



Professor Alan Mackay-Sim

2017 Australian of the Year

Alan Mackay-Sim is a neuroscientist and stem cell scientist. He graduated with a PhD from Macquarie University in 1980 and worked at the University of Sydney, the University of Pennsylvania, the University of Wyoming and the University of Adelaide before taking up a position at Griffith University in 1987. In 2015 he retired and was appointed Emeritus Professor. His research has encompassed the human sense of smell and how the olfactory sensory neurons in the nose get regenerated throughout life. He identified the olfactory stem cell in the nose that is responsible for the regeneration of the sense of smell and uses these “adult” stem cells and other olfactory cells from the nose for therapeutic purposes.

Alan is a world leader in spinal cord injury research using nasal olfactory cells. He led a team from Brisbane in a world-first clinical trial in which the patient’s own olfactory cells were transplanted into their injured spinal cord in the first stages of a therapy to treat human paraplegia. Alan established the National Centre for Adult Stem Cell Research in 2006 and built an adult stem cell bank with cells from more than 300 people with different neurological conditions including schizophrenia, Parkinson’s disease, mitochondrial mutation disorders, Hereditary Spastic Paraplegia, ataxia telangiectasia and motor neuron disease. These stem cells are used to identify the biological bases of neurological diseases using genomics, proteomics and cell function assays and this work is leading to new drug therapies. Alan is 2017 Australian of the Year.