

## Citation for the award of Doctor of Medical Science (honoris causa) to Professor John G McHutchison

Discovering a genuine cure for any disease is a rare and precious event. Discovering and developing an effective cure for a disease that affects millions of people differently, according to their genetic background, is truly extraordinary.

Chronic Hepatitis C Virus (HCV) is a major global public health concern, estimated by the World Health Organization to affect 71 million people worldwide, often causing cirrhosis and carcinoma of the liver. The standard of care, however, for this serious, progressive and often life-threatening disease is changing rapidly, due in large part to Professor John McHutchison's 30 years dedicated to explaining the genetic basis of differing patient responses to HCV infection, and developing a series of curative treatments that apply to allcomers.

After graduating MBBS from the University of Melbourne in 1981 John McHutchison completed his basic training in internal medicine, then a fellowship in gastroenterology, at the Royal Melbourne Hospital where his interest in liver disease, and his work with hepatitis patients began.

Following a move to the USA, working at the University of Southern California and subsequently Scripps Clinic, John McHutchison published a seminal research paper in the *New England Journal of Medicine* that demonstrated the value of combining interferon-alpha treatment with ribavirin, the result of a large clinical trial in patients with HCV infection. This became the standard of care for the next 15 years: a significant improvement on the previous treatment which had little effect for most patients. In follow-up studies he demonstrated the significance of racial background in determining therapeutic response and proposed the tailoring of personalised medicine based on HCV genotype. Then, while at Duke University, he used a genome wide association approach to identify and explain the critical role played by different host genetic variations in patient responses to HCV infection and treatment regimens.

The extraordinary significance of this work was acknowledged by John McHutchison's election to the prestigious Association of American Physicians and he was subsequently appointed, as Senior Vice-President, Liver Disease Therapeutics, at Gilead Sciences, in 2010. More recently, he has been appointed an Officer of the Order of Australia. At Gilead, he has been responsible for developing four antiviral drug combinations, Sovaldi®, Harvoni® and the more broad-spectrum Epclusa®, and Vosevi® regimens. These small molecule drug combinations can with a simple once daily short course of treatment of 8-12 weeks duration collectively cure nearly every patient infected with HCV, Thanks to this work, HCV now represents the first chronic viral infection to be totally curable, irrespective of ethnicity ,viral genotype, or the severity of the underlying liver disease.

John McHutchison's work has direct implications for the health and well-being of the broader community. The dedicated contributions of his team, collaborating with academic and government institutions and non-government organisations, have enabled national health systems of underdeveloped countries to adopt ambitious initiatives to eliminate HCV making the promise of global control of HCV a potential reality within the next decade. In Australia, his team is collaborating with several academic centres to curb the spread of HCV infection in prisons and among intravenous drug users.

Professor John McHutchison is recommended for the award of Doctor of Medical Science (honoris causa) for his innovative and ground-breaking work aimed at eradicating Hepatitis C Virus and eliminating the suffering it causes to millions across the world. His novel and highly sophisticated approach has elucidated for medical practitioners which patients do or do not need treatment; which treatment combinations are most effective for which patients; and he has led the development of the combination therapies that are now achieving astounding rates of cure.