

ADELE CUTIGNANO

Curriculum vitae

Adele Cutignano is a Senior Researcher at the Institute of Biomolecular Chemistry (ICB) of the Italian National Research Council (CNR) in Pozzuoli (NA).

She graduated summa cum laude in 1993 in Pharmaceutical Chemistry and Technology at University of Naples 'Federico II' where she obtained also her PhD in 1997. She moved at University of Salerno for post-doctoral studies receiving in 1999 the Specialization Degree in Hospital Pharmacy, with highest marks and honor. In 2001, she obtained a permanent position as Researcher at ICB where she has been the person in charge for the ICB Mass Spectrometry Facility until 2020.

She obtained the National Scientific Habilitation in Organic Chemistry at MIUR (Ministry of Education, University and Research) as Associate Professor in 2017 and as Full Professor in 2020.

She is partner of the Company BIOSEARCH srl, Spin-off CNR-SZN developing new drugs and cosmetics from marine biological sources.

Her research interests include:

- Chemistry of bioactive marine natural products. Isolation and structural elucidation of small metabolites by chromatographic, chemical and advanced spectroscopic/spectrometric methods (mainly NMR and Mass Spectrometry). The focus is on the products of the secondary metabolism of marine invertebrates and microalgae, which show ecological roles and/or pharmacological potential.

- Mass spectrometry-based approaches for targeted and untargeted metabolite analysis. Development and application of modern analytical workflows to assess lipid and polar metabolites chemical characterization, composition and levels in different biological matrices (animal and vegetal tissues, cells, biological fluids).

- Biosynthetic studies on secondary metabolites and lipids from marine invertebrates and microalgae. The basic methodologies rely on the application of stable labelled isotopes detection techniques (MS and NMR analysis).

Adele Cutignano participated to two Antarctica Expeditions (XVI PNRA Exped. Dec 2005/Jan 2006 and XXI PNRA Exped. Dec 2010/Jan 2011) and in July 2005 was recipient of a research grant for a Short Term Mobility Project 'Enzymatic activities involved in the biosynthesis of secondary metabolites from marine sources' at David Sherman Lab, Life Science Institute, University of Michigan, USA.

She has been Faculty member of PhD School in Pharmaceutical Science of University of Salerno (2004-2011); External Evaluator for a PhD Thesis of University of Barcelona, Spain (2010); component of several scientific committees for the selection of research fellow at ICB-CNR; she has been or currently is Scientific tutor of several MS students of University of Naples,

external tutor of hosted PhD students from Universities abroad, External Supervisor for PhD students from Open University/SZN.

Since 2015 she is in the Organizing Committee of the International Summer School on Natural Products held in Naples biyearly; she organized the Workshop “LC-MS and LC-MS/MS Method validation in scientific research”, Pozzuoli (NA), 12-13 September 2019 and the workshop ‘NMR and Mass Spectrometry at ICB: a research opportunity in Campania region’, Pozzuoli (NA), 4 November 2016. She has been Coordinator of the 2nd MARBEF Training Course on Chemical Methods in Marine Ecology Pozzuoli, Napoli, Italy 9-12 September 2008.

She is currently Editorial Board Member and Guest Editor of the International Journal Marine Drugs, Editorial Board Member and Guest Editor of the International Journal Phycology; Editorial Board member of the International Journal Frontiers Ecology and Evolution/Chemical Ecology, Expert Reviewer for Scientific Journal mainly in the field of Organic Chemistry and Analytical Chemistry (e.g. Organic Letters, Phytochemistry, Marine Drugs, Molecules, Metabolites, International Journal of Molecular Science, Journal of Natural Products, Journal of Cereal Science, Journal of Food Composition and Analysis, Analytical Chemistry, Algal Research).

She has been or currently is PI of Regional, National (PRIN, PNRA) and Bilateral projects (Portugal) as well as several research agreements with Research Institutions and Companies; she actively participated or currently participates to 13 National, 5 International and 7 Bilateral projects.

She was Invited Speaker at the XV International Symposium on Marine Natural Products (MANAPRO), Cumbuco, Brazil (2016) “Bioactive glycerolipids: news from the borders” and at G7 of Science - Augmented Observatories Workshop, Napoli, Italy (2017) “Metabolomics and marine resources”.

Scientific results of her research activity were presented in numerous International Conferences as oral and poster communications.

Adele Cutignano is author of 90 articles, chapter in books and review on international peer reviewed journals; 1 International Patent PCT/IB2014/062098 10/06/2014 ‘Use and preparation of glycolipids as adjuvants in vaccines’; 1 National Patent n. IT1417828 04/09 2015 “Uso e preparazione di glicolipidi come adiuvanti in vaccini”. H-index: 30 [Google Scholar, September 2021].