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## *COST ACTION GREENERING – DATA COLLECTION*

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**First name, Family Name:** Ana Aguiar-Ricardo

**Type (Academic or Industrial):** Academic

**Country:** Portugal

**Leadership position in the COST:**

**Working Group in which you are involved:** WG3. Education and Mobility and WG4 - Impact

**E-mail:** air@fct.unl.pt

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**Laboratory/Company:** LAQV REQUIMTE, NOVA School of Science and Technology (FCT NOVA)

**Laboratory/Company info (limited to 400 characters):**

LAQV embraces 871 researchers who are currently pushing the boundaries of Sustainable Chemistry and Chemical Engineering to provide sustainable and practical solutions for governments, industry, and the general public. LAQV research crosses the fields of Chemical Synthesis and Catalysis, Food Science and Technology, Natural Products, Analytical Methods, Intensification of Processes and Clean Technologies, Alternative Solvents, and Smart Materials.

**Link to the home page of the Laboratory/Company:**

<https://laqv.requimte.pt/research/research-groups/>;

[https://laqv.requimte.pt/people/27-ana\\_aguiar\\_ricardo](https://laqv.requimte.pt/people/27-ana_aguiar_ricardo)

**Fields of expertise (limited to 400 characters):**

- Supercritical fluid technology
- Nano to micro particle engineering for innovative medicines
- Non-invasive platforms for controlled drug delivery (e.g. via dermal and pulmonary routes);
- Hydrogels and stimuli-responsive materials, their processing and the design of new functionalization methodologies;
- Antimicrobial polymers for anti-biofouling applications, for water treatment and biomedical applications

**5 Main publications or patents:**

- Morgado, PI; Miguel S.P.; Correia, I.L.; Aguiar-Ricardo, A. Ibuprofen loaded PVA/chitosan membranes: A highly efficient strategy towards an improved skin wound healing, Carbohydrate Polymers 2017, 159, 136-145. DOI: 10.1016/j.carbpol.2016.12.029
- Silva, A.S.; Sousa, A.M.; Cabral, R.P.; Silva, M.C.; Costa, C.; Miguel, S.P.; Bonifacio, V.D.B.; Casimiro, T.; Correia, I.J.; Aguiar-Ricardo, A. Aerosolizable gold



nano-in-micro dry powder formulations for theragnosis and lung delivery, *Int. J. Pharm.* 2017, 519, 240-249. DOI:10.1016/J.IJPHARM.2017.01.03

- Restani, R.B.; Silva, A.S.; Pires, R.F.; Cabral, R.; Correia, I.J.; Casimiro T.; Bonifácio, VDB; Aguiar-Ricardo, A. Nano-in-Micro POxylated Polyurea Dendrimers and Chitosan Dry Powder Formulations for Pulmonary Delivery, *Part. Part. Syst. Charac.* 2016, 33, 851-858. DOI: 10.1002/ppsc.201600123
- Morgado, P.I.; Aguiar-Ricardo, A.; Correia, I.J. Asymmetric membranes as ideal wound dressings: An overview on production methods, structure, properties and performance relationship, *J. Membr. Sci.* 2015, 490, 139–151. DOI:10.1016/j.memsci.2015.04.064
- Correia, VG.; Ferraria, A.M.; Pinho, M. G.; Aguiar-Ricardo, A. Antimicrobial contact-active oligo(2-oxazoline)s-grafted surfaces for Fast Water Disinfection at the point-of-use, *Biomacromolecules* 2015, 16, 3904-3915. DOI: 10.1021/acs.biomac.5b01243

**Collaborations:** The group has well established collaborations with leading academic, research and industrial partners across the EU and worldwide. The list includes Hammond-Lab MIT(USA), Lund University (Sweden), University of Zaragoza (Spain), IST-UL (Portugal), FF-UL (Portugal), HOVIONE (Portugal), GeoSoils (Portugal).

**Facilities:**

- Supercritical CO<sub>2</sub>-assisted spray drying facility for production of dry powder formulations as well as encapsulation of different nano-in-micro particles, including loaded dendrimers,
- High-pressure apparatus for polymerization in supercritical CO<sub>2</sub> media.
- High-pressure apparatus for membrane production using scCO<sub>2</sub> -assisted phase inversion.
- Andersen cascade impactor equipment.
- Morphologi G3