

Report on the 16th Congress of the German Transplantation Society October 11–13, 2007 in Mainz

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As has been customary the German Transplantation Congress was attended by transplantation physicians, members of the nursing staff, transplantation co-ordinators and – in particular during the final panel discussion – by patients and the interested public. The congress venue was the recently reopened Congress Hall ‘Rheingoldhalle’ of Mainz. According to the motto ‘Organs and Cell – Donate, Transplant, Maintain’ the Congress targeted particularly young scientists. Junior scientists obtained priority in presenting their scientific results, which was considered in the scientific programme and by the breach with the tradition of former meetings to invite internationally renowned scientists. Thirty-five young transplantation physicians were awarded with travelling supports and scientific awards were preferentially conferred to

junior scientists. Moreover, the viewing and discussion of posters – usually submitted by younger scientists was increased by granting them a poster session in addition to the traditional poster presentation. In accord with the general positive appraisal of this additional poster session, this new aspect of the German Transplantation Society should be retained in future meetings.

The Congress was opened by representatives of the Ministry of Health of Rhineland-Palatinate, the Lord Mayor of Mainz, the Johannes Gutenberg University and by the German Transplantation Society. During the opening ceremony a first scientific highlight was presented by Gerhard Opelz, Heidelberg, giving the lecture ‘Collaborative Transplant Study: Benefit of a Worldwide Transplant Registry’. According to the data collected in this registry the



Congress of the German Transplantation Society



Christoph Habermann, State Secretary of the Ministry of Health of Rhineland Palatine

results of organ transplantation are largely identical irrespective of the immunosuppression used. In kidney transplantation the use of calcineurin inhibitors surprisingly did not influence long-term graft function.

Among the numerous topics on specific organs, immunological issues, organ preservation and ethics in transplantation medicine, two plenary sessions are particularly worth mentioning: The first event was the plenary session entitled 'Cell and Tissue Transplantation – a Clinical Perspective'. M. Manns, Hannover, presented data on the use of hepatocytes to temporarily replace a failed liver which is presently in clinical evaluation using a novel technology. M. Grompe, Portland, reported on the multi-functional capacity of stem cells and on peculiarities in the process of stem cell processing for clinical application. Both presentations corroborated the requirement of fundamental research before these innovative clinical approaches of treatment may be introduced.

The second session entitled 'Scientific News from the Pharmaceutical Industry' was a comprehensive reflection of recent advances in immunosuppressive drugs replacing the



Georg Krausch, President of the Johannes Gutenberg University

traditional Satellite Symposia. The four main sponsors of the meeting presented results of recent clinical research as well as basic aspects concerning the role of B and T cells in rejection and novel approaches of inhibiting their activity.

The panel discussion on behalf of the 10th anniversary of the German Transplantation Act was the dominating event of the last congress day. Deputies of the German Organ Procurement Organization (DSO; Dr Th. Beck), of insurance companies (Th. Riegel), of the German Hospital Association (DKG; Dr R. Hoechstetter), of the National Ethics Council (Dr J. Taupitz) and of transplantation medicine (Prof. Dr R. Margreiter, Innsbruck) discussed crucial issues in organ donation which could not or only partially be solved by the German Transplantation Act: co-operation of the contributing hospitals, will and motivation of the German population to donate organs after death, issues of brain death and principles of its diagnosis. In particular, ethical and legal implications in organ donation which have been discussed for many years were a matter of controversial discussion. Based on the Austrian experience, the panel came to the agreement that



Jens Beutel, Lord Mayor of Mainz



Uwe Heemann, President of the German Transplantation Society

the rate of donated organs could be considerably increased by adopting the regulation of presumed consent. A comprehensive education of the population must be provided, but the German National Ethics Council has endorsed this approach in a recent statement.

Finally, the winners of the scientific awards and the issues of their scientific work are listed:

Rudolf Pichlmayr Prize awarded by the German Transplantation Society (sponsored by Biotest AG) to Sonja Schrepfer (Hamburg) for her comprehensive work on long-term action of new immunosuppressive drugs entitled 'New generation of immunosuppressants and immunomodulators in thoracic organ transplantation'.

Award of Organ Donation by the German Transplantation Society honoring particular activities in this field: Dietmar Mauer and his team for their initiative 'Family care following organ donation in the German organ procurement region Mitte'.

Astellas Prize 'Immunosuppression and Compliance': Tobias R. Türk for his study 'Influence of different immunosuppressive regimens on compliance after renal transplantation'. Long-term allograft function depends on a reliable intake of necessary immunosuppressive medication. In a prospective cohort trial the author analyzed different regimens.

Award for Groundbreaking Studies by Wyeth: Gudrun E. Koehl for her investigations on 'Development of *de novo* cancer in p53 knockout mice is dependent on the type of long-term immunosuppression used'. *De novo* malignancy is a major source of morbidity and mortality in transplant patients. Immunosuppression has been shown to be critical for tumor growth. The authors were able to show that rapamycin completely prevented *de novo* tumor formation in 40% of the animals and improved overall survival. These results are the first to show spontaneous cancers in mice arising from p53-mutations can be reduced by the immunosuppressant rapamycin.

Genzyme Award 2007: Katja Kosch for her studies entitled 'Molecular markers in the urine- determinants for acute rejection following renal transplantation'. Since acute rejection is a major risk factor for the development of chronic allograft nephropathy, earlier intervention may result in prolonged graft function. Focussing on noninvasive diagnostic approaches the authors could demonstrate that by monitoring selected markers (IP-10, granulysin, NKG2D) both short- and long-term allograft function may be predicted permitting optimized drug regimens.

Best abstracts of young authors

Maurits Vinkers: 'Using the P-PASS for the recognition of a pancreas donor'. This donor score can help recognizing a suitable pancreas donor. In the case of a high score, 1-year

graft survival is significantly jeopardized. The data demonstrate that donor score should be calculated and only low score donors should be considered for pancreas donation.

Nils Lachmann: 'Impact of anti-HLA and donor-specific antibodies on renal graft survival: a single center 4-year follow-up'. In this prospective study HLA and donor-specific antibodies appearing even several years after transplantation were demonstrated to impact late allograft outcome. Therefore, routine HLA antibody screening after transplantation is advocated in order to decrease graft failure and to initiate appropriate treatment.

Kay-Renke Schmidt: 'Glucose-depending insulin secretion of *in vitro* modified peripheral human blood monocytes'. *In vitro* modified peripheral human blood monocytes were described as a possible source for insulin-secreting cells. The authors demonstrated that cultured monocytes were positive for insulin and C-peptide. Blood glucose level of diabetic mice was significantly decreased within 1 h by this insulin. In addition, insulin-positive monocytes maintained their functional capacity for 100 days. Persisting function will be an issue of further studies.

Poster prizes

Rui Liang and Arash Nickkhah: 'Melatonin protects against hepatic reperfusion injury through inhibition of IKK and JNK pathways and modification of hepatocyte proliferation'. Melatonin is a potent scavenger of reactive oxygen species. In this study Melatonin significantly improved survival and decreased transaminase levels, cell damage and necrosis, leukocyte infiltration, and iNOS expression. These hepatoprotective effects could be further characterized to be mediated by inhibition of IKK and JNK pathways and regulation of cell proliferation.

Andreas Benesic: '*In vitro* transformation of peripheral monocytes to progenitor cells with putative hepatopoietic potential and their labelling with supraparamagnetic iron oxides for MR-analysis'. In the face of organ shortage cell-based therapies are hopeful alternatives. This study provides a functional approximation of monocyte-derived cells as a possible source of hepatocyte-like cells. Furthermore it implicates a viable approach for MR-detection.

Ekkehard Ziegler: 'In vitro and in vivo inhibition of T cell proliferation by CCL 19'. Immunosuppressive effect of CCL 19 is based on a control mechanism of chemokines regarding migration and proliferation of T cells. A reduced rejection rate after kidney and heart transplantation in a mouse model published in 2006 may be traced back to this principle.

Gerd Otto
Johannes Gutenberg University,
Mainz, Germany