

Citation for Professor Anthony Simon Turner

Professor (Simon) Turner has made an outstanding contribution to Veterinary Science principally through research in veterinary and biomedical sciences, as an educator in veterinary science, and as a mentor to students and graduates of the Faculty of Veterinary Science. Professor Turner is a professor in the Department of Clinical Sciences, College of Veterinary and Biomedical Science at Colorado State University.

Importantly, Professor Turner has been an unstinting supporter of the Faculty of Veterinary Science at the University of Melbourne through his scholarship support of students and his mentorship of University of Melbourne graduates in North America. Professor Turner had a formative role in the careers of many young graduates of the Faculty of Veterinary Science, both through leading by example and through personal mentoring of individuals.

Professor Turner has an extraordinary career. He was the first University of Melbourne veterinary graduate to become a member by examination of the American College of Veterinary Surgeons (1978) and was the first Australian veterinarian, and the only one to date, to be recognized by the American Veterinary Medical Association for lifetime achievement in research (Lifetime Excellence in Research Award, 2009). He also received a Distinguished Alumnus Award from The Ohio State University in June 2011.

After an initial career as a leading equine orthopaedic surgeon in North America that was distinguished by his authorship and co-authorship of three seminal textbooks on equine and large animal surgery, Professor Turner established the Small Ruminant Comparative Orthopedic Laboratory (SRCOL) in the College of Veterinary and Biomedical Sciences at Colorado State University in 1989. This laboratory has been very successful in developing and employing small ruminant (sheep) models of human disease. Professor Turner secured over \$8.2m in research funding as principal investigator between January 2006 and December 2010 for mainly comparative orthopaedic research. He is an author of over 130 refereed papers, including a 2001 publication in *Nature*, and an additional 200 abstracts and conference proceedings.

Professor Turner's research in the SRCOL began with characterization of the aged ovariectomized ewe as a model for postmenopausal conditions such as osteoporosis, heart disease, hot flashes and arthritis. He has investigated new therapeutic agents for osteoporosis including selective estrogen receptor modulators (SERM's). Other areas of research using the sheep have included investigation into new methods of enhancement of implant fixation in normal and osteoporotic bone, anterior and posterior spine fusion with various implants, and fracture healing. He has also evaluated implants to secure meniscal tears, meniscal transplantation and tendon reattachment to bone, and several hemostatic agents to reduce intra-operative bleeding from bone, liver, spleen and kidney. Currently his laboratory is evaluating materials to prevent soft tissue adhesion to the spine following laminectomy (a very common procedure in people) as well as a material to promote the healing of the dura in the brain.

Professor Turner's research and evaluation of medical devices and therapeutics have resulted in 11 products being available to the medical profession. One of the most rewarding products was a knee prosthesis used to replace bone afflicted with cancer. This prosthesis has been used in over 400 people, whose only other option was amputation. In 1997, in collaboration with Dr. Clint Rubin, State University of New York, Stony Brook, Turner's research results gained international attention by showing that the bone density in a sheep's hind legs increased when they were subjected to a very low force delivered at high frequency. This technology is now available to improve bone density in women.

Professor Turner serves on the review board of the journal of Veterinary Comparative Orthopaedics and Traumatology and is Consultant Editor for Veterinary Clinics of North America: Equine Practice (a role he has filled for almost 20 years). He was inducted in The Glover Gallery for distinguished alumni and faculty of Colorado State University in October 2001. Professor Turner has supervised 16 research higher degree students in veterinary science, chemical or mechanical engineering (14 Master of Science, one Master of Engineering, and one PhD).

Professor Turner has provided scholarship and mentoring support of veterinary students at the University of Melbourne through his perpetual scholarship with a Melbourne secondary school. His scholarship provides funding for books and supplies for the duration of the BVSc course and, more importantly, opportunities for mentorship by Professor Turner. He regularly visits Australia (at least annually and usually more frequently) and during those visits he meets with his scholarship students and their families (as appropriate). Professor Turner provides funding for his scholarship students to undertake a 3-6 week placement in the Veterinary Teaching Hospital at Colorado State University during their penultimate or final years in the BVSc. This placement is often combined with surgical research experience in his laboratory. Professor Turner devotes considerable time and effort to ensuring that his scholarship students have access to the best clinical learning opportunities available at Colorado State University. Professor Turner is also a valued resource for University of Melbourne graduates in veterinary science who intend to undertake post-graduate training (clinical or

research) in North America. He readily and expertly advises prospective students, assists them identify appropriate opportunities and mentors them once they take up their positions.

Professor Turner is one of the outstanding graduates of the Faculty of Veterinary Science at the University of Melbourne. His work in both veterinary and biomedical science is recognized around the world. Professor Turner has used his influence and contacts in North America to mentor and promote the North American phase of the careers of over 20 veterinary graduates from the University of Melbourne.