

TRAINING SCHOOL LISBON, PORTUGAL

Signal and imaging biomarkers of cognitive status

TRAINING SCHOOL PUBLICATIONS

Five publications have been published in the third grant period.

**A WEBINAR** 

Nephrology)

"Brain and kidney" with the SFNDT (French Society of

Animal models to study the relationship between kidney disease and mild cognitive

impairment

TRAINING SCHOOL
ARIANO IRPINO, ITALY

The Clinical Relevance of Brain Modeling and Imaging Technologies UPCOMING EVENTS

What's next?

IN THIS ISSUE

NEWS FROM MC MEETING

TRAINING SCHOOLS

UPCOMING EVENTS





# NEWS FROM MC MEETING

We had management committe, core group and working group meetings on 26-27 May 2023 in Patras, Greece.



Each working group leader presented what they did and what they plan for the remaining 1,5 years.

We discussed the progress of expected deliverables by COST

such as a white paper informing concisely about cognitive impairment in nephrological patients; Guidelines for testing for – and/or treatment of – MCI in CKD patients and vice versa and the final report of the action.

# Next grant period's highlights

- Education and exchancing ideas
- Dissemination
- Guidelines
- Patient engagement
- Final report

# Healthy kidneys, healthy brain

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## TRAINING SCHOOL IN LISBON

Signal and imaging biomarkers of cognitive status

Organized by
Prof Alexandre Andrade
&
Dr Ana Carina Ferreira



This Training School took place on September 1st and 2nd at the facilities of the Institute of Biophysics and Biomedical Engineering and Faculty of Sciences of the University of Lisbon.

The attendants had the opportunity to learn about the mechanisms involved in aging and cognitive decline, including specific



aspects of CKD-associated decline, as well as biomarkers of cognitive status that can be assessed through non-invasive signal and imaging tools. A significant part of the TS was devoted to hands-on training in the acquisition and analysis of electroncephalography signals as well as analysis of functional magnetic resonance data. The attendants, who came mostly from the fields of nephrology and biomedical engineering, acquired knowledge and expertise relevant for the cognitive evaluation of patients in clinical setting that may complement traditional test-based methodologies.





## TRAINING SCHOOL IN BELGRADE

Animal models to study the relationship between kidney disease and mild cognitive impairment

28-29 September, 2023

Location: University of Belgrade, Faculty of Pharmacy



The training school organized by **Prof. Vesna Pesic (Belgrade)** and **Prof. Carsten Wagner (Zurich)** provided an introduction to animal models, mostly rodents, to study cognitive disorders in chronic kidney disease. The school was well attended by participants from 7 different countries with background in nephrology, pharmacy, pharmacology, neurosciences, or psychiatry.





During the first day the clinical problem of CKD and cognitive disorders was discussed while the second day focused mostly on animal



models and techniques. In the afternoons, practical demonstrations and discussions highlighted important issues and fostered exchange between participants and instructors. The great hospitality offered by the local organizers provided a very relaxed atmosphere during the training school.



### TRAINING SCHOOL IN ARIANO IRPINO

The Clinical Relevance of Brain Modeling and Imaging Technologies



Organized by Dr Michele Farisco

an interview, click <u>here</u>

Biogem hosted a short training school titled "The Clinical Relevance of Brain Modeling Technologies" on October 9 and 10. 13 attendees from 8 countries participated to the school, which included lectures from speakers from 3 countries. The goal of the school was two-fold: creating an interface between leading scientists from cutting-edge neuroscientific research and graduate students/junior researchers/clinicians from nephrology and medicine; providing people from nephrology and medicine with updated information about the state-of-the-art research on brain underpinnings of cognition, with a specific focus on computational, theoretical, and clinical neuroscience, in order to explore possible strategies to better translate most recent achievements into clinical practice. There were very engaging discussions and exchange of ideas, with a multidisciplinary engagement which promises to deliver very good results in the future.



## **CONFERENCES**



# The <u>ERA</u> project on Brain and Kidney Interaction (CONNECT): present and future

Moderator:

Giovambattista Capasso

Panel discussion: Ivan Rychlik (Czech Republic), Marion Pepin (France), Olivier Godefroy (France)

June 15-18, 2023, Milan, Italy

Connecting brain and kidney: a place for chronic kidney disease in cognitive disorders and aging

#### CONNECT symposium in **EuGMS**:

Connecting brain and kidney: a place for chronic kidney disease in cognitive disorders and aging Chairs: Giuseppe Paolisso, Italy, Francesco Mattace-Raso, The Netherlands



September 20-22, 2023, Helsinki, Finland

#### Speakers:

- 1. Is kidney function decline associated with cognitive decline? Marion Pépin, France
- 2. Kidney-Brain axis: is it only about vascular injury? Aleksandra Klimkowicz Mrowiec, Poland
- 3. Drugs with a potential negative impact on cognitive function in CKD: how can we improve prescription? Gaye Hafez, Turkey

## **Publications**



- 1. Sophie Liabeuf, Vesna Pešić, Goce Spasovski, Romaldas Maciulaitis, Mickaël Bobot, Ana Farinha, Carsten A Wagner, Robert J Unwin, Giovambattista Capasso, Inga Arune Bumblyte, Gaye Hafez, CONNECT Action (Cognitive Decline in Nephro-Neurology European Cooperative Target), Drugs with a negative impact on cognitive function (Part 1): chronic kidney disease as a risk factor, *Clinical Kidney Journal*, 2023;, sfad241, https://doi.org/10.1093/ckj/sfad241
- 2. Gaye Hafez, Jolanta Malyszko, Aleksandra Golenia, Aleksandra Klimkowicz-Mrowiec, Ana Carina Ferreira, Mustafa Arici, Annette Bruchfeld, Dorothea Nitsch, Ziad A Massy, Marion Pepin, Giovambattista Capasso, Laila-Yasmin Mani, Sophie Liabeuf, CONNECT Action (Cognitive Decline in Nephro-Neurology European Cooperative Target), Drugs with a negative impact on cognitive functions (Part 2): drug classes to consider while prescribing in CKD patients, Clinical Kidney Journal, 2023;, sfad239, https://doi.org/10.1093/ckj/sfad239
- 3. Giannakou, K., Golenia, A., Liabeuf, S., Malyszko, J., Mattace-Raso, F., Farinha, A., Spasovski, G., Hafez, G., Wiecek, A., Capolongo, G., Capasso, G., Massy, Z. A., & Pépin, M. (2023). Methodological challenges and biases in the field of cognitive function among patients with chronic kidney disease. Frontiers in medicine, 10, 1215583. https://doi.org/10.3389/fmed.2023.1215583
- 4. Pépin, M., Klimkowicz-Mrowiec, A., Godefroy, O., Delgado, P., Carriazo, S., Ferreira, A. C., Golenia, A., Malyszko, J., Grodzicki, T., Giannakou, K., Paolisso, G., Barbieri, M., Garneata, L., Mocanu, C. A., Liabeuf, S., Spasovski, G., Zoccali, C., Bruchfeld, A., Farinha, A., Arici, M., ... CONNECT (Cognitive Decline in Nephro-Neurology: European Cooperative Target) Action (2023). Cognitive disorders in patients with chronic kidney disease: Approaches to prevention and treatment. European journal of neurology, 30(9), 2899–2911. https://doi.org/10.1111/ene.15928
- 5. Farisco, M., Zecchino, I., Capasso, G., & CONNECT Consortium (2023). The need for a multi-disciplinary reflection about frailty and cognitive impairment in chronic kidney disease. Nephrology, dialysis, transplantation: official publication of the European Dialysis and Transplant Association European Renal Association, 38(5), 1064–1066. https://doi.org/10.1093/ndt/gfac334



# Webinar with the SFNDT (French Society of Nephrology)



6 June 2023, virtual a local activity

with the support of the CSL Vifor Laboratory

#### "Brain and Kidney"

Moderator: Mickaël Bobot (Marseille) & William Hanf

Screening for cognitive disorders and particularities in CKD

#### Dr Marion Pépin (Geriatrician, Paris)

Uremic toxins and cognitive impairment - **Prof Sophie Liabeuf (Pharmacologist, Amiens)**Specific treatments for ischemic stroke and particularities of renal failure - **Pr Laurent Suissa (Neurologist, Marseille)** 

Infections of the central nervous system in transplant recipients - **Dr Yanis Tamzali** (Nephrologist - Infectiologist, Paris)



Congrats!

JOIN THE RIDE FOR YOUR KIDNEY HEALTH!

19 August 2023

# Patient engagement!

In the next grant period, we are coming together with patient organisations. How should we explain the brain-kidney relationship to patients? What kind of events should we organize? What can we do together to raise awareness of this issue in Europe? Our first meeting was with the European Kidney Patients' Federation (EKPF) on October 23, 2023. For your suggestions, contact: Maria Jose Soler Romeo, Gaye Hafez

### **UPCOMING EVENTS**

**Management Committee meeting** 

Organized by: Prof Inga Arunė Bumblytė

Kaunas, Lithuania

s *Save* The date

> JUNE 27-28, 2024

#### **Training School in Istanbul**

Istanbul, Türkiye Organized by: Prof Mustafa Arıcı, Dr Gaye Hafez The program and the participant

acceptance details will be shared on our website and social media accounts.

Save The Date

SEPTEMBER 5-6, 2024 **Chair** Giovambattista Capasso

> Vice-Chair Robert Unwin

Scientific Communication Manager Jolanta Malyzko

Grant Holder
Universita della
Campania
Luigi Vanvitelli
Naples/Italy

**Grant Holder Representative**Giovambattista
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