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SSD BIO/10 - SC 05/E1

CURRENT POSITION: Biologist official (Department of Life and Environmental Sciences, University of Cagliari);
Lecturer on contract from 2012 (Biochemistry – SSD BIO/10, Faculty of Medicine and Surgery, University of Cagliari).

- 2010, Graduate School “Food Sciences” from the Faculty of Medicine and Surgery, University of Cagliari
- 2006, Ph.D. degree in “Animal, Molecular and Human Biology, Curriculum Biochemistry”, University of Cagliari
- 2001 Master’s degree in Biological Science – University of Cagliari – Italy.

AFFILIATION TO SCIENTIFIC SOCIETY

Italian Society of Biochemistry and Molecular Biology (SIB) and Federation of European Biochemical Societies (FEBS).

TEACHING

From 2012 to now: Professor on contract on the Faculty of Medicine and Surgery, University of Cagliari:

- **Aa 2024-25** Biochemistry, bachelor’s degree in Midwifery.
 - **Aa 2024-25, 2023-24 and 2022-23** Medical Chemistry and Biochemistry for Bachelor’s Degree in Imaging and Radiotherapy
 - **Aa 2021-22 and 2019-20** Chemistry and Biochemistry for Bachelor’s degree in Health Assistance, Prevention techniques in the environment and in work environments, Dental Hygiene.
 - **Aa 2018-19 and 2017-18** Biochemistry Bachelor’s Degree in Physiotherapy, Speech Therapy, Professional Education
- From 2016 to 2018**, she taught Organic chemistry and biochemistry in the summer school of preparation for the admission tests to the degree courses of the Biomedical Faculties
- From 2015 to 2017**, Organic Chemistry and Propaedeutic Biochemistry, Annual course of preparation for the admission tests to the degree courses of the Biomedical Faculties
- From 2012 to 2015**, Chemistry and Propaedeutic Biochemistry for Bachelor’s degree in Dentistry and Dental Prosthetics
- **Aa 2012-13** Biochemical methodologies applied to nutrition, School of Specialization in Food Sciences

SCIENTIFIC ACTIVITY

Currently, her research is mainly focused on preparing and characterising plant extracts and the biological activities of plant extracts and synthetic compounds. Her interests are particularly in antioxidant activity and the study of inhibitors of enzymes (amylase and glucosidase, tyrosinase, collagenase, elastase, xanthine oxidase, cholinesterases, monoaminoxidase) that play a key role in several pathological diseases.

In the past, lines of research have concerned:

- Analysis of biological fluid from fibromyalgia patients to identify any possible biomarker for this disease.
- the structural and functional properties of respiratory proteins, haemoglobin, focusing her attention on the natural human haemoglobin variants and the structural-functional relationships strictly correlated to the identification of the onset of possible pathologies.
- The characterisation of myoglobin hydrophobic cavities by NMR spectroscopy of Xenon¹²⁹

Author or co-author of about 55 papers in international journals:

1. Antonella Ibba, Alessandra Piras, Benedetta **Era**, Antonella Fais, Andrea Maxia, Sara Fais, Germano Orrù, Silvia Porcedda Aqueous Extract of *Rubus ulmifolius* Schott (Rosaceae) against Pathogenic Gram-Positive Oral Bacteria: an in Vitro Evaluation Volume 14, Issue 2, 2025, 92 <https://doi.org/10.33263/LIANBS142.092>
2. Rita Meleddu, Antonella Fais, Benedetta **Era**, Sonia Floris, Simona Distinto, Antonio Lupia, Filippo Cottiglia, Alessia Onali, Erica Sanna, Daniela Secci, Giulia Atzeni, Laura Demuru, Pierluigi Caboni, Donatella Valenti, and Elias Maccioni ACS Med. Chem. Lett. 2024, 15, 1685–1691

3. Masuri, S.; **Era**, B.; Pintus, F.; Floris, S.; Meloni, F.; Pettinau, F.; Podda, E.; Cabiddu, M.G.; Fais, A.; Pivetta, T. Design, Synthesis, Structural Insights, Tyrosinase Inhibition, and Sun Protection Factor of New Thiosemicarbazone Derivatives. *Molecules* 2024, 29, 5629. <https://doi.org/10.3390/molecules29235629>
4. Delia Maccioni, Danilo Falconieri, Elio Acquis, Sanjay Bhaskar Kasture, Benedetta **Era**, Antonella Fais, Emma Cocco, Andrea Maxia Advances in Sardinian *Withania somnifera* (L.) Dunal crops through phytochemical and biological approaches *Industrial Crops & Products* 208 (2024) 117887
5. Antonella Ibba, Antonella Rosa, Antonella Fais, Benedetta **Era**, Silvia Porcedda, Alessandra Piras. Supercritical extraction from *Rosa canina* L. fruits: fatty acids composition and biological activities. *La rivista italiana delle sostanze grasse - VOL. 101 - OTTOBRE/DICEMBRE 2024*
6. Floris, S.; Pintus, F.; Fais, A.; **Era**, B.; Raho, N.; Siguri, C.; Orrù, G.; Fais, S.; Tuberoso, C.I.G.; Olla, S.; et al. Biological Potential of *Asphodelus microcarpus* Extracts: α -Glucosidase and Antibiofilm Activities In Vitro. *Molecules* 2024, 29, 5063. <https://doi.org/10.3390/molecules29215063>
7. Fais, A.; **Era**, B. Phytochemical Composition and Biological Activity. *Plants* 2024, 13, 331. <https://doi.org/10.3390/plants13030331>
8. Amalia Di Petrillo, Chiara Siguri, Giovanna L. Delogu, Antonella Fais, Benedetta **Era**, Sonia Floris, Francesca Pintus, Amit Kumar, Massimo Claudio Fantini, Stefania Olla Exploring *Asphodelus microcarpus* as a source of xanthine oxidase inhibitors: Insights from in silico and in vitro studies *Chemico-Biological Interactions* 397 (2024) 111087
9. Delogu, G.L.; Bengala, M.; Matos, M.J.; Crucitti, D.; Sogos, V.; Era, B.; Fais, A. A New Class of Benzo[b]thiophene-chalcones as Cholinesterase Inhibitors: Synthesis, Biological Evaluation, Molecular Docking and ADME Studies. *Molecules* 2024, 29, 3748. <https://doi.org/10.3390/molecules29163748>
10. Cinzia Sanna, Antonella Fais, Benedetta Era, Giovanna L. Delogu, Enrico Sanna, Laura Dazzi, Antonella Rosa, Arianna Marengo, Patrizia Rubiolo, Antonio De Agostini, Sonia Floris and Francesca Pintus *JOURNAL OF ENZYME INHIBITION AND MEDICINAL CHEMISTRY* 2023, VOL. 38, NO. 1, 2274798 <https://doi.org/10.1080/14756366.2023.2274798>
11. Masuri, S.; Era, B.; Pintus, F.; Cadoni, E.; Cabiddu, M.G.; Fais, A.; Pivetta, T. Hydroxylated Coumarin-Based Thiosemicarbazones as Dual Antityrosinase and Antioxidant Agents. *Int. J. Mol. Sci.* 2023, 24, 1678. <https://doi.org/10.3390/ijms24021678>
12. Olla, S.; Siguri, C.; Fais, A.; Era, B.; Fantini, M.C.; Di Petrillo, A. Inhibitory Effect of Quercetin on Oxidative Endogen Enzymes: A Focus on Putative Binding Modes. *Int. J. Mol. Sci.* 2023, 24, 15391. <https://doi.org/10.3390/ijms242015391>
13. Antonella Fais, Francesca Pintus, Benedetta Era, Sonia Floris, Amit Kumar, Debapriyo Sarmadhikari, Valeria Sogos, Eugenio Uriarte, Shailendra Asthana, and Maria João Matos Design of 3-phenylcoumarins and 3-thienylcoumarins as potent xanthine oxidase inhibitors: synthesis, biological evaluation and docking studies *ChemMedChem* 2023, e202300400
14. Pintus, F.; Floris, S.; Fais, A.; Era, B.; Kumar, A.; Gatto, G.; Uriarte, E.; Matos, M.J. Hydroxy-3-Phenylcoumarins as Multitarget Compounds for Skin Aging Diseases: Synthesis, Molecular Docking and Tyrosinase, Elastase, Collagenase and Hyaluronidase Inhibition, and Sun Protection Factor. *Molecules* 2022, 27, 6914. <https://doi.org/10.3390/molecules27206914>
15. Delogu, G.L.; Fais, A.; Pintus, F.; Goyal, C.; Matos, M.J.; Era, B.; Kumar, A. Structural Insight of New Butyrylcholinesterase Inhibitors Based on Benzylbenzofuran Scaffold. *Pharmaceuticals* 2022, 15, 304. <https://doi.org/10.3390/ph15030304>
16. Pintus, F.; Floris, S.; Fais, A.; Era, B.; Porcedda, C.; Tuberoso, C.I.G.; Caddeo, C. Euphorbia characias Extract: Inhibition of Skin Aging-Related Enzymes and Nanoformulation. *Plants* 2022, 11, 1849. <https://doi.org/10.3390/plants11141849>
17. Asensio-Regalado, C.; Alonso-Salces, R.M.; Gallo, B.; Berrueta, L.A.; Era, B.; Pintus, F.; Caddeo, C. Tempranillo Grape Extract in Transfersomes: A Nanoproduct with Antioxidant Activity. *Nanomaterials* 2022, 12, 746. <https://doi.org/10.3390/nano12050746>
18. Giovanna Lucia Delogu, Benedetta Era, Sonia Floris, Rosaria Medda Valeria Sogos, Francesca Pintus, Gianluca Gatto, Amit Kumar, Gunilla TorstensdotterWestermarck, Antonella Fais; A new biological prospective for the 2-phenylbenzofurans as inhibitors of α -glucosidase and of the islet amyloid polypeptide formation, *International Journal of Biological Macromolecules* 169 (2021) 428–435.

19. Era, B.; Floris, S.; Sogos, V.; Porcedda, C.; Piras, A.; Medda, R.; Fais, A.; Pintus, F. Anti-Aging Potential of Extracts from *Washingtonia filifera* Seeds. *Plants* 2021, 10, 151. <https://doi.org/10.3390/plants10010151>
20. Fais, A.; Delogu, G.L.; Floris, S.; Era, B.; Medda, R.; Pintus, F. *Euphorbia characias*: Phytochemistry and Biological Activities. *Plants* 2021, 10, 1468. <https://doi.org/10.3390/plants10071468>
21. Sonia Floris, Antonella Fais, Rosaria Medda, Francesca Pintus, Alessandra Piras, Amit Kumar, Piotr Marek K., Gunilla Torstensdotter Westermarke and Benedetta Era *Washingtonia filifera* seed extracts inhibit the islet amyloid polypeptide fibrils formations and α -amylase and α -glucosidase activity *JOURNAL OF ENZYME INHIBITION AND MEDICINAL CHEMISTRY* 2021, VOL. 36, NO. 1, 517–524 <https://doi.org/10.1080/14756366.2021.1874945>
22. B. Era[#], G.L. Delogu[#], F. Pintus, A. Fais, G. Gatto, E. Uriarte, F. Borges, A. Kumar, M.J. Matos (2020) Looking for new xanthine oxidase inhibitors: 3-Phenylcoumarins versus 2-phenylbenzofurans. *International Journal of Biological Macromolecules* Volume 162, 1 November 2020, Pages 774-780, ISSN: 01418130, DOI:10.1016/j.ijbiomac.2020.06.152
23. A. Piras, S. Porcedda, D. Falconieri, A. Fais, B. Era, G. Carta & A. Rosa (2020) Supercritical extraction of volatile and fixed oils from *Petroselinum crispum* L. seeds: chemical composition and biological activity. *NATURAL PRODUCT RESEARCH*, ISSN: 14786419, DOI: 10.1080/14786419.2020.1810031.
24. Maria Barbara Pisano, Amit Kumar, Rosaria Medda, Gianluca Gatto, Rajesh Pal, Antonella Fais[#], Benedetta Era[#], Sofia Cosentino, Eugenio Uriarte, Lourdes Santana, Francesca Pintus and Maria João Matos (2019) Antibacterial Activity and Molecular Docking Studies of a Selected Series of Hydroxy-3-arylcoumarin. *Molecules*, 24(15), ISSN: 1420-3049, DOI:[10.3390/molecules24152815](https://doi.org/10.3390/molecules24152815)
25. Floris S., Fais A., Rosa A., Piras A., Marzouki H., Medda R., González-Paramás A.M., Kumar A., Santos-Buelga C., Era B. (2019) Phytochemical composition and the cholinesterase and xanthine oxidase inhibitory properties of seed extracts from the: *Washingtonia filifera* palm fruit. *RSC Advances* Volume 9, Issue 37, Pages 21278-21287, ISSN: 20462069, DOI:10.1039/c9ra02928a
26. Antonella Rosa, Benedetta Era, Carla Masala, Mariella Nieddu, Paola Scano, Antonella Fais, Silvia Porcedda, Alessandra Piras. Supercritical CO₂ Extraction of Waste Citrus Seeds: Chemical Composition, Nutritional and Biological Properties of Edible Fixed Oils. *European Journal of Lipid Science and Technology* (2019) Volume 121, Issue 7, ISSN: 14387697, DOI:10.1002/ejlt.201800502
27. Di Petrillo A., María González-Paramás A., Rosa A., Ruggiero V., Boylan F., Kumar A., Pintus F., Santos-Buelga C., Fais A., Era B. Chemical composition and enzyme inhibition of *Phytolacca dioica* L. seeds extracts. *Journal of Enzyme Inhibition and Medicinal Chemistry* (2019) Volume 34, Issue 1, Pages 519-527 ISSN: 14756366, DOI: 10.1080/14756366.2018.156307
28. Fais A., Kumar A., Medda R., Pintus F., Delogu F., Matos M.J., Era B.[#], Delogu G.L.[#] Synthesis, molecular docking and cholinesterase inhibitory activity of hydroxylated 2-phenylbenzofuran derivatives. *Bioorganic Chemistry* Volume 84, 2019 March, Pages 302-30, ISSN: 00452068 DOI: 10.1016/j.bioorg.2018.11.043.
29. Di Petrillo A., Santos-Buelga C. Era B. González Paramás AM., Tuberoso C.I.G., Medda R., Pintus F., Fais A. Sardinian honeys as sources of xanthine oxidase and tyrosinase inhibitors. *Food Sci Biotechnol* (2018) 27(1):139–146, ISSN: 12267708, DOI: 10.1007/s10068-017-0275-z.
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31. Amit Kumar, Francesca Pintus, Amalia Di Petrillo, Rosaria Medda, Paola Caria, Maria João Matos, Dolores Viña, Enrico Pieroni, Francesco Delogu, Benedetta Era, Giovanna L. Delogu, Antonella Fais. Novel 2-phenylbenzofuran derivatives as selective butyrylcholinesterase inhibitors for Alzheimer's disease. *Scientific Reports* (2018) 8:4424, ISSN: 2045-2322, DOI:10.1038/s41598-018-22747-2.
32. Fais A., Era B., Di Petrillo A., Floris S., Piano D., Montoro P., Tuberoso C.I.G., Medda R., Pintus F. Selected Enzyme Inhibitory Effects of *Euphorbia characias* Extracts., *BioMed Research International*. Volume 2018, ISSN: 23146133, DOI: 10.1155/2018/1219367.
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- cytotoxicity and cell absorption. *Food Chemistry* 230 (2017) 82–90, ISSN: 03088146, DOI: 10.1016/j.foodchem.2017.03.019.
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 37. Di Petrillo A, González-Paramás AM, Era B, Medda R, Pintus F, Santos-Buelga C, Fais A. Tyrosinase inhibition and antioxidant properties of *Asphodelus microcarpus* extracts. *BMC Complement Altern Med.* 2016 Nov 9;16(1):453, ISSN: 1472-6882, doi: 10.1186/s12906-016-1442-0.
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Autorizzo il trattamento dei miei dati personali ai sensi del Dlgs 196 del 30 giugno 2003 e dell'art. 13 GDPR.