PROMEMO event in memory of Prof. Marco Capogna

Tuesday 21st November, 2023, at 14:00 (GMT+1)

PROMEMO
CENTER FOR PROTEINS IN MEMORY

PROGRAM

PROMEMO SEMINARS

Online / in person

14:00-14:05 **Introduction of speakers**

14:05-14:45 **Prof. Francesco Ferraguti (on-site):** *"Neural circuits mediating the influence of metabotropic glutamate receptor 5 on anxiety"*

14:50-15:30 **Prof. Peter Somogyi (online):** *"Exploration of cortical GABAergic neuronal diversity with Marco Capogna"*

15:30-16:00 **Break with refreshments**

COMMEMORATION OF MARCO CAPOGNA

Online / in person

16:00-16:10 **Welcome and introduction**
PROMEMO director Anders Nykjær

16:10-16:40 **Remembering Marco by his students /associates**
Theo Karayannis, Thomas Bienvenu, Marco Bocchio, Wen-Hsien Hou/Felipe Fredes

16:40-17:40 **Remembering Marco by his colleagues**
Scott Thompson, Peter Somogyi, Marco Beato, Thomas Klausburger, Dmitri Rusakov, Karri Lamsa, Norbert Hajos, Francesco Ferraguti, Cheng-Chang Lien, Anders Rosendal Korshøj, Sadegh Nabavi

17:40-18:00 **Remembering Marco by his friends/ attendees**
(Time for the rest of the participants who want to express themselves)
Teresa Ariosto

18:00-18:10 **Closing the commemoration session by joint memorizing**

18:10-18:45 **Reception (on-site)**

REGISTRATION

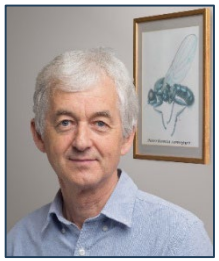
Link to sign up: https://events.au.dk/commemorationofmarcocapogna2023
Registration deadline, in-person attendance: **Friday 17th November at 10:00**
Registration deadline, online attendance: **Monday 20th November at 12:00**

VENUE

AIAS Auditorium, bldg. 1632,
Aarhus University, Høegh-Guldbergs Gade 6B, 8000 Aarhus C, DK
OR online via Zoom

INVITED SPEAKERS

Prof. Francesco Ferraguti



Prof. Peter Somogyi

Marco Capogna
1958 – 2022

Words in memoriam

Words from PROMEMO and DANDRITE PIs

Obituary in European Journal of Neuroscience

Obituary in Stiften

INVITED SPEAKERS

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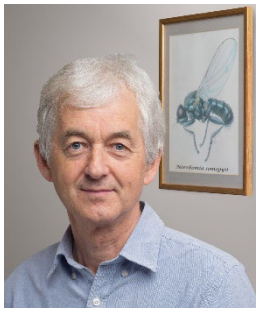

Professor Peter Somogyi, FRS FMedSci
Department of Pharmacology,
Oxford Neuroscience, University of Oxford, UK

Title of seminar

" Exploration of cortical GABAergic neuronal diversity with Marco Capogna"

Abstract

The function of any given cortical area is delivered by long-range glutamatergic neuronal outputs in co-operation with other parts of the nervous system. The activity of the glutamatergic neurons in any given area is shaped by more than 50 distinct local and some long-range GABAergic neuronal types, each specialising in affecting different cortical space and acting with distinct temporal dynamics. The action of each GABAergic neuronal type is supported by evolution-selected molecular mechanisms. I had the privilege to explore this diversity with Marco Capogna and other colleagues over decades at Oxford and marvel at the beauty of the neuronal diversity reflected in their spatio-temporal features. I will focus on two contrasting neuronal types, to the understanding of which Marco made seminal contributions. The the axo-axonic cell selectively innervates only the axon-initial segment of glutamatergic neurons, acts through GABA-A receptors and has profound influence on their firing. The neurogliaform cell in contrast, provides a uniquely dense, small axonal cloud influencing all neuronal processes through both synapses and by volume conduction acting through both GABA-A and GABA-B receptors. Both cell types participate in cortical function in all cortical areas including the hippocampal formation and the amygdala. The journey of exploration has been exciting and will continue long beyond our contributions and is already taken to new heights by some of our colleagues and students. I hope that one day the roles of each cell type will be explained in the context of a unified cortical spatio-temporal dynamic framework governing behaviour.

Professor Francesco Ferraguti
Institute of Pharmacology,
Medical University of Innsbruck, Austria

Title of seminar

"Neural circuits mediating the influence of metabotropic glutamate receptor 5 on anxiety"

Abstract

Anxiety disorders are highly prevalent psychiatric illnesses posing an important social and economic burden. Their current pharmacotherapy shows limited efficacy with more than one third of patients being poorly responsive or therapy resistant. There is, therefore, a strong medical need for new therapeutic agents acting through novel mechanisms of action. Recent preclinical and clinical studies have opened new prospects for targeting metabotropic glutamate (mGlu) receptors as novel anxiolytics. In my talk, I will present new data on how (mechanisms) and where (neural circuits) mGlu5 receptor antagonists impact the negative valence domain. Circuits and mechanisms underlying the anxiolytic-like effect in mice of mGlu5 receptor negative allosteric modulators (NAM) and benzodiazepines (BZD) will also be compared. Our work reveals important operational differences between BZD and mGlu5-NAM in their acute anxiolytic-like effects, that may open new therapeutic avenues.