Meet Clémence Blouet, our 2024 Jens Sandahl Christiansen Awardee in Basic Science

Dr Clémence Blouet, from Cambridge, UK, is our 2024 Jens Sandahl Christiansen Awardee in Basic Science. She will deliver her Award Lecture in Stockholm at ECE 2024. Read on to learn more about her career in endocrinology, her advice for future endocrinologists, and what you can look forward to hearing her talk about at the Congress.

Please tell us about your current role
I am a principal investigator at the MRC Metabolic Diseases Unit (MDU) at the University of Cambridge. The MRC MDU is dedicated to the study of the causes and consequences of obesity.

How were you inspired to work in endocrinology?
I obtained a PhD in human nutrition and, initially, I was primarily interested in the effect of macronutrients from the diet on the function of peripheral organs. During my postdoctoral studies, I became interested in the brain's role in how the body senses and uses nutrients. I was inspired by the studies of Luciano Rossetti and his group, showing that nutrient sensing in the brain can orchestrate complex metabolic and neuroendocrine responses.

What will you discuss in your Award Lecture at ECE 2024?
I will discuss our research on oligodendrocyte plasticity in the median eminence and its role in neuroendocrine functions and the regulation of energy and glucose homeostasis. Oligodendrocytes are a type of non-neuronal cell, present in the brain. They are formed during development and normally survive throughout adulthood, but we found that the way this lineage is regulated in the hypothalamus during adulthood is very different from the rest of the brain. In the median eminence, an important bidirectional hub for neuroendocrine signals, oligodendrocytes turn over rapidly, and contribute to local sensing functions.

What is likely to be the next breakthrough in your area of interest?
Recent advances have significantly enhanced our understanding of the neurochemical mechanisms and downstream neurocircuits that regulate various peripheral effectors of

energy and glucose homeostasis. An important, yet unexplored, question is how these circuits interact at a network level and integrate with cognitive inputs.

What are the biggest challenges in your field right now?
To acquire physiologically pertinent knowledge, it is necessary to incorporate sophisticated assessments that involve complex, inducible and site-specific gain-of-function and loss-of-function models in the brain, and to multiplex the gathering of diverse physiological variables. This continues to be a formidable challenge, both in terms of technical execution and assembling the appropriate team of experts needed to conduct these studies properly.

What are you most proud of in your career, and in life in general?
Reflecting on my past experiences, I am proud to have trusted my instincts and to have persisted in the detailed analysis of my initial observations, despite the technical obstacles encountered. Furthermore, I am proud to have attained this stage in my career while caring for my family, which has brought about a profound sense of balance and accomplishment.

What is the most enjoyable aspect of your work?
Exploring the unknown, and testing hypotheses, are certainly the most enjoyable aspects of this job for me.

What are you most looking forward to at ECE 2024?
I am looking forward to meeting a new group of scientists, from whom I will learn new things, leading me to view my data from a different perspective.

Why should people join ESE?
ESE offers a great platform for endocrinologists to advance their knowledge through conferences and courses, networking and building professional relationships, and provides opportunities for funding.

What words of wisdom do you have for aspiring endocrinologists?
It is an exceptionally thrilling time to enter this field! I believe it becomes much more engaging when the results of an experiment deviate from the initial predictions. Ensure that you design your experiments meticulously to yield clear data, and be prepared to revise your model as frequently as necessary, to accurately represent your experimental findings.