 15 (6), 1609.
 10. T Pérez, MC Pardo, Y Cabellos, M Peressini, I Ureña-Vacas, DR Serrano, E Gonzalez-Burgos (2023). Mental health and drug use in college students: Should we take action? *Journal of Affective Disorders*
 11. De Pablo E, O'Connell P, Fernández-García R, Marchand S, Chauzy S, Tewev F, Dea-Ayuela M.A., Kumar D, Bolás F, Ballesteros MP, Torrado JJ, Healy AM, **Serrano DR** (2023). Targeting lung macrophages for fungal and parasitic pulmonary infections with innovative amphotericin B dry powder inhalers. *Int. J. Pharm.* 635: 122788. (IF:6.51, Q1).
 12. R Fernández-García, D Walsh, P O'Connell, K Slowing, R Raposo, MP. Ballesteros, A. Jiménez-Cebrián, MJ Chamorro-Sancho, F. Bolás-Fernández, AM Healy, D.R. Serrano (2023). Can amphotericin B and itraconazole be co-delivered orally? Tailoring oral fixed-dose combination coated granules for systemic mycoses. *Eur J. Pharm and BioPharm.*,183:74-91.
 13. Ramos E, Gil-Martín E, De Los Ríos C, Egea J, López-Muñoz F, Pita R, Juberías A, Torrado JJ, **Serrano DR**, Reiter RJ, Romero A (2023). [Melatonin as Modulator for Sulfur and Nitrogen Mustard-Induced Inflammation, Oxidative Stress and DNA Damage: Molecular Therapeutics](#).*Antioxidants*, 12 (2): 103390. (IF: 7.67, D1).
 14. **Serrano, D.R.**; Kara, A.; Yuste, I.; Luciano, F.C.; Ongoren, B.; Anaya, B.J.; Molina, G.; Diez, L.; Ramirez, B.I.; Ramirez, I.O.; Sánchez-Guiraes, S.A.; Fernández-García, R.; Bautista, L.; Ruiz, H.K.; Lalatsa, A (2023). 3D Printing Technologies in Personalized Medicine, Nanomedicines, and Biopharmaceuticals. *Pharmaceutics* 2023, 15, 313. (IF: 6.525, Q1).
 15. Ruiz HK, **Serrano DR**, Calvo L, Cabañas A (2022). Current Treatments for COVID-19: Application of Supercritical Fluids in the Manufacturing of Oral and Pulmonary Formulations. *Pharmaceutics*. 4;14(11):2380. (IF: 6.525, Q1).
 16. Fernandez-García R, Walsh D, O'Connell P, Slowing K, Raposo R, Ballesteros MP, Jiménez-Cebrián A, Chamorro-Sancho JC, Bolás-Fernández F, Healy AM, **Serrano DR** (2023). Can amphotericin B and itraconazole be co-delivered orally? Tailoring

- oral fixed-dose combination coated granules for systemic mycoses. *Eur J Pharm and Biopharm* 183:74-91. (IF: 5.589, Q1).
17. Rolon M, Hanna E, Vega C, Coronel C, Dea-Ayuela MA, **Serrano DR**, Lalatsa A (2022). Solid Nanomedicines of Nifurtimox and Benznidazole for the Oral Treatment of Chagas Disease. *Pharmaceutics*. 29;14(9):1822 (IF: 6.525, Q1).
 18. Osouli-Bostanabad K, Puliga S, **Serrano DR**, Bucchi A, Halbert G, Lalatsa A (2022). Microfluidics manufacture of lipid based- nanomedicines. *Pharmaceutics* 14, 1940 (IF: 6.525, Q1).
 19. Esteban-Cartelle B, Vicente-oliveros N, Menendez-Conde C, **Serrano DR**, Martin-Davila P, Fortun-Abete J, Leon-Gil L, Alvarez-Diaz A (2022). Antibiotic stability in portable elastomeric infusion devices: a systematic review. *Am J health-Syst Pharm*, 79:1355-1368 (IF: 2.980, Q3).
 20. González-González O, Ramirez IO, Ramirez BI, O'Connell P, Ballesteros MP, Torrado JJ, **Serrano DR** (2022). Drug stability: ICH versus accelerated predictive stability studies. *Pharmaceutics*, 14, 2615 (I: 6.525, Q1).
 21. Torrado-Salmeron C, Laguna A, guillen A, Saro MG, Matji A, Torrado JJ, **Serrano DR** (2022). Tailoring rational manufacturing of extemporaneous compounding oral dosage formulations with a low dose of minoxidil. *Pharmaceutics*, 14, 2324 (I: 6.525, Q1).
 22. Nambiar AG, Singh M, Mali AR, **Serrano DR**, Kumar R, Healy AM, Agrawal AK, Kumar D (2022). Continuous Manufacturing and molecular modeling of pharmaceutical amorphous solid dispersions. *AAPS PharmSciTech*, 23:249. (IF: 4.026, Q2).
 23. Malebari AM, Kara A, Khayyat AN, Mohammad KA, **Serrano DR** (2022). Development of advanced 3D printed solid dosage pediatric formulations for HIV treatment. *Pharmaceutics*, 15, 435 (I: 6.525, Q1).
 24. Rodríguez-Fernandez MJ, **Serrano Lopez DR**, Torrado JJ (2022). Effect of primary packaging material on the stability characteristics of diazepam and midazolam parenteral formulations. *Pharmaceutics*, 14, 2061 (I: 6.525, Q1).
 25. Rodríguez-Torrado M, Kara A, Torrado S, romero A, Juberias A, Torrado JJ, **Serrano DR** (2022). In vitro and in vivo characteristics of olive oil as excipient for topical administration. *Pharmaceutics*, 14, 2615 (I: 6.525, Q1).
 26. Fernández-García R, Muñoz-García JC, Wallace M, Fabian L, González-Burgos E, Gómez-Serranillos MP, Raposo R, Bolás-Fernández F, Ballesteros MP, Healy AM, Khimyak YZ, **Serrano DR** (2022). Self-assembling, supramolecular chemistry and pharmacology of amphotericin B: Poly-aggregates, oligomers and monomers. *J Control Release*. 341:716-732 (IF: 9.776, D1).
 27. Yuste I, Luciano FC, González-Burgos E, Lalatsa A, **Serrano DR** (2021). Mimicking bone microenvironment: 2D and 3D in vitro models of human osteoblasts. *Pharmacol Res.*169:105626. (IF: 7.658, Q1, D1).
 28. Sánchez-Guirales SA, Jurado N, Kara A, Lalatsa A, **Serrano DR** (2021). Understanding Direct Powder Extrusion for Fabrication of 3D Printed Personalised Medicines: A Case Study for Nifedipine Minitablets. *Pharmaceutics*. 2021 Sep 29;13(10):1583. (IF: 6.321, Q1).
 29. Kara A, Vassiliadou A, Ongoren B, Keeble W, Hing R, Lalatsa

- A, **Serrano DR** (2021). Engineering 3D Printed Microfluidic Chips for the Fabrication of Nanomedicines. *Pharmaceutics*. 13(12):2134 (IF: 6.321, Q1).
30. Ayyoubi S, Cerda JR, Fernandez-Garcia R, Knief P, Lalatsa A, Healy AM, Lalatsa A, **Serrano DR** (2021). 3D printed spherical mini-tablets: Geometry versus composition effects in controlling dissolution from personalised solid dosage forms. *Int J Pharm*, 597:120336 (1-15) (IF:5.875, Q1).
 31. Bezerra A, de Jesus A, Laurenti M, Lalatsa A, **Serrano DR**, Passero LF (2021). Nanoemulsified butenafine for enhanced performance against experimental cutaneous leishmaniasis. *Journal of Immunology research* [Epub ahead of print]. (IF:3.327, Q3).
 32. Romero A, Ramos E, López-Muñoz F, De Los Ríos C, Egea J, Gil-Martín E, Pita R, Torrado JJ, **Serrano DR**, Juberias A (2021). Toxicology of Blister Agents: Is Melatonin a Potential Therapeutic Option? *Diseases*. 10;9(2):27.
 33. Fernández-García R, Prada M, Bolas-Fernandez F, Ballesteros MP, **Serrano DR** (2020). Oral Fixed-Dose Combination Pharmaceutical Products: Industrial Manufacturing Versus Personalized 3D Printing. *Expert review. Pharm Res*, 37 (132). (IF:3.896, T1, Q2).
 34. Lalatsa A, Statts L, Adriana de Jesus J, Adewusi O, Auxiliadora Dea-Ayuela M, Bolas-Fernandez F, Dalastra Laurenti M, Felipe Domingues Passero L, **Serrano DR** (2020). Topical buparvaquone nano-enabled hydrogels for cutaneous leishmaniasis. *Int J Pharm*. 588:119734. (IF: 4.845, Q1).
 35. Fernández-García R, Statts L, de Jesus JA, Dea-Ayuela MA, Bautista L, Simão R, Bolás-Fernández F, Ballesteros MP, Laurenti MD, Passero LFD, Lalatsa A, **Serrano DR** (2020). Ultradeformable Lipid Vesicles Localize Amphotericin B in the Dermis for the Treatment of Infectious Skin Diseases. *ACS Infect Dis*. 6(10):2647-2660 (IF: 4.614, Q1).
 36. Dea-Ayuela MA, Segarra S, **Serrano DR**, Bolás-Fernández F (2020). Nucleotides and AHCC Enhance Th1 Responses In Vitro in Leishmania-Stimulated/Infected Murine Cells *Molecules* 25 (17), 3918 (IF: 3.267, Q2).
 37. Cerda JR, Arifi T, Ayyoubi S, Knief P, Ballesteros MP, Keeble W, Barbu E, Healy AM, Lalatsa A, **Serrano DR** (2020). Personalised 3D Printed Medicines: Optimising Material Properties for Successful Passive Diffusion Loading of Filaments for Fused Deposition Modelling of Solid Dosage Forms. *Pharmaceutics*. 11;12(4). pii: E345 (IF: 4.773, D1).
 38. Bilbao-Ramos P, **Serrano DR**, Ruiz Saldaña HK, Torrado JJ, Bolás-Fernández F, Dea-Ayuela MA (2020). Evaluating the Potential of Ursolic Acid as Bioproduct for Cutaneous and Visceral Leishmaniasis. *Molecules*. 19;25(6). pii: E1394. (IF: 3.060, Q2).
 39. Matji A, Vargas E, Carvajal L, Terleira AI, Portolés A, Garcia-Arieta A, Torrado JJ, **Serrano DR** (2020). Effect of enantiomerism on the bioequivalence of a new ibuprofen 600-mg tablet formulation obtained by roller compaction. *Chirality*. 32(2):185-190 (IF: 1.927, Q3).

40. Fernández-García R, Lalatsa A, Statts L, Bolás-Fernández F, Ballesteros MP, **Serrano DR** (2020). Transfersomes as nanocarriers for drugs across the skin: Quality by design from lab to industrial scale. *Int J Pharm.* 573:118817 (IF: 4.213, Q1).
41. Pérez-Cantero A, **Serrano DR**, Navarro-Rodríguez P, Schätzlein AG, Uchegbu IF, Torrado JJ, Capilla J (2019). Increased Efficacy of Oral Fixed-Dose Combination of Amphotericin B and AHCC® Natural Adjuvant against Aspergillosis. *Pharmaceutics* 11(9) (IF: 4.773, D1).
42. **Serrano DR**, Fernandez-Garcia R, Mele M, Healy AM, Lalatsa A (2019). Designing Fast-Dissolving Orodispersible Films of Amphotericin B for Oropharyngeal Candidiasis. *Pharmaceutics* 11(8). pii: E369 (IF: 4.773, D1).
43. Bezerra-Souza A, Fernandez-Garcia R, Rodrigues GF, Bolas-Fernandez F, Dalastra Laurenti M, Passero LF, Lalatsa A, **Serrano DR** (2019). Repurposing Butenafine as An Oral Nanomedicine for Visceral Leishmaniasis. *Pharmaceutics* 11(7). pii: E353 (IF: 4.773, D1).
44. Matji A, Donato N, Gagol A, Morales E, Carvajal L, **Serrano DR**, Worku ZA, Healy AM, Torrado JJ (2019). Predicting the critical quality attributes of ibuprofen tablets via modelling of process parameters for roller compaction and tableting. *Int J Pharm.* 565:209-218 (IF: 4.213, Q1).
45. **Serrano DR**, Gordo MJ, Matji A, González S, Lalatsa A, Torrado JJ (2019). Tuning the Transdermal Delivery of Hydroquinone upon Formulation with Novel Permeation Enhancers. *Pharmaceutics.* 11(4). pii: E167. (IF: 4.773, D1).
46. Lamy B, **Serrano DR**, O'connell P, Couet W, Marchand S, Healy AM, Tewes F (2019). Use of leucine to improve aerodynamic properties of ciprofloxacin-loaded maltose microparticles for inhalation. *Eur J Pharm Res.* 1 (1):2-11.
47. Dea-Ayuela MA, Galiana-Roselló C, Lalatsa A, **Serrano DR** (2018). Applying Loop-mediated Isothermal Amplification (LAMP) in the Diagnosis of Malaria, Leishmaniasis and Trypanosomiasis as Point-of-Care Tests (POCTs). *Curr Top Med Chem.* 18(16):1358-1374 (IF: 3.442, Q2).
48. Alonso TR, Gagol A, Scherer M, Matji A, Torrado-Santiago S, **Serrano DR**, Garcia-Arieta A, Torrado JJ (2018). A multivariate investigation into the relationship between pharmaceutical characteristics and patient preferences of bioequivalent ibuprofen tablets. *Patient Prefer Adherence.* 12:1927-1935 (IF:2.097, Q2).
49. Walsh D, **Serrano DR**, Worku ZA, Madi AM, O'Connell P, Twamley B, Healy AM (2018). Engineering of pharmaceutical cocrystals in an excipient matrix: Spray drying versus hot melt extrusion. *Int J Pharm.* 2018 Nov 15;551(1-2):241-256 (IF: 3.649, Q1).
50. **Serrano DR**, Terres MC, Lalatsa A (2018). Applications of 3D printing in cancer. Review. *Journal of 3D printing in medicine,* 2(3):1-16.
51. Nam L., Coll C., Erthal LCS, de la Torre C, **Serrano D**, Martinez-Mane R., Santos-Martinez MJ, Ruiz-Hernandez E (2018). Drug Delivery Nanosystems for the Localized Treatment

- of Glioblastoma Multiforme, *Materials*, 11 (5). pii: E779 (IF:2.654, Q2).
52. Smith L, **Serrano DR**, Mauger M, Bolas-Fernandez F, Dea-Ayuela MA, Lalatsa A (2018). Orally Bioavailable and Effective Buparvaquone Lipid-Based Nanomedicines for Visceral Leishmaniasis, *Mol Pharm* 15(7):2570-2583 (IF:4.556, Q1).
 53. Lamy B, Tewes F, **Serrano DR**, Lamarche I, Gobin P, Couet W, Healy AM, Marchand S (2018), New aerosol formulation to control ciprofloxacin pulmonary concentration, *Journal of controlled release. Journal of the Controlled Release*, 271:118-126 (IF:7.786, Q1).
 54. Walsh D, **Serrano DR**, Worku ZA, Norris BA, Healy AM (2018). Production of Cocrystals in an Excipient Matrix by Spray Drying. *International Journal of Pharmaceutics*. 536: 467-477 (IF: 3.649, Q1).
 55. **Serrano DR**, Walsh D, O'Connell P, Mugheirbi N, Worku ZA, Bolas-fernandez F, Galina C, Dea MA, Healy AM (2018). Optimising the in vitro and in vivo performance of oral cocrystal formulations via spray coating. *European Journal of Pharmaceutics and Biopharmaceutics*. 124:13-27 (IF: 4.159, Q1).
 56. Ishida K, Castro RA, Torrado JJ, **Serrano DR**, Borba-Santos LP, Quintella LP, de Souza W, Rozental S, Lopes-Bezerra LM (2018). Efficacy of a poly-aggregated formulation of amphotericin B in treating systemic sporotrichosis caused by *Sporothrix brasiliensis*. *Med Mycol*. 56:288-296. (IF: 2.377, Q1)
 57. De Pablo, E, Fernández-García R, Ballesteros MP, Torrado JJ, **Serrano DR** (2017). Nebulised antibiotherapy: conventional versus nanotechnology-based approaches, is targeting at a nano scale a difficult subject? *Annals of Translational Medicine* 5(22):448.
 58. Konta AA, García-Piña M, **Serrano DR** (2017). Personalised 3D Printed Medicines: Which Techniques and Polymers Are More Successful? *Bioengineering (Basel)*: 4(4).
 59. Mugheirbi NA, O'Connell P, **Serrano DR**, Healy AM, Taylor LS, Tajber L. (2017). Comparative Study on the Performance of Inert and Functionalized Spheres Coated with Solid Dispersions Made of Two Structurally Related Antifungal Drugs. *Mol Pharm*. 14(11):3718-3728. (IF:4.440, Q1).
 60. **Serrano DR**, Lalatsa A, Dea-Ayuela MA (2017). Engineering Synergistically Active and Bioavailable Cost-effective Medicines for Neglected Tropical Diseases; The Role of Excipients. *Curr Top Med Chem*. [Epub ahead of print]. (IF: 2.864, Q2).
 61. **Serrano DR**, Lalatsa A (2017). Oral amphotericin B: The journey from bench to market. *Journal of Drug Delivery Science and Technology*, 42:75-83. (IF:1.194, Q4).
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- injectable microemulsion: Pseudo-ternary phase diagrams, in vitro, ex vivo and in vivo evaluation. *Eur J Pharm Sci.* 1;101:220-227. (IF: 3.756, 54/257 Pharmacology & Pharmacy, Q1).
64. Rolón M, **Serrano DR**, Lalatsa A, de Pablo E, Torrado JJ, Ballesteros MP, Healy AM, Vega C, Coronel C, Bolás-Fernández F, Dea-Ayuela MA (2017). Engineering Oral and Parenteral Amorphous Amphotericin B Formulations against Experimental *Trypanosoma cruzi* Infections. *Mol Pharm.* 14(4):1095-1106. (IF:4.440, 32/257, Pharmacology & Pharmacy, Q1).
 65. Fernández-García R, de Pablo E, Ballesteros MP, **Serrano DR** (2017). Unmet clinical needs in the treatment of systemic fungal infections: the role of amphotericin B and drug targeting. *Int J Pharm.* 525 (1): 139-148. (IF:3.649, 56/527, Pharmacology and Pharmacy, Q1).
 66. **Serrano DR**, Mugheirbi NA, O'Connell P, Leddy N, Healy AM, Tajber L (2016). Impact of Substrate Properties on the Formation of Spherulitic Films: A Case Study of Salbutamol Sulfate. *Cryst. Growth Des.*,16 (7), 3853–3858 (IF: 4055, 4/26 Crystallography, 51/257 Material Science, Q1).
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 68. Fisusi FA, Siew A, Chooi KW, Okubanjo O, Garrett N, Lalatsa K, **Serrano D**, Summers I, Moger J, Stapleton P, Satchi-Fainaro R, Schätzlein AG, Uchegbu IF (2016). Lomustine Nanoparticles Enable Both Bone Marrow Sparing and High Brain Drug Levels - A Strategy for Brain Cancer Treatments. *Pharm Res.* 33(5):1289-303 (IF: 3.002, 87/257 Pharmacology & Pharmacy, Q2).
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 71. Garret NL, Godfrey, L, Lalatsa, A, **Serrano DR**, Uchegbu IF, Schatzlein A, Moger, J (2015). Detecting polymeric nanoparticles with coherent antistokes Raman scattering microscopy in tissues exhibiting fixative-induced autofluorescence. *Proceedings SPIE*, 9329.
 72. Grossjohann C, **Serrano DR**, Paluch KJ, O'Connell P, Vella-Zarb L, Manesiotis P, McCabe T, Tajber L, Corrigan OI, Healy AM (2015). Polymorphism in sulfadimidine/4-aminosalicylic Acid cocrystals: solid-state characterization and physicochemical properties. *J Pharm Sci.*104(4):1385-98 (IF 3.007, 77/256 Pharmacology & Pharmacy, Q2).
 73. **Serrano DR**, Lalatsa A, Dea MA, Bilbao P, Garret NL, Moger J, Guarro J, Capilla J, Ballesteros MP, Schätzlein AG, Bolas F,

- Torrado JJ, Uchegbu IF (2015). Oral Particle Translocation to Lung, Liver and Spleen Confers Oral Amphotericin B Activity in Visceral Leishmaniasis and Aspergillosis. *Mol Pharm.* 2;12(2):420-31. (IF 4.787, 24/256 Pharmacology & Pharmacy, D1).
74. Hernandez L, Bolas F, Montoya A, Checa R, Dado D, Galvez R, **Serrano DR**, Torrado JJ, Otranto D, Latrofa MS, Miro G (2015). Unresponsiveness of experimental canine leishmaniosis to a new amphotericin B formulation. *Advances in Pharmaceutics*, Vol 2015, 1-13.
 75. Corral MJ, **Serrano DR**, Moreno I, Torrado JJ, Domínguez M, Alunda JM (2014). Efficacy of low doses of amphotericin B plus allicin against experimental visceral leishmaniasis. *J Antimicrob Chemother.* 69(12):3268-74. (IF 5.439, 17/256 Pharmacology & Pharmacy, D1).
 76. Ruiz HK, **Serrano DR**, Dea-Ayuela MA, Bilbao-Ramos PE, Bolás-Fernández F, Torrado JJ, Molero G (2014). New amphotericin B-gamma cyclodextrin formulation for topical use with synergistic activity against diverse fungal species and *Leishmania* spp. *Int J Pharm.* 473(1-2):148-57. (IF 3.785, 45/256 Pharmacology & Pharmacy, Q1).
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 79. **Serrano DR**, Hernandez L, Flerie L, Gonzalez I, Montoya A, Ballesteros MP, Dea MA, Miro G, Bolas F, Torrado JJ (2013). Hemolytic and pharmacokinetic studies of liposomal and particulate amphotericin B formulations. *Int J Pharm.* 447:38– 46. (IF 3.785, 45/256 Pharmacology & Pharmacy, Q1).
 80. Torrado JJ, **Serrano DR**, Uchegbu IF (2013). The Oral Delivery of Amphotericin B. *Ther Deliv.* 4(1), 9-12.
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Projects

International Research Projects

Título: Combating fungal prosthetic joint infections by tailoring release of antifungals loaded in microparticulate hydrogels and 3D printed implants

Funding agency: ESCMID Research Grant 2021 (€19,715)
Participants: Complutense University of Madrid
Period: From 01/03/2021 – 01/07/2022 (15 months)
PI: Dolores R. Serrano

Title: Assessment of the Biological Activity of New Pharmaceutical Formulations of Nifurtimox and Amphotericin B (14-INV-022)
Funding agency: National Government of Paraguay - Conacyt (796,850,000 Paraguayan Gs, equivalent to €120,000)
Participants: Moisés Bertoni Foundation, Portsmouth University, CEU University, Trinity College Dublin
Period: From 2015-01-15 – 2017-01-15 (24 months)
IP: Miriam Rolón

National Research Projects

Title: Development of Hydrogels and Personalized Implants by 3D Printing for the Treatment of Infections of Joint Prostheses and Heart Valves (PID2021-12631OA-I00)
Funding agency: Ministry of Science and Innovation (€116,160)
Participants: Complutense University of Madrid – Gregorio Marañón Hospital
Period: From 01/09/2022 – 31/08/2025 (36 months)
PI: Dolores R. Serrano

Title: Non-medical cannabis use and mental health: UNI-MAD action plan in the university community (2022I014)
Funding agency: Ministry of Health (43423 €)
Participants: UCM – UAH- UAM – UPM
Period: From 01/01/2023 – 31/12/2024 (24 months)
IP: Elena González Burgos

Title: Preparation of Advanced Drug Delivery Systems Incorporating Metal Nanoparticles Based on Supercritical CO₂ Technologies (RTI2018-097230-B-I00)
Funding agency: Ministry of Science, Innovation and Universities (€98,010)
Participants: Complutense University of Madrid
Period: From 01/01/2019 to 31/12/2021 (36 months)
PI: Albertina Cabañas Poveda

Title: Assessment of the efficacy of amphotericin B in the polyaggregate state and its formulation in albumin microspheres in the treatment of experimental canine leishmaniasis
Funding Agency: Ministry of Science and Innovation – REF AGL2007-64120/GAN (€95,000)
Participants: Complutense University of Madrid
Period: 2007-10-01 - 2011-08-31
PI: Francisco Bolás Fernández

Title: Comparison of gravimetric techniques versus infrared techniques in the process of preparing cytostatics
Funding Agency: Project Grants to SEFH Groups (Spanish Society of Hospital Pharmacy) (€9,795)
Participants: Complutense University of Madrid and Ramón y Cajal Hospital
Period: From 01-09-2018 – 30/11/2019 (15 months)
IP: Ana Herranz Alonso

UCM Research Projects

Title: Application of Design-Based Quality (QbD) to the Development of Formulations for the Combined Oral Therapy of Leishmaniasis and Systemic Mycosis (PR26/16-20355)
Funding Agency: Santander Research Projects-Complutense University of Madrid (€6,000)
Participants: Complutense University of Madrid
Period: From 01-12/2016 – 01/12/2017 (12 months)
PI: Francisco Bolás Fernández

UCM Cooperation Projects

Title: Interuniversity Master's Degree in Pharmaceutical Technology and Drug Development: Institutional Strengthening, Entrepreneurship and Training of Future Ibero-American Leaders (16/2022)
Funding Agency: XVIII Call for Grants for Cooperation projects that contribute to the achievement of the UCM's sustainable development goals (€14130)
Participants: Universidad Complutense de Madrid, Universidad UTESA and Universidad UASD de República Dominicana.
Period: From 01/05/2022 – 30/06/2023 (14 months)

PI: Dolores R. Serrano

Title: Bringing personalized therapies based on 3D printing to the Caribbean (4/2021)
Funding Agency: XVII Call for Grants for Cooperation projects that contribute to the achievement of the UCM's sustainable development goals (€13,939)
Participants: Universidad Complutense de Madrid and Universidad UTESA de República Dominicana.
Period: From 01/05/2021 – 31/12/2021 (7 months)

PI: Dolores R. Serrano

Título: Closing the global health innovation gap with nano-enabled medicines for leishmaniasis. International cooperation projects for mobility (ENF03/2017).
Funding agency: Ibero-American Union of Universities (€8,500)
Participants: UCM, Universitat de Barcelona, University of São Paulo, São Paulo State University, University of Portsmouth, Universidad CEU, Universitat Autònoma de Barcelona

Period: 01/09/2017 – 31/08/2018 (12 months)

PI: Francisco Bolás Fernández

UCM Entrepreneurship Projects

In tight: formative

Funding Agency: III Call for the UCM-Santander Programme of incentives for the promotion, creation and consolidation of entrepreneurial initiatives of the Complutense University of Madrid (1500 €)

Participants: Complutense University of Madrid

Period: From 01/01/2023 – 31/12/2023 (12 months)

PI: Dolores R. Serrano

Title: Breaking the Gender Gap in R+D+i: Entrepreneurship of Women with STEM Vocations (18/15ACT/21)

Funding agency: Ministry of Equality (€18,033.34)

Participants: Universidad Complutense de Madrid and Business International Women

Period: From 01/01/2022 – 31/12/2022 (12 months)

PI: Dolores R. Serrano

UCM Student Observatory Projects

Title: Evaluation of employability and labor insertion in graduates of UCM doctoral programs: implementation of university policies adapted to current and future labor needs (EMPLEDOC)

Funding Agency: Call for projects of the student observatory (POE-UCM)- €6,995

Participants: Complutense University of Madrid

Period: From 01/10/2022 – 31/07/2023 (10 months)

PI: Ana Isabel Fraguas Sánchez / Elena González Burgos

Title: Mental Health Disorders and Psychoactive Substance Use in University Students (Project 25).

Funding Agency: Call for projects of the student observatory (POE-UCM)- €6,944

Participants: Complutense University of Madrid

Period: From 01/10/2021 – 31/07/2022 (10 months)

PI: Dolores R. Serrano/Elena González

Memberships

American Association of Pharmaceutical Scientists

Sociedad Española de Farmacia Industrial y Galénica

European Society of Clinical Microbiology and Infectious Diseases

Other Relevant Information