
Postdoctoral fellowship opportunity

You are What and When You Eat; Effects on Human Circadian System and Metabolism

Description

Two post-doctoral fellow positions are available for two new human research projects—using highly-controlled in-laboratory protocols:

- Project 1: Breakthrough animal experimental evidence and preliminary human data suggest that high fat-dietary intake may disrupt circadian organization and that circadian disruption increases the risk for obesity. This project will determine whether a high-fat diet, vs. a low-fat diet, will alter the circadian system and thereby circadian rhythms in energy intake and expenditure in humans. This research will provide novel mechanistic insights into the link between macronutrient intake and the circadian system, and may help in the design of evidence-based dietary intervention incorporating “timing” to combat the obesity epidemic. The successful applicant will be expected to complete this project and develop new research initiatives.
- Project 2: The endogenous circadian system plays an important role in regulating glucose tolerance, beta-cell function, diet-induced thermogenesis, and potentially fat tolerance. Levering this insight, we have developed a novel and translational approach that combines the concepts of the importance of WHAT we eat with the importance of WHEN we eat. This research will determine whether shifting high-carb intake to the biological morning and high-fat intake to the biological evening – without disrupting sleep, extending fasting duration, or changing 24-h caloric or macronutrient intake – can increase glucose tolerance, diet-induced thermogenesis, and fat tolerance, both under circadian aligned and misaligned conditions, with great translational promise for shift workers and the general population. The successful applicant will be expected to complete this project and develop new research initiatives.

The selected candidates will work under the co-supervision of Dr. Frank A.J.L. Scheer and Dr. Jingyi Qian, at the Medical Chronobiology Program (MCP), at Brigham and Women’s Hospital and Harvard Medical School. The MCP investigates the impact of the circadian system and circadian disruption on health and disease, as well as countermeasures against adverse health effects. We primarily study humans and focus on cardiometabolic function. More information about the MCP can be found at: <https://sleep.hms.harvard.edu/research/labs-divisions/medical-chronobiology-program-mcp>.

Expected background of candidates

We seek post-doctoral fellows (MD and/or PhD) who have excellent experimental and analytical skills in physiology, ideally in human metabolic function, nutrition, and/or circadian physiology and a record of publications in these areas. The positions require the ability to work independently as well as to perform effectively within a team. Excellent organizational, communication, and scientific writing skills in English are essential. We expect a strong interest in this research area, outstanding motivation, and a firm commitment to quality and productivity. These positions are expected to start the summer of 2023 and will be open until they are filled. The initial appointments will be for 2 years, renewable annually thereafter.

How to apply

To apply for one or both of the positions, the following documents should be sent by email to Frank A.J.L. Scheer, PhD (fscheer@bwh.harvard.edu) and Jingyi Qian, PhD (jqian@bwh.harvard.edu):

- Cover letter including motivation (also indicate if you have specific preference for Project 1 or 2)
- CV including contact information for three references
- Although this is not a condition of employment, please indicate whether or not you would be eligible for an NIH training fellowship (US citizen or permanent resident).

Brigham and Women's Hospital is an Equal Opportunity Employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, creed, sex, sexual orientation, gender identity, national origin, ancestry, age, veteran status, disability unrelated to job requirements, genetic information, military service, or other protected status.