

Data Driven Medicine: Examples from Respiratory Diseases

Lecture by Prof. Peter J. Sterk, MD, PhD

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Date

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University Children's Hospital Basel, Spitalstrasse 33, 4056 Basel, Aula, 2nd floor

Prof. Peter J. Sterk, MD, PhD, is emeritus and previous coordinator of research of the Dept. Respiratory Medicine, Academic Medical Centre, University of Amsterdam. He was trained as clinical physiologist and currently focuses on bio-clinical phenotyping of patients with chronic airways diseases.

Current research converges on translational studies in the phenotyping, monitoring and targeted therapies of asthma and COPD, in partnerships with (inter)national networks. It includes molecular fingerprinting of individual patients at various stages of chronic airways disease, putting emphasis on biological and clinical phenotypes rather than traditional diagnoses. This is being validated in human proof of concept models, such as experimental human in vivo exacerbations by rhinovirus infection, together with long-term cohort studies in child- and adulthood.

An integrative systems medicine approach prevails, in which the dynamics of airway function is coupled to temporal changes in molecular profiles within the airways, such as transcriptomics and particularly breathomics. The breathomics program is currently tested as a real-time precision medicine tool at point of care for patients with various phenotypes of chronic airway diseases, lung cancer and respiratory infections (www.breathcloud.org).

He is coordinator of the U-BIOPRED project, funded by the Innovative Medicines Initiative (IMI) from the European Union and the European Federation of Pharmaceutical Industries and Associations (EFPIA). He was Chief Editor of the European Respiratory Journal and Associate Dean of Graduate Studies of Academic Medical Centre, which provides teaching programs for 1500 PhD-fellows. He is one of the founders of the new Dutch National Program on Lung Research, in which researchers, care takers and patients collectively are advocating and boosting clinical and basic respiratory research (www.nationaalprogrammaalongonderzoek.nl).