Profile #2652

Profile #2652 - Medical University of Graz - Austria

Date: 2009/08/12	Deadline: 2013/12/31

Contact

Organisation	Medical University of Graz	**Department**	Stem Cell Research Unit and Transfusion Medicine
Contact person	Rohde, Mrs, MD Eva		
Email	eva.rohde@klinikum-graz.at		
Address	Auenbruggerplatz 3		
Postcode	8036	**City**	Graz
Country	Austria		
Telephone	+43 316 385 86877	**Fax**	+43 316 385 3429
Website	www.medunigraz.at/stemcellresearch		

Organisation

Type:	Research Organisation & Universities
Is a Small and Medium Sized Enterprise (SME)? NO	
Number of Employees	0
Description of research activity:	The Stem Cell Research Unit was established January 1, 2008 to reinforce successful developments in the field of adult stem cell research at the Medical University of Graz (MUG). PD Dr. Dirk Strunk was named the head of the SCRU by appointment of the rector of the MUG. The Stem Cell Research Unit consists of an interdisciplinary team of researchers from the Department of Hematology (Head: Prof. Werner Linkesch) at the Medical University Clinic and the University Clinic of Blood Group Serology and Transfusion Medicine (Head: Prof. Gerhard Lanzer). Our research and education curriculum is an integral part of the PhD Program Molecular Medicine at the Medical University of Graz. Our goal is the development of novel stem cell therapy concepts with a clear focus on adult human stem cells. We operate basic research laboratories including a good manufacturing practice (GMP)-compliant experimental stem cell production laboratory. Our Hematology group runs a diagnostic flow cytometry core facility for acute leukemia and stem cell typing with a frequency of approximately 1,500 patient samples (leading to >30,000 flow sample measurements) per year. The Stem Cell Research Unit has been among the leading research groups in Graz actively performing research at the new Centre for Medical Research (ZMF). The direct availability of human blood cell resources due to the involvement of the department for transfusion medicine makes us an attractive partner for research partners from industry and other institutions.

Former participation in an FP European project? YES

Project title / Acronym:	DISMAL LSHC-CCT-2005-018911 and Geninca HEALTH-F2-2008-202230
Activities performed::	The Stem Cell Research Unit of the Medical University of Graz was an associated partner of Prof. Dr. Michael Speicher, Head of the Institute of Human Genetics, Medical University of Graz, Austria, who performed research funded by the European Commission: DISMAL LSHC-CCT-2005-018911 and Geninca HEALTH-F2-2008-202230 Other funding was received from national grant support: by the Austrian Research Foundation (FWF) Grant N211-NAN, the Austrian National Bank project 12,569, and the project GATiB-Genome Austria Tissue Bank GZ200.139/1-VI/1/2006

Research topics

• HEALTH.2010.4.2.9-1: Optimisation of current methodologies and development of novel methods to achieve functional differentiation of human-based target cells in vitro. FP7-HEALTH-2010-Joint-Research-Initiative-Commission-COLIPA-single stage.

Expertise/commitment offered

Keywords specifying the expertise:	cell culture techniques, in vitro and in vivo cell function, human adult stem and progenitor functionality,

Description of the expertise:	Technology Offer N°1 Application number: EP 06 120 857.5 Title: Plasma-free platelet lysate for use as a supplement in cell cultures and for the preparation of cell therapeutics Pub. No. WO/2008/034803; Publication date 27.03.2008 Technology Offer N° 2 Application number: EP 07 104 031.5 Title: Method to study proliferation of endothelial progenitor cells and the potential influence of compounds on their proliferation behaviour M9499/DB (submitted 03/2007): EP07104031.5 EXPERTISE: Research activities focus on experimental and clinical transplantation of adult stem cells. Individual projects deal with the biology and function of hematopoietic progenitors and stem cells as well as non-hematopoietic mesenchymal stem cells (MSCs) and endothelial progenitor cells (EPCs) in vitro and in vivo. The aim of our work is to contribute to developments in the field of regenerative stem cell therapy. Regenerative medicine is an innovative therapeutic concept which aims to support organ regeneration after ischemic, metabolic or toxic injury using the newest medical strategies such as stem cell transplantation. The most common targets include cardiovascular, metabolic, neuro-degenerative and immunologic diseases, like, for example, acute and chronic heart disease, Parkinson's, Alzheimer's, diabetes and cancer. Based on a wide spectrum of experimental data and early clinical observations, regenerative stem cell therapy is currently being translated into a growing number of groundbreaking clinical trials. The stem cell therapy-related research at the MUG has focused on "making stem cells a clinical product". Several innovative strategies for the clinical-scale propagation of human stem cells have been developed. In one of our most current projects, we are attempting to utilize nanoparticles with high signaling capacity in magnetic resonance imaging to target human stem cells for high resolution, non-radioactive, non-invasive molecular imaging. To accomplish this goal we will access our state-of-the-art technology for the clinical-scale propagation of adult human stem cells under GMP conditions.
Commitment offered	Research,Demonstration,Training,Technology

Expectations

Term commitment:	Long (> 3 years)
Expected results for your organisation:	We expect exciting cooperation opportunities with industrial partners other partners derived from other research units for interdisciplinary, international and national research projects. We expect that we are able to provide our humanized cell culture systems for interested partners as we can offer a substantial head start position due to our long-standing experience in cell biology and cell culture techniques.