



PRINCE MAHIDOL
AWARD CONFERENCE

2017



ADDRESSING THE HEALTH OF
VULNERABLE POPULATIONS
FOR AN INCLUSIVE SOCIETY

Opening Session
by Her Royal Highness
Princess Maha Chakri
Sirindhorn

OPENING SESSION

& KEYNOTE ADDRESS

Keynote Address

Sir Gregory Paul Winter

Prince Mahidol Award Laureate 2016 in the Field of Medicine
Master of Trinity College, University of Cambridge
United Kingdom

Professor Vladimir Hachinski

Prince Mahidol Award Laureate 2016 in the Field of Public Health
Distinguished University Professor, University of Western Ontario
Canada

Professor Amartya Sen

Nobel Memorial Prize in Economic Sciences 1998
Professor, Harvard University
USA



Sir Gregory Paul WINTER

Prince Mahidol Award Laureate 2016

in the Field of Medicine

Master of Trinity College, University of Cambridge

United Kingdom

Sir Gregory Paul Winter is one of the world's leading scientists and a pioneer in the field of antibody engineering and modification technology. In the mid 1980s he invented techniques to humanize antibodies for therapeutic uses, which later led to the creation of cutting-edge therapeutic drugs used widely in medicine.

Previously attempts to use antibodies to treat human disease had been limited by the way they had been made from animals, as the antibodies were recognized by the human immune system as foreign and rejected. Sir Gregory developed techniques to isolate the antibody genes from the animal cells and alter the antibodies so that they were now compatible with human immune system when injected into human body. These newly developed antibodies were called "Humanized Therapeutic Antibodies" The advances in the use of humanized antibodies as therapeutic drugs have provided new ways to prevent and treat several diseases, including immune disorders, degenerative diseases, and different types of cancer.

There are now more than 50 new antibody-based drugs in clinical use. For example trastuzumab has been used to treat breast cancer, and adalimumab to treat inflammatory diseases such as rheumatoid arthritis, Crohn's disease, and plaque psoriasis. The latter is reported to be the top selling drug in the world. At the current rate, 3-5 new therapeutic antibodies are being approved



each year. The application of therapeutic antibodies ranges from treatment of illnesses in small group of people such as paroxysmal nocturnal hemoglobinuria to illnesses of million patients such as cancers, multiple sclerosis, asthma, and rheumatoid arthritis.

Sir Gregory Paul Winter graduated from Trinity College, University of Cambridge in 1973 and obtained his PhD in 1976. He was Joint Head of Division of Protein and Nucleic Acids Chemistry of the Medical Research Council Laboratory of Molecular Biology (LMB) and Deputy Director of the MRC Center for Protein Engineering. He is one of the most successful academic entrepreneurs by establishing biotech companies; Cambridge Antibody Technology, Domantis and Bicycle Therapeutics, which is worth over £930 million. His current position is the Master of Trinity College, University of Cambridge.



Professor Vladimir HACHINSKI

Prince Mahidol Award Laureate 2016

in the Field of Public Health

Distinguished University Professor, University of Western Ontario

Canada

Vladimir Hachinski, CM, MD, FRCPC, DSc, FRSC, Doctor honoris causa^{X4} is Distinguished University Professor of Neurology and past Richard and Beryl Ivey Chair of the Department of Clinical Neurological Sciences, University of Western Ontario, London, Canada. He graduated with an MD from the University of Toronto and trained in internal medicine and neurology in Montreal and Toronto and in research in London, U.K. and Copenhagen.

His contributions include pioneering with Dr. John W. Norris of the world's first successful acute stroke unit, now the standard of care. He coined the term brain attack to stress the urgency of stroke and discovered the key role of the brain insula in cardiac complications including sudden death. He has been an advocate, contributor and thought leader in the vascular (treatable) component of dementia, crystallizing the concepts and coining the terms multi-infarct dementia, leukoaraiosis, vascular cognitive impairment, brain at risk stage, and devising the Hachinski Ischemic Score that identifies the treatable component. (over 2500 citations) He was the principal neurological investigator of the Canadian American Ticlopidine Study (PI M. Gent), the EC/IC Bypass Study and the North American Symptomatic Carotid Endarterectomy Trial (PI HJM Barnett). With Shawn Whitehead and David Cechetto he discovered a link between Alzheimer disease and stroke, paving the way for novel therapeutic approaches. Recently he and colleague showed for the first time decreased dementia incidence at a whole population level, concomitant with a successful stroke strategy. He led the adoption of a Proclamation addressing stroke and potentially

preventable dementia on behalf of the World Stroke Organization endorsed by Alzheimer's Disease International, World Federation of Neurology, World Hypertension League, American Heart/Stroke Association, American Academy of Neurology, World Heart Federation, European Academy of Neurology, Heart and Stroke Foundation of Canada, Alzheimer's Association, Alzheimer Society of Canada and 12 other organizations aimed at uniting the stroke and dementia communities in a common effort to prevent stroke and potentially preventable dementias.

He authored, co-authored or co-edited 17 books, and over 700 scientific and scholarly publications resulting in over 32,000 citations and a Hirsh index of 84. His publications were cited over 2000 times in 2015. He has mentored over 100 physicians and scientists, some now leaders in their own right. He was the Editor-in-Chief of the journal STROKE, the leading publication of this field from 2000-2010. He introduced 9 international editions and a unique mentorship program for authors of developing countries.

He won the first Trillium Clinical Scientist Award, of the Ontario Ministry of Health to honor medical scientists working in Ontario, "in recognition of outstanding research accomplishments and contributions to Ontario health care." He received a Doctor honoris causa from the University of Salamanca, Spain, the Mihara Award of the International Stroke Society and the Willis Lecture Award, the American Stroke Association's highest honor. He is a Fellow of the Canadian Academy of Health Sciences.

In 2008 he was named to the Order of Canada, the country's highest award. In 2010 he received the Ontario Premier's Discovery Award in the Life Sciences and Medicine for "ground breaking research on the relationship between stroke and Alzheimer disease", and the World Stroke Organization Leadership in Stroke Medicine Award: "Stroke: Committing to a World Agenda". He won the 2011 International BIAL Merit Award in Medical Sciences for a monograph on "The Long Fuse: Silent Strokes and Insidious Alzheimer Disease" and in 2012 got a Doctor honoris

causa from the Russian Academy of Medical Sciences. In 2013, he received the Order of Ontario and a Queen Elizabeth II Diamond Jubilee Medal. He was the 2013 Paddison Lecturer and was awarded the Chancellor's Award Lecture in Neuroscience and Neurology for his "contributions to neurological sciences and for outstanding academic leadership" at the University of Louisiana. He is past and first Canadian President of the World Federation of Neurology and the Founding Chair, World Brain Alliance.

In 2014, Dr. Hachinski was the Allan & Maria Myers International Visiting Fellow at the Florey Neurosciences Institute, Melbourne, Australia, he received the Karolinska Stroke Research Award, he became the Brain Visiting Scholar at Oxford, Cambridge and London Universities and a Fellow of the Royal Society of Canada. In 2015 he was awarded the Career Scientist Award from the Lawson Research Institute, Ontario and in 2016 the McLaughlin Medal of the Royal Society of Canada, recognizing "research of sustained excellence in medical science".



Professor Amartya Sen

Nobel Memorial Prize in Economic Sciences 1998

Professor, Harvard University

USA

Amartya Sen is Thomas W. Lamont University Professor, and Professor of Economics and Philosophy, at Harvard University and was until 2004 the Master of Trinity College, Cambridge. He is also Senior Fellow at the Harvard Society of Fellows. Earlier on he was Professor of Economics at Jadavpur University Calcutta, the Delhi School of Economics, and the London School of Economics, and Drummond Professor of Political Economy at Oxford University.

Amartya Sen has served as President of the Econometric Society, the American Economic Association, the Indian Economic Association, and the International Economic Association. He was formerly Honorary President of OXFAM and is now its Honorary Advisor. His research has ranged over social choice theory, economic theory, ethics and political philosophy, welfare economics, theory of measurement, decision theory, development economics, public health, and gender studies. Amartya Sen's books have been translated into more than thirty languages, and include Choice of Techniques (1960), Growth Economics (1970), Collective Choice and Social Welfare (1970), On Economic Inequality (1973, 1997); Poverty and Famines (1981); Utilitarianism and Beyond (jointly with Bernard Williams, 1982); Choice, Welfare and Measurement (1982), Commodities and Capabilities (1985), The Standard of Living (1987), On Ethics and Economics (1987); Hunger and Public Action (jointly with Jean Drèze, 1989); Inequality Re-examined (1992); The Quality of Life (jointly with Martha Nussbaum, 1993); Development as Freedom



(1999); *Rationality and Freedom* (2002); *The Argumentative Indian* (2005); *Identity and Violence: The Illusion of Destiny* (2006), *The Idea of Justice* (2009), *An Uncertain Glory: India and Its Contradictions* (jointly with Jean Drèze, 2013), and *The Country of First Boys* (2015).

Amartya Sen's awards include Bharat Ratna (India); Commandeur de la Legion d'Honneur (France); the National Humanities Medal (USA); Ordem do Merito Cientifico (Brazil); Honorary Companion of Honour (UK); the Aztec Eagle (Mexico); the Edinburgh Medal (UK); the George Marshall Award (USA); the Eisenhower Medal (USA); and the Nobel Prize in Economics.