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Participant 6. UREG-Professor Ernst Holler MD PhD, Klinikum der Universität Regensburg.

Professor Holler leads a new allogeneic stem cell transplant unit in Regensburg. His scientific research team is headed by Dr Günther Eissner. Professor Holler's expertise lies in the clinical role of cytokines and use of cytokine antagonists in the control of graft versus host disease as well as graft-versus-leukemia. Another major topic of his clinical and preclinical research focuses on clinical and experimental aspects of endothelial and pulmonary complications and includes mouse models of GvHD. He previously worked for over 20 years in the Med Klinik III, Klinikum Grosshadern, University of Munich with Professor Hans Jochem Kolb, Participant 8 . Professor Holler is an active member of the EBMT and IBMTR, and active participant of the EBMT 'Infectious disease working party' (WP) and the "Chronic Leukaemia WP" and the "Complications subcommittee of the CLWP". Prof Holler is involved in teaching activities at the level of the EBMT. Together with Prof Kolb he also collaborated on the ESH but also at the level of local graduate and postgraduate education. He is reviewer of major scientific journals in the field such as "Blood" and "Bone Marrow Transplantation"FP4 Demonstration Project 'Predicting GvHD in bone marrow transplant using *in vitro* techniques' and was Partner on the EUROBANK and TRANSEUROPE project and will continue to exchange samples and clinical data. Professor Holler's research is funded by several grants especially the 'Deutsche Forschungsgemeinschaft', the Deutsche Krebshilfe and the Wilhelm Sander Foundation. Professor Holler will allow the collection of patient and donor samples, and aid in the correlation of results with clinical outcomes**.** He will take care of coordination of clinical training and trials based on the experimental results of the network. Prof Holler has been involved for many years in specialized training activities for BMT physicians organized by the European School of Haematology and the EBMT. The Regensburg team employs 1 experienced researcher and 1 PhD research student.

Network Team:

Professor. Günther Eissner PhD, PD, Department of Haematology and Oncology, University of Regensburg (UREG). Dr. Eissner is heading the lab for experimental allogeneic BMT, and his expertise lies in vascular (patho)biology and its role for the pathophysiology of transplant-related complications, such as GvHD . One major focus is on leukocyte-endothelial interactions and on the allogenicity of endothelial cells. Dr Eissner has also been involved in the FP4 Demonstration project dealing with the skin explant assay, and is a participant on the EUROBANK project of FP5 which aims on the establishment of patient-specific cell lines for an individualized risk-adapted prophylaxis and/or therapy. Dr Eissner's research activities are funded in part by German foundations ('Deutsche Forschungsgemeinschaft (DFG)'). He previously received a fellowship of the 'Heisenberg' Programme of the DFG. **Professor Gabriele Multhoff** PhD, Department of Hematology and Oncology, Molecular Oncology, University of Regensburg (UREG). Prof. Multhoff is the head of the research group "NK cells in immunotherapy". For 10 years Prof. Multhoff has had a research interest in the development of NK cell mediated immunotherapeutic approaches based on heat shock proteins (HSP). Together with **Dr Claus Botzler,** Prof Multhoff founded the biotechnology company multimmune GmbH in 1999 and received a grant from the Deutsche Forschungsgemeinschaft in 2005 (DFG, MU1238 7/2). Prof. Multhoff's research group aims on the characterization of the immunological consequences of a tumour-specific membrane expression of Hsp70 on leukemic blasts. Incubation of NK cells with Hsp70 protein and an immunogenic peptide derived thereof increases the cytolytic activity of NK cells and results in an upregulation of activatory receptors on NK cells. Prof Multhoff will study therapy-induced modulations (including allogeneic bone marrow transplantation, extracorporeal photopheresis) on the Hsp70 membrane expression of leukaemia cells of patients and bone marrow donors during onset of disease and in progression as a novel prognostic marker for different haematological diseases. Furthermore, the immuno-modulatory effect of Hsp70 and MHC bound peptides will be studied in GvL and GvHD (functional assays: cytotoxicity assays, ELISPOT).

Patents - G Multhoff - Human colon carcinoma cell lines showing stable Hsp72 expression EP 99 105 128.5; G Multhoff - Novel use of Hsp70 protein - PCT/EP99/913314.3.; G Multhoff - An Hsp70 peptide stimulating natural killer (NK) cell activity and uses thereof - WO 02/022656 A3

Relevant References-

Prof. Holler

1. Holler E, Kolb HJ, Mittermüller J, Kaul M, Ledderose G, Duell T, Seeber B, Schleuning M, Hintermeier-Knabe R, Ertl B, Kempeni J, Wilmanns W. Modulation of acute GvHD after allogeneic bone marrow transplantation by TNF alpha release in the course of pretransplant conditioning: Role of conditioning regimens and prophylactic application of monoclonal antibody neutralizing human TNF ALPHA (MAK195F). **Blood,** 1995, 86:890-899

2. Holler E. Cytokines, Viruses, and Graft-Versus-Host Disease. **Curr.Opin.Hematol**., 2002, 9; 479-484

Dr. Eissner

1 Eissner G, Kirchner S, Lindner H, Kolch W, Janosch P, Grell M, Scheurich P, Andreesen R, Holler E: Reverse signalling through transmembrane TNF (mTNF) confers resistance to LPS in human monocytes and macrophages (M/Mφ). **J. Immunol.,** 2002, 164; 6193-6198

2 Eissner G., Multhoff G., Gerbitz A., Kirchner S., Bauer S., Haffner S., Sondermann D., Andreesen R., and Holler E. Fludarabine Induces Apoptosis, Activation, and Allogenicity in Human Endothelial and Epithelial Cells: Protective Effect of Defibrotide. **Blood**, 2002, 100; 334-34

Prof Multhoff

1 Gross C, Koelch W, DeMaio A, Arispe N, Multhoff G. Cell surface-bound heat shock protein 70 (Hsp70)

mediates perforin-independent apoptosis by specific binding and uptake of granzyme B. **J Biol Chem**., 2003, 278; 41173-41181
2 Gastpar R, Gehrmann M, Bausero M, Asea A, Gross C, Schroeder J, Multhoff G. **Can Res**, 2005, 65;5238-5247

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