

## AT GLANCE.....

Alessia Ligresti is a medicinal chemist specialized in chemical biology leading a group at the Institute of Biomolecular Chemistry (ICB). Her scientific interest focuses on cannabinoids and particularly in investigating new cannabinoid based therapeutic applications for onco-metabolic and neurodegenerative diseases. She has also a longstanding experience in developing selective molecules specifically targeting the expanded endocannabinoid system. Recently, her scientific research expanded toward understanding of functional role of mitochondria in pathological conditions. She is co-inventor of 2 patents and has published over 117 scientific articles with key discoveries published in leading journals (H-index: 45, source Scopus).

## EDUCATION AND TRAINING.....

- 1996-2001 **Master Degree** in Pharmaceutical Chemistry and Technology (University of Naples "Federico II")
- 2001-2005 **PhD Degree** in Pharmaceutical Science (University of Naples "Federico II")
- 2005 (July-October) **Visiting Researcher** at Department of Biological Science, Allergan Inc., Irvine, California USA (Field of Study: Biological Science)
- 2006-2008 **Post-doc** at Endocannabinoid Research Group, Institute of Biomolecular Chemistry (Field of Study: Medicinal Chemistry)
- 2019 (June-July) **Visiting Professor** at Institute for Research in Biomedicine (IRB), Barcelona, Spain (Field of Study: Metabolism and Bioenergetics)
- 2022 (September) **Visiting Professor** at Maj Institute of Pharmacology of the Polish Academy of Science (Grant Agreement: PPI/PRO/2019/1/00038/U/001), Krakow, Poland (Field of Study: Neuropharmacology)

## RESEARCH AND PROFESSIONAL EXPERIENCE.....

- Since May 2021, **Eligible** in a **National Public Contest** (code 315.35) as **Director of Research** at National Research Council of Italy (CNR) [Executive from January 2022].
- June 2014, Habilitated as **Associate Professor** in **Biochemistry and Clinical Biochemistry** from MIUR (Italian Ministry of Education, University and Research).
- Since January 2010, "**Primo Ricercatore**" (equivalent to Research Associate Professor) at Institute of Biomolecular Chemistry, CNR.
- Since September 2006, **Eligible** in a **National Public Contest** (code NA19/1) as **Research Investigator** at Institute of Biomolecular Chemistry, CNR [Executive from January 2008].

## ADMINISTRATIVE ROLE AND POSITION RESPONSIBILITY.....

- April 2022, **Research Delegate** to present research activities and implement shared projects on Health and Energy in several Research Institutes of the Qatar Foundation (Doha, Qatar).
- Since August 2022, **Principal Investigator** of the "Hyper" project (under the ROSTRUM agreement between ICB and Pozzuoli Air Force Academy), which aims to evaluate the impact of the experience of suborbital flight (scheduled in 2023 at the Spaceport America in collaboration with Virgin Galactic) on the physiology of travelers.
- Since February 2021, **Member of the Scientific Advisory Committee** designated for the coordination of the framework agreement between ICB and Pozzuoli Air Force Academy (named "ROSTRUM") aimed at developing innovative training courses, research activities and technology transfer in aerospace sector.
- Since March 2019, **Scientific Referent** for the Collaboration Agreement between ICB and University of Portsmouth aimed at promoting staff exchanges and data sharing for a multidisciplinary approach related to potential and ongoing research programs.
- Since December 2019, **Scientific Referent** for the Master Academic Research Agreement with GW Pharmaceuticals (project code CoCRiN-Coordinated Cannabinoid Research in Naples).
- Since October 2018, **Scientific Referent** for the "Trialect Global Medical Education International Program" on the following project "Cancer Biology, Cannabinoids, and Chemoresistance to Human Tumors".
- From January 2016 to December 2020, **PhD Supervisor-Research Project Coordinator** and **Member of the Supervisory Board** for the H2020-MSCA-COFUND research project INCIPIT "Innovative Life Science PhD programme in South Italy" (grant agreement: 665403), which enabled 35 new PhD positions in South Italy.
- From 2014 to 2018, **Member of the Director Advisory Committee** at Institute of Biomolecular Chemistry, CNR.
- From 2014 to 2018, **Member of the RIND Service** (Servizio per le Relazioni con industria ed altre realtà produttive) at Institute of Biomolecular Chemistry, CNR.
- Since 2014, Habilitated as **National RUP** (Responsabile Unico Procedimento) at CNR, a role enabling the responsibility for public tenders falling under the European thresholds.
- June 2005 - June 2007, **Student Representative** for the International Cannabinoid Research Society (ICRS).

## OTHER WORK EXPERIENCES.....

- Since September 2021, **Scientific Consultant** for Obiettivo Qatar (Doha, Qatar)
- Since August 2021, **Scientific Consultant** for the "Cannabinoid Education Programme 360" of Jazz Pharmaceuticals (Dublin, Ireland)
- Since January 2019, **Scientific Consultant** for Entregando Soluciones (Barcelona, Spain)
- From April 2018 and September 2018, **SWOT Analyzer** for Sophos Biotech (Rome, Italy)
- From March 2012 to March 2016, **Scientific Consultant** for Allergan Inc. (Irvine, California)
- Since January 2012, **Scientific Consultant** for Embedded Solutions (Napoli, Italy)

## PRIZES AND AWARDS.....

- March 2020, Highly Cited Woman Researcher at CNR for Chemical Disciplines
- May 2009, Elected as promising leader for “Future directions in gastroenterology and appetite control” by the steering committee of the annual workshop of Astra Zeneca, Gothenburg, Sweden
- June 2005, Student representative award for outstanding work in the cannabinoid field for the international cannabinoid research society (ICRS)
- June 2004, Award for outstanding scientific presentation at the 2004 symposium on the cannabinoid, Paestum, Italy

## PROJECT/PROGRAM REVIEWING.....

- Reviewer for the RMIT European Doctoral Innovators (REDI) Program (since 2021).
- Reviewer for the Irish Research Council, for the Government of Ireland Postgraduate Scholarship and Postdoctoral Fellowship programmes (since 2021).
- Grant reviewer for the PRIN projects awarded by the Ministry for Instruction, University and Research (MIUR), Italy (2017-2019).
- Award reviewer for “Premio Nazionale Editoria Universitaria” (PNEU), Associazione Italiana del libro, Italy (2015-2018).
- Reviewer for the evaluation of Italian Research System (VQR), Italian Research and University Evaluation Agency (ANVUR), Italy (since 2014).
- From 2009 to 2022, Award Committee Member at International Annual Symposium on Cannabinoid Research (ICRS).

## PROJECT MANAGEMENT.....

- Research project: Endocannabinoid regulation of the motivational tone at the mesolimbic system driven by inflammation. Project start/end dates: March 2019/March 2022. Granting agency: National Science Centre of Poland. Gross amount: 2 852 070 PLN. Role: **Local Principal Investigator**
- Research project: Coordinate Cannabinoid Research in Naples. Project start/end dates: December 2019/December 2020. Granting agency: GW Pharmaceuticals. Master Academic Research Agreement. Gross amount: 540.000 GBP. Role: **Principal Investigator**.
- Research project: Therapeutic applications based on phytocannabinoids in neurodegenerative, neuromuscular and oncological diseases. Project start/end dates: December 2018/December 2019. Granting agency: GW Pharmaceuticals. Master Academic Research Agreement. Gross amount: 220.000 GBP. Role: **Principal Investigator**.
- Research project: Effect of phytocannabinoids on urinary microbiota in multistage murine model transgenic adenocarcinoma of mouse prostate (TRAMP). Project start/end dates: January 2018/December 2018. Granting agency: GW Pharmaceuticals. Gross amount: 70.000 GBP. Role: **Principal Investigator**.
- Research project: Innovative life science PhD programme in South Italy — INCIPIT. Project start/end dates: January 2016/December 2019. Granting agency: H2020-MSCA-COFUND. Gross amount: 5.200.000€ (total amount for 35 PhD positions) amount COFUNDED: 2.700.000€. Role: **PhD Supervisor-Research project coordinator-Supervisory Board Member**.
- Research project: New therapeutic strategies based on endocannabinoids, endovanilloids and bioactive amines of fatty acids. Project start/end dates: January 2016/December 2016. Granting agency: CNR internal grant. Gross amount: 195.000€. Role: **Principal Investigator**.
- Research project: Behavioral, proteomic and lipidomic analyses in adult male and female rats exposed to cannabinoids during adolescence: an integrative approach to identify markers of vulnerability for psychiatric disorders and drug abuse. Project start/end dates: August 2009/September 2012. Granting agency: Compagnia di San Paolo (Programma Neuroscienze). Gross amount: 300.000€. Role: **Principal Investigator**.
- Research project: Chemical and pharmacological characterization of cannabis extracts. Project start/end dates: February 2003/June 2007. Granting agency: GW Pharmaceuticals. Gross amount: 312.000€/per year. Role: **Research Project Coordinator**.
- Research project: Elevation of FAA levels and activation of CB/TRPV/prostamide receptors as a new therapeutic strategy. Project start/end dates: January 2005/January 2010. Granting agency: Allergan inc. Gross amount: 190.000€/per year. Role: **Research Project Coordinator**.
- Research project: Role of endocannabinoid system in the peripheral control of energy balance and fat mass: animal and clinical studies and possible mechanism(s) of action. Project start/end dates: April 2005/ April 2009. Granting agency: Sanofi-Aventis. Gross amount: 276.000€. Role: **Research Project Coordinator**.

## TEACHING ACTIVITIES.....

- April 2023, Teaching Activities at Complementary and Integrative Medicine Masterclass for Medical Doctors, Biologists and Pharmacists organized by University of Camerino.
- September 2022, Teaching Activities at Cannabinoid Masterclass for healthcare professionals organized by Jazz Pharmaceuticals
- October 2018, Teaching Activity for Medical Doctors, Biologists and Pharmacists organized by ECM Duchessa Jolanda
- March 2019, Teaching Activity for the 4th MS Pharma School organized by DSM-SCI (Divisione Spettrometria di Massa-Società Chimica Italiana)
- From 2012 to 2018 Teacher and Lab Trainer Coordinator with the MoSeF (Molecole Senza Frontiere) network for national dissemination activities (Futuro Remoto, Festival della Scienza, Notte Bianca dei Ricercatori, Alternanza Scuola-Lavoro).
- From January 2016 to December 2020, PhD Supervisor-Research Project Coordinator of H2020-MSCA-COFUND research projects.