The Annual Meeting of Australian Neuroscience Society is the most prominent neuroscience meeting within Australia (and New Zealand), bringing together researchers and clinicians from all over the country to discuss the latest research developments in basic neuroscience as well as a wide variety of neurological diseases and conditions, including spinal cord injury. This year, the meeting was held in Auckland, New Zealand and had over 800 registrants. Prof. Tobias Bonhoeffer from the Max-Planck Institute delivered the overseas plenary lecture. He gave a truly inspiring overview of his work on plasticity in the adult brain that has revolutionised scientific thinking of the ability of the adult brain to form new connections between nerve cells, which has obvious implications for neurotrauma research from the perspective of plasticity in relation to rehabilitation and recovery.

There were two presentations directly originating from my lab. The first was an oral presentation entitled “Deficiency in complement anaphylatoxin receptors C3aR and CD88 worsens the outcome from spinal cord injury in mice,” which was given by myself in Session 28 “Neuronal Cell Death” on Thursday, the 3rd of February. In my talk, I summarised our recent research progress in relation to activation of the complement system following spinal cord injury, focusing on the putative reparative roles signaling through complement anaphylatoxin receptors in tissue inflammation and the wound healing response following spinal cord injury. Despite this being the very last session on the last day of the conference, it was very well attended. There were seven other presentations in this session, which covered a number of very interesting topics that presented novel insights into molecular mechanisms that contribute to death of nerve cells under various conditions. There was also an interesting talk from the Morganti-Kossmann laboratory at the National Trauma Research Institute detailing increased neurogenesis...
following traumatic brain injury. This endogenous response to injury could prove of therapeutic benefit if strategies can be developed to promote their long-term survival and integration. The second presentation from our lab was a poster detailing the use of high-resolution MRI to better study pathology and lesion site development in mice with experimental spinal cord injury. The development of methods that will allow researchers to conduct non-invasive imaging at relatively high-resolution in live animals is an important step forwards when studying the therapeutic window and treatment efficacy of strategic interventions targeted to improve the outcome from spinal cord injury. We are now aiming to publish these results over the coming months.

There were numerous other poster presentations and talks throughout the conference in relation to better understanding of the pathology associated with injury to the nervous system and other important associated adverse phenomena such as the development of neuropathic pain; these insights all contribute towards the detailed insight that is necessary when it comes to the development of innovative and effective interventions that can provide patients with brain and spinal cord injury with better treatment options and hope for recovery of lost function. Transplantation of stem cells continues to show promise as a treatment for brain or spinal cord injury although several hurdles in terms of survivability, differentiation and possible risks in relation to tumor formation still need to be overcome.

Another important development at the conference was a scheduled meeting of the so-called “Neurotrauma Group,” which brought together a significant number of registrants with an interest in neurotrauma and repair. Part of the discussion focused on how we could foster collaborations between ourselves to further neurotrauma research and the hunt for better treatment options. An exciting outcome of this meeting was that it was agreed upon by all attendees of this meeting to come together in the second half of 2011, most likely in Hobart, and have a small, specialised symposium on neurotrauma research and progress in Australia.
Finally, I would like to express my sincere gratitude to the Spinal Cord Injury Network for providing me with the opportunity to attend this meeting, which allowed me to showcase some of our research there, discuss our findings with colleagues and also establish new collaborations.