

CPSBB participates in the COST Action CA20121 Bench to bedside transition for pharmacological regulation of NRF2 in noncommunicable diseases



Non-communicable diseases (NCDs) such as cancer, diabetes, cardiovascular, neurodegenerative, respiratory or immune diseases, account for 77% of all deaths in the EU and remain the most prevalent and without effective therapy. Networking among multidisciplinary teams that face disease from a perspective of causative pathomechanisms rather than clinical symptoms is the most appropriate approach to overcome this problem. Such pathomechanisms imply the loss of homeostatic functions leading to the pathologic formation of reactive oxygen species, chronic inflammation, metabolic unbalance and proteinopathy. The transcription factor NRF2 is a master regulator of multiple cytoprotective responses and a key molecular link among many NCDs. It provides a unique strategy for drug development and repurposing that is now starting to be translated to the pharmacological and clinical arena. This COST action will build a network of excellence for integrating and spreading the existing knowledge and providing innovative services, drugs and tools related to NRF2-pharmacology, with the final goal of boosting the translation to the European industry sector. To achieve this, the COST action has already gathered a wide set of professionals from different disciplines (medical chemistry, pharmacology, clinical research, molecular biology, bioinformatics, etc.) and sectors (universities, research centres, hospitals, biobanks, biotech SMEs and pharma companies, etc.). At present, the action accounts 24 COST countries (66.7% ITC) plus 2 IPCs and 2 NNC. Among 73 proponents, 7 are SMEs, 18 are ECIs and 53.4% are women. Thanks to COST tools the Action will boost the career of young researchers, wide participation (especially from ITC countries), and spread excellence.

CPSBB is represented in CA20121 by Prof. Dr. Milen Georgiev.