

**Report of the international  
congress of the transplantation  
society. August 2010 Vancouver,  
Canada**

**For the Novartis Transplantation  
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The international congress of the transplantation society (TTS) is a biannual congress organized for basic and clinical scientists worldwide. This year's congress was held in the new Vancouver convention centre in Canada from 15 to 19 august 2010. Over 4000 delegates have attended the 23<sup>rd</sup> TTS. This edition encompassed new insights in genomics, proteomics, diagnosis of human diseases, innovations in immunosuppression, approaches to tolerance, advances in surgery and imaging, and improvements in clinical practice. In this report I will highlight my experiences, the sessions I attended and the topics which were most intriguing.

On Saturday 14 august, one day before the official start of the congress, a “post graduate education meeting” was organized. At this meeting updates of organ donation and transplantation were presented and reviewed.

Dr. Philip Halloran gave a talk on the immunosuppressives used at present in transplantation medicine and the drugs which are in the pipeline in phase II and III studies. The next speaker was Dr. E. Cole who gave an overview of the clinical trials which have tested immunosuppressive minimization strategies. The trials show no significant benefits for steroid withdrawal after transplantation. Results of calcineurin inhibitor (CNI) avoidance studies, by using MTOR-inhibitors or JAK-inhibitors, have varied. CNI withdrawal can result in better renal function but also in more serious adverse effects.

One of the most interesting presentations of the day for me was given by Dr. Teun van Gelder of the Erasmus Medical Centre. His talk discussed the therapeutic drug monitoring of immunosuppressive drugs, and their interactions with each other. There is no clear-cut scientific evidence for the need to monitor drug concentrations of cyclosporin, tacrolimus or sirolimus. On the basis of their narrow therapeutic range though it is advisable to do therapeutic drug monitoring for there drugs, where therapeutic drug monitoring of mycophenolate mofetil might well be unnecessary. Dr. MacPhee gave an overview of the currently known pharmacodynamic monitoring strategies for CNI's. The last session of the day, in the evening, was about diagnostics and biomarkers used in transplantation to predict rejection.

The majority of participants arrived and registered for the congress on sunday 15 august, the official opening day of the 23<sup>rd</sup> TTS. The morning presentations were among others on “how to write a grant”, “how to get an article published” and “how to give a high impact presentation”. The latter two gave valuable information. For example to keep your audience interested and prevent them from drowsing off

between your introduction and the ending, it's advisable to have sub-conclusion slides in the middle of the presentation as well at the ending.

On Monday morning dr. Leroy Hood gave a very interesting talk about his group's work. They are developing chips to analyse hundreds of parameters with a single drop of blood. He predicts that with these chips it should be possible to map a person's total health state in ten years from now, from their immunosuppressive state until their cardiovascular risks and many other factors. His talk was followed by a presentation on monitoring the allograft status with a non-invasive method, protein analysis in the urine of patients.

In the concurrent sessions Dr. Bruce Hall from Australia presented her data showing that IL-2 activated T-regs have a 100 fold stronger capacity compared to normal T-regs to suppress rejection of grafts in animals. Dr. Li Li showed that their group can predict tolerance and chronic allograft rejection with 3 genes in peripheral blood.

In the plenary session on Tuesday the new CD-28 blocker Belatacept was discussed extensively and the second topic was how to induce and recognize tolerant patients in transplantation. In the concurrent symposia I visited the session on new immunosuppressive agents. Dr. Stephan Busque discussed the results of a phase 2 study with tasocitinib (CP-690,550). The patients receiving this drug had better renal function (glomerular filtration rate) and also more viral infections compared to the control arm using CNI's. The rejection rate was the same. The majority of the discussed abstract on new immunosuppressive drugs in this session, and also overall during the congress were on Belatacept. Belatacept has similar rejection rates compared to CNI's in a phase III study , better glomerular filtration rate and a slightly higher incidence of carcinoma's.

On Wednesday I gave a presentation on monitoring the effects of CNI's. It is known that CNI's inhibit calcineurin, but they also inhibit another pathway in T cells called the Map Kinase pathway. This has been shown in in vitro studies. Our study confirmed this effect of CNI's not only in vitro but also in vivo, in healthy volunteers and in kidney transplant recipients. In the afternoon I went to the concurrent session on prevention and Treatment of antibody mediated rejection.

At night a gala evening on a yacht was arranged for us on the waters of Vancouver. It was interesting to meet Dr. Gary Chan during this event. He works for Pfizer and is involved in the clinical trials on tasocitinib, the drug which I had an eposter about during this TTS congress. It was also very interesting to talk to nephrologists from Belgium and Argentina on the boat and hear their experiences.

On Thursday morning, the last day of the congress, I visited the concurrent session on therapeutic monitoring of immunosuppression. Dr. Kuypers gave an interesting talk on the contribution of pharmacogenomics and pharmacogenetics. It discussed his group's work on the variation in effects of CNI's due to CYP3A5 and ABCB-1 gene polymorphisms in patients. In the plenary session Dr. Petra Reinke from Germany gave a talk on biomarkers as guidance for immunosuppression. Her group has special interest in the expression levels of the toag-1 gene in peripheral blood of transplant recipients.

The congress was closed by the chairman of the next TTS congress, Dr. Peter Neuhaus, to be held in Berlin in 2012.