

Curriculum Vitae

Personal information **Juan Aparicio Blanco**

Work experience

07/2024-present: Associate Professor in Pharmaceutical Technology. Department of Pharmaceutics and Food Technology, Universidad Complutense de Madrid (Spain).

09/2019-07/2024: Assistant Professor in Pharmaceutical Technology. Department of Pharmaceutics and Food Technology, Universidad Complutense de Madrid (Spain).

06/2019-08/2019: Postdoctoral Research Associate in Pharmaceutical Technology. Department of Pharmaceutical Technology and Chemistry, Universidad de Navarra (Spain).

05/2019-05/2019: Postdoctoral Research Associate in Pharmaceutical Technology. Department of Pharmaceutics and Food Technology, Universidad Complutense de Madrid (Spain).

09/2014-09/2018: Predoctoral Research Associate in Pharmaceutical Technology. Department of Pharmaceutics and Food Technology, Universidad Complutense de Madrid (Spain).

10/2013-09/2014: Teaching Assistant. Department of Pharmaceutics and Food Technology, Universidad Complutense de Madrid (Spain).

Education and training

06/2023: XX Course in Population Pharmacokinetics Studies, University of Barcelona. Type of training: Postgraduate.

2022: Training for Performing Project Design and Procedure Functions in All Species Listed in Annex II of Order ECC/566/2015 (Function D). Certifying body: Community of Madrid (Spain).

10/2013-09/2018: PhD in Pharmacy. Universidad Complutense de Madrid and Universidad de Alcalá (Spain). Academic qualification: "Cum laude". Thesis title: Development of lipid nanocapsules as a strategy to overcome the passage across the blood-brain barrier of drug substances acting on the central nervous system. International PhD Mention.

10/2012-06/2013: Master in Pharmaceutical Technology, Universidad Complutense de Madrid and Universidad de Alcalá (Spain) Academic qualification: 9.85 out of 10.

09/2007-06/2012: Degree in Pharmacy, Universidad Complutense de Madrid (Spain) Academic qualification: 9.83 out of 10, **Valedictorian**

Journal articles (*: Corresponding author)

22- **Aparicio-Blanco J**, López-Torres II, Alonso-Berenguel M, Torres-Suárez AI, Martín-Sabroso C. Local antimicrobial delivery systems for prophylaxis and treatment of periprosthetic traumatological infections. *European Journal of Pharmaceutical Sciences*. **2025**, 204, 106940. (IF: 4.7, 54/352, **Q1** in Pharmacology & Pharmacy).

21- Freire NF, Cordani M, **Aparicio-Blanco J**, Fraguas-Sánchez AI, Dutra L, Pinto MCC, Zarrabi A, Pinto JC, Velasco G, Rialho R. Preparation and characterization of polybutylene succinate (PBS) nanoparticles containing cannabidiol (CBD) for anticancer application. *Journal of Drug Delivery Science and Technology*. **2024**, 97, 105833. (IF: 4.9, 48/352, **Q1** in Pharmacology & Pharmacy).

20- **Aparicio-Blanco J***, Pucci C, de Pasquale D, Marino A, Debellis D, Ciofani G. Development and characterization of lipid nanocapsules loaded with iron oxide nanoparticles for magnetic targeting to the blood-brain barrier. *Drug Delivery and Translational Research*. **2024**, 14, 3494–3511. (IF: 5.5, 34/352, **Q1 (D1)** in Pharmacology & Pharmacy).

19- Martínez-Navarrete M, Guillot AJ, Lobita MC, Recio MC, Giner RM, **Aparicio-Blanco J**, Montesinos MC, Santos HA, Melero A. Cyclosporin A-loaded dissolving microneedles for dermatitis therapy: development, characterization and efficacy in a delayed-type hypersensitivity in vivo model. *Drug Delivery and Translational Research*. **2024**, 14, 3404–3421. (IF: 5.5, 34/352, **Q1 (D1)** in Pharmacology & Pharmacy).

18- Martínez-Navarrete M, Pérez-López A, Guillot AJ, Cordeiro AS, Melero A, **Aparicio-Blanco J***. Latest advances in glucose-responsive microneedle-based systems for transdermal insulin delivery. *International Journal of Biological Macromolecules*. **2024**, 263 (2), 130301. (IF: 8.5, 6/94, **Q1 (D1)** in Polymer Science).

17- **Aparicio-Blanco J**, Vishwakarma N, Lehr CM, Prestidge CA, Thomas N, Roberts RJ, Thorn C, Melero A. Antibiotic tolerance and resistance: what can drug delivery do against this global threat? *Drug Delivery and Translational Research*. **2024**, 14, 1725-1734. (IF: 5.5, 34/352, **Q1 (D1)** in Pharmacology & Pharmacy). **Article highlighted in the journal's annual Editorial note.** *Drug Delivery and Translational Research* (2024). <https://doi.org/10.1007/s13346-024-01599-6>.

16- Gómez-Lázaro L, Martín-Sabroso C, **Aparicio-Blanco J***, Torres-Suárez AI. Assessment of In Vitro Release Testing Methods for Colloidal Drug Carriers: The Lack of Standardized Protocols. *Pharmaceutics*. **2024**, 16 (1), 103. (IF: 5.5, 34/352, **Q1 (D1)** in Pharmacology & Pharmacy). **Editor's choice article.**

15- Pérez-López A, Torres-Suárez AI, Martín-Sabroso C, **Aparicio-Blanco J***. An overview of *in vitro* 3D models of the blood-brain barrier as a tool to predict the *in vivo* permeability of nanomedicines. *Advanced Drug Delivery Reviews*. **2023**, 196,

114816. (IF: 15.2, 4/354, **Q1 (D1)** in Pharmacology & Pharmacy). **Highly cited paper** (Source: WOS).

14. Pérez-López A, Martín-Sabroso C, Gómez-Lázaro L, Torres-Suárez AI, **Aparicio-Blanco J***. Embolization therapy with microspheres for the treatment of liver cancer: State-of-the-art of clinical translation. *Acta Biomaterialia*. **2022**, 149:1-15. (IF: 9.7, 9/92, **Q1 (D1)** in Engineering, Biomedical).

13. Martín-Sabroso C, Alonso-González M, Fernández Carballido A, **Aparicio-Blanco J**, Córdoba-Díaz D, Navarro-García F, Córdoba Díaz M, Torres-Suárez AI. Limitations and challenges in the stability of cysteamine eye-drop compounded formulations. *Pharmaceutics*. **2022**, 15 (1): 2. (IF: 4.6, 71/278, **Q2** in Pharmacology & Pharmacy). **Editor's choice article**.

12. Antich-Isern P, Caro-Barri J, **Aparicio-Blanco J***. The combination of medical devices and medicinal products revisited from the new European legal framework. *International Journal of Pharmaceutics*. **2021**, 607: 120992. (IF: 6.51, 40/279, **Q1** in Pharmacology & Pharmacy).

11. Pérez-López A, Martín-Sabroso C, Torres-Suárez AI, **Aparicio-Blanco J**. Timeline of Translational Formulation Technologies for Cancer Therapy: Successes, Failures, and Lessons Learned Therefrom. *Pharmaceutics*. **2020**, 12 (11): 1028. (IF: 6.321, 29/276, **Q1** in Pharmacology & Pharmacy).

10. **Aparicio-Blanco J**, Sanz-Arriazu L, Lorenzoni R, Blanco-Prieto M. Glioblastoma chemotherapeutic agents used in the clinical setting and in clinical trials: Nanomedicine approaches to improve their efficacy. *International Journal of Pharmaceutics*. **2020**, 581: 119283. (IF: 5.875, 37/276, **Q1** in Pharmacology & Pharmacy).

9. Simancas-Herbada R, Fernández-Carballido A, **Aparicio-Blanco J**, Slowing K, Rubio-Retama J, López-Cabarcos E, Torres-Suárez AI. Controlled Release of Highly Hydrophilic Drugs from Novel Poly (Magnesium Acrylate) Matrix Tablets. *Pharmaceutics*. **2020**, 12 (2): 174. (IF: 6.321, 29/276, **Q1** in Pharmacology & Pharmacy).

8. **Aparicio-Blanco J**, Romero IA, Male DK, Slowing K, García-García L, Torres-Suárez AI. Cannabidiol Enhances the Passage of Lipid Nanocapsules across the Blood-Brain Barrier Both in Vitro and in Vivo. *Molecular Pharmaceutics*. **2019**, 16:1999-2010. (IF: 4.321, 48/271, **Q1** in Pharmacology & Pharmacy).

7. **Aparicio-Blanco J**, Sebastián V, Benoit JP, Torres-Suárez AI. Lipid nanocapsules decorated and loaded with cannabidiol as targeted prolonged release carriers for glioma therapy: *in vitro* screening of critical parameters. *European Journal of Pharmaceutics and Biopharmaceutics*. **2019**, 134:126-137. (IF: 4.604, 40/271, **Q1** in Pharmacology & Pharmacy).

6. **Aparicio-Blanco J**, Sebastián V, Rodríguez-Amaro M, García-Díaz H, Torres-Suárez AI. Size-Tailored Design of Highly Monodisperse Lipid Nanocapsules for Drug Delivery. *Journal of Biomedical Nanotechnology*. **2019**, 15:1149-1161. (IF: 4.483, 12/38, **Q2** in Materials Science, Biomaterials).

5. **Aparicio-Blanco J**, Torres-Suárez AI. Towards tailored management of malignant brain tumors with nanotheranostics. *Acta Biomaterialia*. **2018**; 73:52-63 (IF: 6.638; 7/80, **Q1 (D1)** in Engineering Biomedical).

4. **Aparicio-Blanco J**, Martín-Sabroso C, Torres-Suárez AI. In vitro screening of nanomedicines through the blood-brain barrier: a critical review. *Biomaterials*. **2016**; 103:229-255 (IF: 8.402; 1/33, **Q1 (D1)** in Materials Science, Biomaterials).

3. **Aparicio-Blanco J**, Torres-Suárez AI. Glioblastoma multiforme and lipid nanocapsules: a review. *Journal of Biomedical Nanotechnology*. **2015**; 11:1283-1311 (IF: 3.929, 8/33, **Q1** in Materials Science, Biomaterials).

2. Martín-Sabroso C, Fraguas-Sánchez AI, **Aparicio-Blanco J**, Cano-Abad MF, Torres-Suárez AI. Critical attributes of formulation and of elaboration process of PLGA-protein microparticles. *International Journal of Pharmaceutics*. **2015**; 480: 27-36 (IF: 3.994, 44/255, **Q1** in Pharmacology & Pharmacy).

1. Martín-Sabroso C, Moreno-Ortega AJ, **Aparicio-Blanco J**, Fraguas-Sánchez AI, Cano-Abad MF, Torres-Suárez AI. Overcoming Glucocorticoid Resistances and Improving Antitumor Therapies: Lipid and Polymer Carriers. *Pharmaceutical Research*. **2015**; 32: 968-985 (IF:3.26, 66/255, **Q2** in Pharmacology & Pharmacy).

Book chapters (*: Corresponding author)

4- **Aparicio-Blanco J***, Torres-Suárez AI. Lipid nanocapsules: latest advances and applications. Book chapter in: *Fundamentals of Pharmaceutical Nanoscience*. Springer, **2024**. ISBN: 978-3-031-59477-9.

3. Garcia-Cremades M, **Aparicio-Blanco J**, Garcia-Recio V, Córdoba-Díaz M, Córdoba-Díaz D. Computer simulations in pharmacokinetics. Book chapter in *Physico-Chemical Aspects of Dosage Forms and Biopharmaceutics - Volume 2*, 353-366. Elsevier, **2024**. ISBN: 978-032-39-1818-3.

2. Antich-Isern P, Caro-Barri J, **Aparicio-Blanco J***. Market and ethical issues of implants. Book chapter in *Polymeric Materials for Biomedical Implants: Characterization, Properties, and Applications*, 487-525. Elsevier, **2024**. ISBN: 978-032-39-9690-7. DOI: 10.1016/B978-0-323-99690-7.00006-6.

1. **Aparicio-Blanco J**, Torres-Suárez AI. Managing CNS Tumors: The Nanomedicine Approach. Book chapter in *New Approaches to the Management of Primary and Metastatic CNS Tumors*, 65-94. In Tech, **2017**. ISBN: 978-953-51-3051-2.

Projects

12- Multifunctional Protein Nanoparticles for Cancer Therapy (nanoPROT). Funding entity: Complutense University of Madrid (42,508.49 €). PI: Prof. Miguel Gisbert Garzarán. (**01/01/2025 - 31/12/2026**).

11- Micro and nanomedicines for prophylaxis and treatment of prosthetic infections (CARRIER4PROST). Funding entity: Spanish Ministry of Science and Innovation (Ref. PI21/01130; 68,244 €). PI:

Prof. Ana I. Fraguas Sánchez. **(01/01/2022 - 31/12/2025)**.

10- Cannabidiol release studies. Funding entity: Laboratorios Beemine S.L. (10,000 €). PI: Prof. Manuel Córdoba Díaz. **(01/02/2022 - 31/07/2022)**.

9- Formation and characterization of microemulsions of hydroferol. Funding entity: FAES Farma, S.A. (8,500 €). PI: Prof. Ana I. Torres Suárez. **(28/01/2021 - 28/04/2021)**.

8- Lipid nanocarriers functionalized with cannabidiol for the treatment of brain tumors (NANOGLIO). Funding entity: Spanish Ministry of Science and Innovation (Ref. PID2019-105531RB-I00; 90,000 €). PI: Prof. Ana I. Torres Suárez. **(01/06/2020 - 31/05/2024)**.

7- Stability study of distinct compounded aqueous formulations of mercaptamine chlorhydrate. Funding entity: Recordati Rare Diseases Spain (14,000 €). PIs: Prof. Ana I. Torres Suárez and Prof. Ana Fernández Carballido. **(03/12/2019 - 16/04/2021)**.

6- Development of liquid oral formulations of phytomedicines from different species of *Sambucus*. Funding entity: Complutense University of Madrid (Ref. CUD-UCM 25-2017; 14,850 €). PI: Prof. Ana M. Fernández. **(01/03/2018-31/12/2018)**.

5- Development of cannabinoid-decorated nanoparticles and evaluation of their biodistribution into the central nervous system. Funding entity: Complutense University of Madrid-Santander Foundation (Ref. PR26/16-20311; 6,000 €). PI: Prof. Ana I. Torres. **(22/12/2016-21/12/2017)**.

4- Development of tablet formulations of phytomedicines from different species of *Sambucus*. Funding entity: Complutense University of Madrid (Ref. CUD-UCM 7-2016; 11,700 €). PI: Prof. Ana I. Torres. **(27/02/2017-31/12/2017)**.

3- Microencapsulation of bacteria. Funding entity: CARTIF Foundation (3,800 €). PI: Prof. Ana I. Torres. **(01/05/2017-30/08/2017)**.

2- Development of orally disintegrating tablets from the pulp of the plant species *Synsepalum dulcificum*, wherein miraculin is the major active ingredient. Funding entity: Medicinal Gardens S.L. (9,800 €) PI: Prof. Ana I. Torres. **(01/10/2016-01/08/2017)**.

1- Development of sustained-release tablets of metformin. Funding entity: Industria Centroamericana de Químicos Farmacéuticos S.A. (11,000 €). PI: Prof. Ana I. Torres Suárez. **(30/01/2014-30/09/2014:)**.

Memberships

Evaluation and revision of R&D projects and articles

8- Expert Reviewer of Czech Science Foundation (since 2024).

7- Young Associate Editor of *Drug Delivery and Translational Research* (since 2024). IF: 5.5, 34/352, **Q1 (D1)** in Pharmacology & Pharmacy.

6- Member of the Editorial Board of *European Journal of*

Pharmaceutics and Biopharmaceutics (since 2023). IF: 4.3, 69/352, **Q1** in Pharmacology & Pharmacy.

5- Expert Reviewer of National Science Center, Poland Grant Applications (since 2022).

4- Expert Reviewer of Natural Sciences and Engineering Research Council of Canada Alliance Grant Applications (since 2022).

3- Expert Reviewer (in the field of Biomedicine) for the Young Investigators Contest organized by the Spanish Ministry of Universities (since 2021).

2- Member of the Editorial Board of *European Journal of Pharmaceutical Sciences* (since 2021). IF: 4.7, 54/352, **Q1** in Pharmacology & Pharmacy.

1- Reviewer of >35 international scientific journals (including 16 D1).

Affiliation to research groups, professional and scientific associations

- Young Scientific Committee of the Controlled Release Society (as a Member of the Executive Committee since 2023, as Secretary since 2024)

- Spanish Society of Pharmaceutics and Pharmaceutical Technology (since 2015).

- Controlled Release Society: Spanish-Portuguese Local Chapter (since 2015). Founder Member of its Young Section Committee (2015-2018).

Prizes and Awards

10- **XIII Mario Martín Velamazán Pharmacy Research Award 2023–2024**. Awarding institution: CEU San Pablo University (Spain).

9- **Glaxo Smith Kline Prize** within the Scientific Contest 2021 organized by the Spanish National Royal Academy of Pharmacy. Awarding entity: Spanish National Royal Academy of Pharmacy (RANF).

8- **Alcalíber Prize** within the Scientific Contest 2020 organized by the Spanish National Royal Academy of Pharmacy. Awarding entity: Spanish National Royal Academy of Pharmacy (RANF).

7- **Juan Abelló Pascual I Prize** within the Scientific Contest 2019 organized by the Spanish National Royal Academy of Doctors. Awarding entity: Spanish Royal Academy of Doctors.

6- **PhD in Pharmacy Extraordinary Award, Academic Year 2017/2018**. Awarding entity: Universidad Complutense de Madrid (Spain).

5- **Seal of Excellence Marie Slodowska Curie** Individual Fellowships Call 2018. Awarding entity: European Commission.

4- **Juan Abelló Prize** within the Scientific Contest 2018 organized by the Spanish National Royal Academy of Pharmacy. Awarding entity: Spanish National Royal Academy of Pharmacy

(RANF).

3- First National Award for Excellence in Academic Performance: Health Sciences, Academic Year 2021/2022.
Awarding entity: Spanish Ministry of Education.

2- First Complutense Award for Best Academic Performance: Health Sciences, Academic Year 2021/2022.
Awarding entity: Universidad Complutense de Madrid (Spain).

1- Degree in Pharmacy Extraordinary Award, Academic Year 2011/2012. Awarding entity: Universidad Complutense de Madrid.

Research grants and scholarships

2022: Spanish Ministry of Science, Innovation and Universities Fellowship within José Castillejo Program for Junior PIs (Ref. CAS21/00269). Duration: 4 months.

2014-2018: Spanish Ministry of Education Fellowship within Professor Training Program (Ref. FPU13/02325). Group leader: Prof. Ana I. Torres, Universidad Complutense de Madrid (Spain). Duration: 48 months.

- **2017:** Spanish Ministry of Education Fellowship for short stays in foreign centres (Ref. EST16/00556). Group leader: Prof. Ignacio A. Romero, The Open University (UK). Duration: 2 months.
- **2016:** Spanish Ministry of Education Fellowship for short stays in foreign centres (Ref. EST15/00534). Group leader: Ignacio A. Romero, The Open University (UK). Duration: 3 months.
- **2015:** Spanish Ministry of Education Fellowship for short stays in foreign centres (Ref. EST14/00229). Group leader: Prof. Jean P. Benoit, Université d'Angers (France). Duration: 3 months.

2012-2013: University Research Assistant. Funding entity: Spanish Ministry of Education. Duration: 9 months. Universidad Complutense de Madrid (Spain).

2011-2012: Erasmus Fellowship. Funding entity: European Commission. Duration: 6 months. Albert-Ludwigs-Universität Freiburg (Germany).

Other Relevant Information

Stays in R&D centres

01/06/2022-30/09/2022: Visiting Researcher. Center for Materials Interfaces, Instituto Italiano di Tecnologia (Italia). Screening of the permeability of magnetic nanomedicines across a human microfluidic *in vitro* model of the blood-brain barrier. Supervisor: Gianni Ciofani. Funding entity: Spanish Ministry of Science, Innovation and Universities (Ref. CAS21/00269).

15/06/2017-15/08/2017: Visiting Predoctoral Fellow. School of Health, Life and Chemical Sciences, The Open University (UK). Screening of the permeability of nanomedicines across a human *in vitro* model of the blood-brain barrier. Supervisor: Prof. Ignacio A. Romero. Funding entity: Spanish Ministry of Education (Ref.

EST16/00556).

15/09/2016-14/12/2016: Visiting Predoctoral Fellow. School of Health, Life and Chemical Sciences, The Open University (UK). Screening of the uptake of nanomedicines across a human *in vitro* model of the blood-brain barrier. Supervisor: Prof. Ignacio A. Romero. Funding entity: Spanish Ministry of Education (Ref. EST15/00534).

01/09/2015-30/11/2015: Visiting Predoctoral Fellow. Unité Micro et Nanomédecines Biomimétiques, U1066, Université Bretagne Loire (France). Development of functionalization strategies aimed at brain active targeting of nanocarriers for medical purposes. Supervisor: Prof. Jean Pierre Benoit. Funding entity: Spanish Ministry of Education (Ref. EST14/00229).

01/03/2012-31/07/2012: Trainee at the Pharmacy Service of Universitätsklinikum Freiburg im Breisgau (Germany). Supervisor: Martin Sutter, PhD. Funding entity: European Commission.