

Laudatio Prof. Sir Richard Peto

Your Royal Highness,
Your Excellencies,
Members of the Board of the Heineken Foundation and the Alfred Heineken Fondsen Foundation, in particular their Chair, Mrs. De Carvalho,
Ladies and gentlemen,

Dear Professor Peto,

The jury of the Dr. A.H. Heineken Prize for Medicine has decided to award you the award for your outstanding and innovative achievements in the methodology of observational epidemiological research, clinical trial design and techniques to combine results of individual studies into one comprehensive 'meta-analysis'.

Your work in this field over the past decades has been implemented worldwide. In connection to your methodological work, you were able to provide a wealth of evidence to improve patient and population health, especially in the fields of smoking, lung cancer and the prevention of tobacco-related death; early breast cancer treatment; and lipid-altering interventions and cardiovascular risk.

Ladies and gentlemen, Professor Peto's work regarding observational studies of the causes of disease and regarding randomized trials of treatment can be described as reliable, robust and as investigations on a large scale. These studies often involve many investigators in developed and developing countries, and the results have a great impact on international disease control strategies.

Professor Peto was able to develop novel methods of statistical analysis, new types of research infrastructure, and also sophisticated computer-based data collection methods. Since even large studies may be too small to provide the real answers, he developed meta-analytical techniques. Meta-analysis can be based on outcomes of published studies but also on individual patient data from several studies on the same topic. This has brought a new standard for high level evidence in clinical medicine and this technique provides opportunities to identify different effects in clinical subgroups.

The hallmark of his work is clarity. The studies he designed show a unique ability to distinguish the essential from the redundant.

His early work together with the late Sir Richard Doll was a breakthrough in smoking research, and his later work in this area had and has major impact as to the recognition of the hazards of smoking and the benefits of stopping smoking. He is the leading expert on the worldwide tobacco problem, predicting one billion avoidable deaths this century if current smoking patterns persist. Working closely with Doll, Professor Peto demonstrated that half of all persistent smokers are eventually killed by their habit; however, even after decades of smoking, stopping this habit can prevent premature death. These findings have strongly supported anti-smoking strategies internationally, both in public and private domains.

Using a prospective meta-analytic approach, Professor Peto made pivotal contributions on treatment of early breast cancer. This was made possible through the establishment of the Early Breast Cancer Trialists' Collaborative Group in the mid-1980s. By now, this collaboration has shown that a combination of several moderate improvements in survival has added up to a halving of mortality. This research has influenced international treatment guidelines and clinical practice substantially, and is expected to continue to do so over the next decade.

Furthermore, Professor Peto contributed significantly to the study of cholesterol-lowering treatments, not only by doing clinical research in large series of patients, but also by meta-

analysis combining the evidence from various individual studies. The consequence has been the acceptance and implementation of cholesterol-lowering treatment by statins.

Richard Peto studied in Cambridge and London, and works as a scientist in Oxford since 1969, where he became a professor in medical statistics and epidemiology in 1992. He is one of the founders and current directors of the Clinical Trial Service Unit and Epidemiological Studies Unit. This institute recently received the Queen's Award for Higher and Further Education.

He is a Fellow of the Royal Society and was knighted for services to epidemiology. He is listed among the 20 most cited medical researchers of our time. He received a number of prestigious awards and honorary professorships.

Professor Peto, you are an impressive leader in independent scientific research in a context of huge societal and commercial interests involved with e.g. tobacco and statins. In view of your longstanding, outstanding and internationally achievements in epidemiology, meta-analysis, and international public health research, according to the jury, you, Sir Richard Peto are the awardee of the Dr. A.H. Heineken Prize for Medicine 2008.

Prof. dr. Jos van der Meer,
Chair of the jury of the Dr. A.H. Heineken Prize for Medicine 2008