

CURRICULUM VITAE



Name: Tamara Forbes Hernández

Nationality: Cuban/Spanish

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Current Position: Associate Professor (since October 2025) Institution:
Department of Biomedical Sciences. University of Cagliari, Italy

Previous Positions

- 02/2025 – 09/2025: Assistant Professor, University of Granada, Spain
- 02/2022 – 01/2025: Research Fellow (JdC-I, NextGenerationEU), University of Granada, Spain
- 07/2021 – 10/2021: Researcher, University of Vigo, Spain
- 02/2019 – 06/2021: Research Fellow (JdC-F), University of Vigo, Spain
- 01/2016 – 01/2019: Postdoctoral Researcher, Marche Polytechnic University, Italy
- 11/2012 – 10/2015: PhD Researcher, Marche Polytechnic University, Italy
- 05/2011 – 05/2012: Visiting Professor, Guayaquil Agrarian University, Ecuador
- 09/2007 – 10/2012: Assistant Professor, University of Havana, Cuba

Education

- PhD in Biological Sciences and Clinical Specialties, Marche Polytechnic University (Italy), 2016
- Master's Degree in Food Science and Technology, University of Havana (Cuba), 2010
- Bachelor's Degree in Food Sciences (5-year program), University of Havana (Cuba), 2007

Bibliometric Indicators

- Web of Science (ISI): 148 articles, 7097 citations, h-index = 46
- Scopus: 144 articles, 7991 citations, h-index 49

Languages

- Spanish: Native
- English: Intermediate (B2)
- Italian: Excellent (C1)

CV Summary

Dr. Tamara Forbes Hernández holds a PhD in Biological Sciences and Clinical Specialties (2016) from Marche Polytechnic University (Italy), and a Master's Degree in Food Science and Technology (2010) from the University of Havana (Cuba). She currently serves as Associate Professor of Biochemistry at the University of Cagliari, Italy, where she continues her research on the biological effects of dietary bioactive compounds.

Her academic career comprises positions at several universities, including the University of Havana, Marche Polytechnic University, the Agrarian University of Ecuador, UNEATLANTICO, the International Ibero-American University, the University of Vigo, and the University of Granada. She has extensive expertise in dietary matrix analysis and evaluation, with a particular focus on the biological activities of natural antioxidants. Her recent research has centered on the effects of phytochemicals on oxidative stress and the modulation of signaling pathways related to antioxidant defense, metabolism, mitochondrial function, cell proliferation, and inflammation. Specifically, her work has addressed: (1) the *in vitro* and *in vivo* effects of polyphenol-rich extracts from strawberry, olive oil, and honey on the progression of ovarian, breast, and colon cancers; (2) the regulation of lipid metabolism by strawberry extracts through the AMP-activated protein kinase cascade and their influence on adipocyte differentiation; (3) the protective effects of polyphenol-rich extracts against UV- and LPS-induced stress; (4) the impact of *in vitro* gastrointestinal digestion on the biological activity of natural compounds; (5) the identification of bioactive compounds from agri-food products as potential adjuvants to conventional chemotherapy; and (6) the evaluation of phytochemicals' neuroprotective effects in an *in vivo* Alzheimer's disease model.

Dr. Forbes Hernández has participated in several EU-funded projects (GOODBERRY, EUBerry, SUSTAINOLIVE, UP4HEALTH, IBERPHENOL, NANOEATERS) and is member of the COST Action MitoEAGLE CA15203 network. She has co-supervised 13 Bachelor's, 12 Master's, and 3 Doctoral theses, and has served on the defense committee of a PhD dissertation at the University of Granada. In addition, she acted as an internship tutor within the ERASMUS+ knowledge exchange project LOWE: *Learning Outcomes for the Wellness Economy*. Her scientific output includes over 140 peer-reviewed papers in high-impact journals (Q1), 7 book chapters, 2 patents, and more than 70 conference contributions. Her current metrics include over 7,000 citations and an h-index of 46 (WOS).

Selected Publications (Q1, 2015–2025)

- **Forbes-Hernández TY.**, Vargas-Corral F., RivasGarcía L., Bullón B., Varela A., Armas-Diaz Y., Romero-Márquez JM., Navarro-Hortal MD., Bullón P., Quiles JL. Addressing Physiopathology of Periodontitis in Older Adults Through Oleuropein-Rich Olive Leaf Supplement: Design and Baseline Characteristics of OLIVAGING Clinical Trial. *Journal Mediterranean Journal of Nutrition and Metabolism*, 2025. DOI 10.1177/1973798X251357485.
- Navarro-Hortal M.D. et al., **Forbes-Hernández T.Y.** (2025). Garlic hydrophilic extract modulates redox biology in Alzheimer's disease model. *eFood*, 6:e70044.
- Romero-Marquez, J.M., Navarro-Hortal, M.D., Varela-López, A., Calderón-Iglesias, R., Puentes, J.G., Giampieri, F., Battino, M., Sánchez-González, C., Xiao, J., García-Ruiz, R., Sánchez, S., **Forbes-Hernández, T.Y.** and Quiles, J.L. (2025), Olive Leaf Extracts with High, Medium, or Low Bioactive Compounds Content Differentially Modulate Alzheimer's Disease via Redox Biology. *Food Frontiers.*, 6: 1513-1529. <https://doi.org/10.1002/fft2.70013>.
- Romero-Marquez JM, Navarro-Hortal MD, **Forbes-Hernández TY**, Varela-Lopez A, Puentes JG, Sanchez-González C, Sumalla-Cano S, Battino M, García-Ruiz R, Sánchez S, Quiles JL. Effect of

- olive leaf phytochemicals on the anti-acetylcholinesterase, anti-cyclooxygenase-2 and ferric reducing antioxidant capacity. *Food Chemistry* 444 (2024) 138516. DOI: 10.1016/j.foodchem.2024.138516.
- Romero-Márquez, J.M.; Navarro-Hortal, M.D.; **Forbes-Hernández, T.Y.**; Varela-López, A.; Puentes, J.G.; Pino-García, R.D.; Sánchez-González, C.; Elio, I.; Battino, M.; García, R.; et al. Exploring the Antioxidant, Neuroprotective, and Anti-Inflammatory Potential of Olive Leaf Extracts from Spain, Portugal, Greece, and Italy. *Antioxidants* 2023, 12, 1538. <https://doi.org/10.3390/antiox12081538>
 - Cianciosi D., **Forbes-Hernández T.Y.**, Giampieri F., Battino M. (2024). Manuka honey suppresses metastasis and angiogenesis in colon cancer. *Food Function*, 15(13):7200–7213.
 - Cianciosi D, **Forbes-Hernandez T**, Armas Diaz Y, Elexpuru-Zabaleta M, Quiles JL, Battino M, Giampieri F. Manuka honey's anti-metastatic impact on colon cancer stem-like cells: unveiling its effects on epithelial-mesenchymal transition, angiogenesis and telomere length. *Food Funct.* 2024 Jul 1;15(13):7200-7213. doi: 10.1039/d4fo00943f. PMID: 38896046.
 - Navarro-Hortal M.D., Romero-Márquez J.M., **Forbes-Hernández T.Y.** et al. (2024). Broccoli by-products as healthy ingredients for Alzheimer's management. *J. Agric. Food Chem.*, 72(10):5197–5211.
 - Romero-Márquez J.M., **Forbes-Hernández T.Y.**, Quiles J.L. (2023). Molecular mechanisms of olive leaf polyphenols against Alzheimer's disease. *Int. J. Mol. Sci.*, 24(5):4353.
 - Varela-López A., Navarro-Hortal M.D., Forbes-Hernández T.Y. et al. (2023). Dietary antioxidants and lifespan: relevance of environmental conditions. *Exp. Gerontology*, 178:112221.
 - Navarro-Hortal MD, Romero-Márquez JM, Muñoz-Ollero P., [...] **Forbes-Hernández TY**, Quiles JL (2022). Amyloid β -but not Tau induced neurotoxicity is suppressed by Manuka honey via HSP-16.2 and SKN-1/Nrf2 pathways in an *in vivo* model of Alzheimer's disease. *Food Funct.*, 13, 11185–11199. DOI: 10.1039/d2fo01739c.
 - Cianciosi D, **Forbes-Hernández TY**, Regolo L, [...] Battino M (2022). Manuka honey in combination with 5-Fluorouracil decreases physical parameters of colospheres enriched with cancer stem-like cells and reduces their resistance to apoptosis. *Food Chem.* 374, 131753. DOI: 10.1016/j.foodchem.2021.131753.
 - Gil-Martín E., **Forbes-Hernández TY.**, Romero A., Cianciosi D., Giampieri F., Battino M. (2022). Influence of the extraction method on the recovery of bioactive phenolic compounds from food industry by-products. *Food Chem.* 378, 131918. DOI: 10.1016/j.foodchem.2021.131918.
 - Afrin S, Giampieri F, Cianciosi D, Alvarez-Suarez JM, Bullon B, Amici A, **Forbes-Hernández TY**, Battino M (2021). Strawberry tree honey in combination with 5-fluorouracil enhances chemosensitivity in human colon adenocarcinoma cells. *Food Chem Toxicol* 156,112484. DOI: 10.1016/j.fct.2021.112484.
 - Cianciosi D, **Forbes Hernandez T**, Ansary J [...] Battino M (2020). Phenolic compounds from Mediterranean foods as nutraceutical tools for the prevention of cancer: The effect of honey polyphenols on colorectal cancer stem-like cells from spheroids. *Food Chem* 325, 126881. DOI: 10.1016/j.foodchem.2020.12688.
 - **Forbes Hernandez T**, Cianciosi D, Ansary J, Mezzetti B, Bompadre S, Quiles JL, Giampieri F, Battino M (2020). Strawberry (*Fragaria x ananassa* cv. Romina) methanolic extract promotes browning in 3T3-L1 cells. *Food Funct.*, 11(1):297-304. DOI: 10.1039/c9fo02285f.
 - Cianciosi D, **Forbes-Hernández TY**, Afrin S, [...] Battino M, Giampieri F (2020). The influence of *in vitro* gastrointestinal digestion on the anticanceractivity of Manuka honey. *Antioxidants*, 9, 64; DOI:10.3390/antiox9010064.
 - Afrin S, Giampieri F, Cianciosi D, [...] **Forbes Hernandez T**, Battino M (2019). Strawberry tree honey as a new [...] inhibits cell cycle and promotes apoptosis by regulating EGFR and MAPKs signaling pathways. *J. Funct. Foods*, 57:439-452. 10.1016/j.jff.2019.04.035.
 - Mazzoni L, Giampieri F, Suarez JM, Gasparrini M, Mezzetti B, **Forbes Hernandez T**, Battino MA (2019). Isolation of strawberry anthocyanin-rich fractions and their mechanisms of action against murine breast cancer cell lines. *Food Funct.* 10(11):7103-7120. DOI: 10.1039/c9fo01721f. Epub 2019 Oct 17.
 - **Forbes-Hernández TY**, Giampieri F, Gasparrini M, [...] Battino M (2017). Lipid accumulation in HepG2 cells is attenuated by strawberry extract through AMPK activation. *Nutrients* 9(6):621. DOI: 10.3390/nu9060621.

Grants and Fellowships

- Juan de la Cierva Incorporación (2020). Ref. No.: IJC2020-043910-I. *Agencia Estatal de Investigación* (Spanish State Research Agency). Duration: 2021–2024. Principal Investigator: Tamara Forbes Hernández. Total funding: €106,350. Host institution: Granada University, Spain.
- Juan de la Cierva Formación (2017), Spanish State Research Agency. Ref. No.: FJCI-2017-33157. *Agencia Estatal de Investigación* (Spanish State Research Agency). Duration: 2019–2021. Principal Investigator: Tamara Forbes Hernández. Total funding: €50,000. Host institution: Vigo University, Spain.
- COST Action CA15203 Scholarship (2017). Awarded for participation in the *Training School MiPsociety and MITOEGLE*, Obergurgl, Austria.
- Competitive Postdoctoral Fellowship (2016–2019). Project title: *AMPK as a potential target of bioactive compounds from strawberries in the regulation of lipid metabolism*. Host institution: Marche Polytechnic University, Italy.
- Doctoral Scholarship (2012–2015). PhD in Biological and Specialized Clinical Sciences, Marche Polytechnic University, Ancona, Italy.

Research Projects Participation

- Development of a dermatological product based on flower and plant extracts for cell protection. Funded by UGR / FEDER Andalucía 2021–2027. PI: *Cristina Sánchez*.
- OLIVAGING – Nutraceuticals and functional foods from the olive tree for aging-related pathologies. Project ID: PID2019-106778RB-I00. MCIN / AEI / FEDER, Spain (2020–2024). PI: *José L. Quiles*. €133,100.
- SUSTAINOLIVE – Promoting the sustainability of Mediterranean olive groves. PRIMA H2020, European Commission (2019–2023). Coord.: *R. García Ruiz*, Univ. of Jaén. PI (UGR): *J.L. Quiles*. €2.44M.
- Design and evaluation of redox-based nutraceuticals for healthy aging (B-AGR-193-UGR18). UGR / FEDER, Spain (2020–2021). PI: *J.L. Quiles*. €25,400.
- NANOEATERS – Transfer and valorization of nanotechnologies for innovative SMEs. INTERREG EU Programme (2017–2020). PI: *A. Longo*. €555,545.
- UP4HEALTH – Upcycling olive, grape, and nut by-products into natural bioactive ingredients. H2020 EU Project (2020–2024). PI: *J. Simal*. €689,480.
- IBERPHENOL – Polyphenols and their industrial applications. EU Cooperative Network (0377_IBERPHENOL_6_E) (2017–2020). PI: *J. Simal*. €277,061.
- Effect of berry consumption on ovarian cancer prevention. UNIVPM, Italy (2018–2021). PI: *M. Battino*. €182,000.
- GOODBERRY – Improving the stability of high-quality traits of berries across environments and cultivation systems. Horizon 2020, EU (Grant No. 679303, 2016–2020). PI: *Sonia Osorio*. €5.14M.
- MitoEAGLE – Mitochondrial mapping: Evolution, Age, Gender, Lifestyle, Environment (COST Action CA15203). European Union, COST Programme (2016–2020). PI: *Erich Gnaiger*.
- Cell cycle aberrations and oxidative stress in age-related neurodegenerative diseases: The role of food antioxidants (RS13M01). Italian Ministry of Foreign Affairs / Serbian Ministry of Education, Science and Technological Development (2013–2015). PIs: *M. Battino*, *B. Spremo-Poparevic*.
- EUBerry – Sustainable improvement of European berry production, quality, and nutritional value. FP7, European Union (Grant No. 265942) (2013–2015). PI: *Bruno Mezzetti*. €4.07M.
- Nutritional status of young adults and its relationship with chronic disease risk. Autonomous University of Puebla, Mexico (2005–2012). PIs: *T. Bilbao Reboredo*, *L. Ledesma*.

Patents

- Composition for skin protection against oxidative stress (UNIVPM, 2021)

- Use of an extract for prevention/treatment of uterine fibroids (UNIVPM, 2016)

Awards and Recognitions

- Highly Cited Scientist (Stanford University Ranking, years 2020–2025)
- Best Poster Award, *III Research Congress of the Granada Health Technology Park (PTS)*, Spain (2025). Poster title: “*Olive tree compounds and aging-related diseases: Preliminary results from a clinical trial in patients with periodontitis.*”
- First Prize, *5th Flaminio Fidanza Award (Spazio Alle Idee)*, Orvieto, Italy (15–16 April 2016).
- Honourable Mention, *2nd Flaminio Fidanza Award (Spazio Alle Idee)*, within the *5th Nu.Me. Conference*, Terni, Italy (18–20 April 2013).
- “Golden Chalk” Teaching Award and Exemplary Educator, University of Havana (2011).
- Most Outstanding Graduate, Pharmacy and Food Institute. Graduation XVI (2007).
- Most Outstanding Graduate, University of Havana (2007).

Editorial and Reviewing Activities

- Associate Editor: *Mediterranean Journal of Nutrition and Metabolism*.
- Editorial Board Member: *Int. J. Mol. Sci.*, *J. Berry Res.*, *Diseases*
- Reviewer: *Food Chemistry*, *Nutrients*, *Molecules*, *Antioxidants*, *J. Funct. Foods*, among others.
- Guest Editor: *Molecules*, *Nutrients*, *Trends in Food Science & Technology*.