

ERC STARTING GRANT funded Postdoctoral Fellow and PhD Student Positions in IMMUNOMETABOLISM in Ebru Erbay's Laboratory at Bilkent University, Ankara, Turkey:

My laboratory's research focus is at the intersection of nutrient-sensitive, inflammatory and stress pathways in the context of chronic inflammatory and metabolic diseases such as obesity, diabetes and atherosclerosis. A major, unanswered question in immunometabolism is: How do the excess of nutrients engage inflammatory and stress pathways in cells and lead to the development of chronic metabolic and inflammatory diseases? One clue is the chronic overloading of anabolic and catabolic organelles by nutrients leads to metabolic stress. Indeed, metabolic overload leads to endoplasmic reticulum (ER) stress and activates the unfolded protein response (UPR). We are interested in particular with ER's unconventional mechanisms of sensing the cellular lipid content and its role in coupling nutrient signals to inflammatory responses. Our laboratory's major goal is to probe the molecular differences between the detrimental consequences of metabolic ER stress and the adaptive UPR that could be therapeutically exploited in chronic metabolic and inflammatory diseases. The UPR consists of three branches, however, specific tools to control any of these arms were not available. Our approach to this problem involves using chemical-genetics to specifically modulate the activities of two important kinases in the ER stress response, IRE-1 and PKR. This method allows mono-specific activation or inhibition of only the modified kinase in cells and tissues in vivo. Furthermore, this will be coupled to substrate discovery (both RNA and protein) and creation of transgenic mouse models where the activity of these essential kinases can be regulated at specific points during atherogenesis. This work involves a multidisciplinary approach including cell and molecular biology, chemical-genetics, RNA-sequencing, proteomics, metabolomics, transgenic mice, in vivo disease modeling, advanced imaging techniques, and therapeutic targeting of miRNAs. Detailed information on the project can be obtained by directly contacting Dr. Ebru Erbay at eerbay@bilkent.edu.tr.

This is a very exciting research project funded for the first time by ERC Starting Grant in Life Sciences in Turkey. Several postdoctoral fellowship positions, PhD student positions, technician positions are available through an ERC Starting Grant, which will fund the above project for 4 more years. In addition, these positions come with exceptional benefits (including subsidized housing for single and family, childcare, enrollment in excellent private health insurance program, on campus Bilkent University health services, free transportation using Bilkent services, work computer, enrollment in Bilkent courses and continuing education programs, training and conference trips, etc.). The research will be carried out in our two new laboratories at the Department of Molecular Biology (<http://www.fen.bilkent.edu.tr/~bilmbg/> and <http://www.bilkent.edu.tr/~infobil/>) and the Nanobiotechnology Laboratory in the National Nanotechnology Research Center (<http://unam.bilkent.edu.tr/>) located in Bilkent University campus. Our labs are equipped with state-of-the-art equipment and have access to cores that will facilitate discovery.

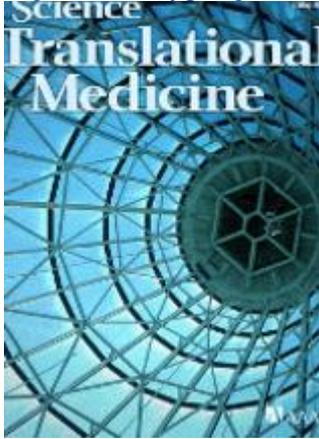
Please, contact Dr. Ebru Erbay to inquire further information. For application the following are needed: (1) CV, (2) Letter of Interest, (3) A list of published work and copies of 3 most recent/relevant articles (mainly required for postdoctoral applicants), (4) The contact information of 3 references. These can be emailed by the deadline of December 1 st, 2015 to eerbay@bilkent.edu.tr. Successful candidates will begin their new positions as of January 1st 2016. (PhD positions can be applied to officially to

Bilkent MBG and until MBG departments final application date: sometime in early January, 2016).

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