

Europe tackles Chronic Kidney Disease with Systems Biology

25 Research groups from 15 countries will study a severe complication of diabetes and hypertension

Vienna -- SysKid, a large-scale integrating European research project, aims at understanding chronic kidney disease in the context of diabetes and hypertension. SysKid – which stands for »Systems Biology towards Novel Chronic Kidney Disease Diagnosis and Treatment« – will pave the way for progress in prevention, new diagnostic strategies and treatment options for declining kidney function, which affects millions of patients suffering from diabetes and hypertension. The project is driven by a European Union grant of EUR 11,8 million from Framework Programme 7 (FP 7) and a total project volume of close to EUR 16 million. SysKid's first general assembly will be held March 9-11, 2010 at the Medical University of Vienna.

Chronic kidney disease (CKD) caused primarily by diabetes and hypertension has a life-threatening and profound impact on the lives of a large number of patients in Europe. About 50 million people – ten percent of Europe's general population – are affected by the early stages of CKD. In these stages, the disease typically triggers cardiovascular complications and bone metabolism disorders. When CKD progresses, it makes patients dependent on renal dialysis and, eventually, kidney transplantation.

In Europe the prevalence of diabetes has been increasing rapidly in the last years – approximately seven percent of the general population is affected, but only half of the patients know about their disease. As a consequence CKD and cardiovascular complications as well as mortality will increase, too.

»Following a state-of-the-art Systems Biology approach, SysKid will establish a comprehensive picture of the consequences of diabetes and hypertension on kidney function,« says Dr. Bernd Mayer, managing partner of the R&D company emergentec biodevelopment GmbH, Vienna, who is coordinating the project. »We will focus on the early stage of chronic kidney disease and aim at identifying better strategies for prevention as well as novel diagnosis and therapy options to improve patients' quality of life«.

SysKid integrates a balanced mix of clinicians, statisticians, epidemiologists, molecular researchers and bioinformaticians from universities, small- and medium-sized enterprises as well as industry partners. This interdisciplinary approach aims at understanding the pathophysiology of chronic kidney disease, which in turn will provide tools both for identifying persons at risk for developing the disease as well as for the development of novel therapy approaches.

THE SYSKID CONSORTIUM involves 25 research groups from 15 countries: Austria, Belgium, Denmark, France, Great Britain, Germany, Hungary, Italy, Israel, Ireland, Poland, Spain, Switzerland, The Netherlands and the United States. The research project is to last for five years.

More Information: www.syskid.eu