



## Sara Standoli

Born in Teramo-Italy

Master Degree in  
Pharmaceutical  
Biotechnology-Departments of  
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## Cinzia Rapino

SSD BIO / 10: Biochemistry

Research field: Biochemistry  
of lipid mediators



## Dagmar Meyer zu

Professor at the institute for  
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## Tatiana Guzzo

C4T S.r.l  
Closseum Combinatorial  
Chemistry Centre for  
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Rome (IT)

*Innovative Organic Chemistry  
Solutions, for companies  
developing pharmaceuticals, fine  
and speciality chemicals.*

## Molecular Mechanisms of Neuroinflammation: Interaction between Endocannabinoids and other Bioactive Lipids

- In this project it is intended to individuate and characterize the molecular mechanisms by which the interaction between two systems of lipid mediators [the endocannabinoids (eCB) and the sphingosine-1-phosphate (S1-P)] can regulate the neuroinflammation process by using different methodological approaches of biochemical-molecular, cell imaging analyses and drug design technologies. The identification of specific molecular targets of crosstalk between the two systems able to reduce neuroinflammation will be used to develop new bioactive molecules as diagnostic instruments in order to treat neurodegenerative diseases.
- The research products will be enhanced through:
  - initiatives of results dissemination by participating in annual meetings, conferences as well as by scientific publication and discussion of the doctoral thesis; The student can associate to the Integrated Research Training group of the Collaborative Research Center SFB1039 (<https://www.lipidsignalling.de/en/kolleg/konzept.php>). This includes diverse seminars and also the Summer School.
  - technological transfer activity by the development and design of new molecules of eCB and S1-P systems as pharmacological prototypes with anti-inflammatory and neuroprotective action.



## Company role in PON RI project



- Co-projecting: The C4T Center has an extensive experience in specific research areas (for example, endocannabinoids, G protein coupled receptors, metalloproteinases, kinases) and will also provide innovative and selective modulators, already patented, of the eCB system, such as that of the type-2 cannabinoid receptor (CB2), which plays an important role in the processes of neuroinflammation.
- Training: C4T will increase the doctoral student's knowledge on drug design activities through computational technologies. In practice, the student will be able to follow the design of new molecules of the eCB and S1-P system, identified as possible therapeutic targets in the first phase of the project, through the most modern computational and organic synthesis technologies of Medium-Throughput Screening (MTS) technologies.
- Research: The research project, in collaboration with the foreign academic institution and C4T, will allow the PhD student to produce abstracts to be presented in national and international congresses and at least two publications in JCR journals for the achievement of the PhD title.
- Technological transfer: To encourage the technological impact on the sector of intervention, there is the commitment of the parties (UNITE, University of Goethe and C4T) to develop innovative pharmacological prototypes, which could potentially find a market.



## Publications

➤ Not yet available





## Scientific meeting

➤ Not yet available

