



# Goodbye Ted (an obituary for Edward G. Jones)

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*“A tribute to one of the most distinguished neuroanatomists of our times, Ted Jones.”*

One disadvantage of the passing of time is seeing those who were our mentors and advisors, and subsequently our colleagues, pass away. We are confronted with such a sad circumstance now with the unexpected death of Edward G. Jones – known to his friends simply as Ted. His death represents a tremendous loss for us and for all those who had the good fortune to know him well. Ted deserved the public recognition he received for the numerous important scientific contributions he made during his extensive career. Indeed, we have lost not only a great friend but a magnificent neuroscientist as well.

Ted Jones was born in New Zealand in 1939. He was awarded his doctorate in medicine in 1962 from the University of Otago and his Ph.D. from Oxford University in 1968, for his work with Tom Powell, one of the most influential neuroanatomists of that era. With Powell, he began to study the thalamus and the cerebral cortex, jointly publishing more than 20 articles on these structures. At the end of the 1960s, Ted returned to New Zealand, and after a brief period at the University of Otago, he left for the USA in 1972 to take a position at the Faculty of Medicine at Washington University in Saint Louis. Twelve years later, in 1984, he moved on to California, first to UC Irvine, where he served as the head of the Department of Anatomy and Neurobiology, and then to UC Davis, where he was Chair of Psychiatry and was appointed Director of the Centre of Neuroscience in 1998.

His death on the 6th of June in Los Angeles interrupted a brilliant career that mirrored the past 45 years of evolution of the morphological sciences. Ted's career commenced in the heroic era of functional neuroanatomy, when silver impregnation was the dominant technique (the methods of Nauta, Fink-Heimer, and others), and continued through the golden age of

the discipline, characterized by the use of axonal transport tracers. He became a true master of electron microscopy and of the immunocytochemical techniques required to visualize neurotransmitters and their receptors, and moved on to new techniques to study the expression of specific genes and transcription factors. Ted was always capable of using the newest tools to study his two preferred brain regions: the thalamus and cerebral cortex. He also had a special interest in studying the role of the thalamus in the coordination and regulation of cortical function associated with consciousness and perception, as was evident from his many studies into the anatomy, physiology and, recently, the pathology of the cortico-thalamo-cortical circuit. Ted's demonstration that the cortico-thalamic system is organized as a means to synchronize the activities of thalamic and cortical neurons has been primordial to understanding the function of the thalamus. Thanks to him, we now know that the focalized cortico-thalamic axon originating in layer VI, along with diffuse axonal projection from layer V cortical neurons and the cells of the *core* and of the *matrix* of the dorsal thalamus, form a substrate for the synchronization of the disperse cortical and thalamic neurons populations during high frequency oscillations; we also know that these synchronizations underlie specific events of consciousness.

We cannot end this brief summary of Ted's main feats without mentioning his extraordinary work to categorize cortical neurons and his classification in function of their morphology, chemical characteristics, and connections, in which we had the great fortune to participate extensively. Ted is one of the most highly cited scientists of all the scientific areas, and his merits are recognized through a number of significant prizes and distinctions that he was awarded. He was invested Doctor *Honoris Causa* by the University of Salamanca, he served as president of the Society for Neuroscience, and he was elected a member

of the American Academy of Sciences. For his matrix-core theory of organization in consciousness and perception, he received the Karl Spencer Lashley Award from the American Philosophical Society in 2001.

While his groundbreaking research into anatomy made him one of the most outstanding neuroanatomists of the second half of the twentieth century, Ted was also involved in other fundamental scientific activities. His most recent work focused on understanding – through genetic and molecular analyses of the brain – the differences between the brains of patients with severe psychiatric problems, such as schizophrenia and bipolar disorder, and those of healthy individuals. He also formed part of the group of scientists working on the Human Brain project, the aim of which is to make databases available through Internet to neuroscientists interested in studying the function of the brain, and the tools for their analysis – a longtime dream of neuroanatomists and a project Ted enthusiastically supported.

Finally, among the huge volume of Ted's work spanning nearly half a century, we must not forget his studies of the history of neuroscience and the English translation of part of Santiago Ramón y Cajal's work, which he produced with one of us (Javier DeFelipe). Before this work, several studies by Cajal on the cerebral cortex had still not been translated, and it also produced a new translation of Cajal's works on the degeneration and regeneration of the Central and Peripheral Nervous System, with useful annotations and explications that have greatly helped to make the works of Cajal available to non-Spanish speaking members of the scientific community.

Neuroscience has lost one of its most charismatic leaders. Those of us who knew him will never forget this man who, through his effort and tenacity, extended the boundaries of neuroanatomy. We will dearly miss his great sense of humor, his good nature, his encyclopedic knowledge of the nervous system and of the history of neuroscience.

These qualities made him not only an ideal colleague but a great mentor.

There can be no better farewell than that offered by Antonio Machado:

**Vivid, la vida sigue,  
los muertos mueren y las sombras pasan;  
lleva quien deja y vive el que ha vivido.  
¡Yunques, sonad; enmudeced, campanas!**

**Live, life goes on,  
the dead go on dying, the shadows go by,  
the man who abandons still has, and the  
man who has lived is alive.  
Make noise, anvils; be silent, you church  
bells!**

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