

Helmholtz Technology Transfer

The knowledge and technology transfer at the Helmholtz Association on which we report on this special page several times a year takes many forms: From the so-called "Transfer via Heads", over advisory services for politics and the passing on of socially relevant insights, to cooperation projects and licence agreements with companies or spin-offs.

Six New Spin-off Projects Chosen for Helmholtz Enterprise Funding

During the 15th selection meeting of the spin-off funding instrument Helmholtz Enterprise in May 2012, the selection committee recommended six new technology-based spin-off projects to receive funding from the Initiative and Networking Fund. The projects thus receive up to 100,000 Euro each from the Helmholtz Enterprise funding instrument to support the critical starting phase of a spin-off company. Together with the same amount of co-financing from the respective Helmholtz centres, the founders or, respectively, their institutes have at their disposal funding for one year, predominantly for covering personnel costs. The following projects are to receive funding:

Project Peicuris – Cardiac Arrhythmia Active Ingredient Development

The Peicuris project at the Max Delbrück Centre for Molecular Medicine (MDC) Berlin-Buch will concentrate on pre-clinical and early clinical development of low-molecular active ingredients for the treatment and prevention of atrial fibrillation. This new approach to treatment is based on an MDC research discovery significantly increasing the positive effect of omega-3 fatty acids. This innovative therapeutic effect of these substances holds the promise of advantages compared to conventional antiarrhythmic agents.

FastLoc – High-precision Microseismic Real Time Monitoring

The incorporators from the Helmholtz Centre Potsdam GFZ German Research Centre for Geosciences intend to develop a marketable service based on an innovative software with their FastLoc project, allowing for the real time, microseismic tracking of induced fractures in the so-called fracking or hydraulic fracturing procedure. Hydraulic fracturing is the targeted propagation of microfractures in geological rock formations for the purpose of exploiting shale gas, geothermal energy or fluidised hydrocarbon deposits.

mProbes – Nanomicroscopy with the KoalaDrive

The future mProbes GmbH, a spin-off from the Research Centre Jülich, has developed the KoalaDrive, an innovative motor for scanning probe microscopes, by which one can put into position microtools of a nanometre scale. This allows for increasing the resolution of a scan-



KoalaDrive. Photo: Forschungszentrum Jülich GmbH

ning probe microscope and dispenses with expensive vibration dampening. Moreover, several probes can be used at the same time, opening up potential for applications in the field of nano-electronics and for quality control in the semiconductor industry. Due to their small size, KoalaDrive microscopes can be easily integrated into other equipment.

SurgeryPad – Patient Anatomy Representation on a Tablet PC

The spin-off incorporators from the German Cancer Research Centre intend their SurgeryPad to provide a computer-based navigation system allowing for the targeted biopsy (cell and tissue sampling)



SurgeryPad.

Photo: Michael Müller, DKFZ

and treatment, of kidney tumours, for example. In performing a biopsy, the surgeon requires as exact a spatial image of the patient's anatomy, including tumour and risk structures, as possible. The SurgeryPad provides this exactness in a simple manner, for instance, on conventional tablet PCs by way of augmented reality (AR). The danger of puncturation of a risk structure is diminished, instruments are injected in a more precise and targeted manner, reducing the invasiveness and increasing the safety and cost-effectiveness of such interventions.

MarNaS – Marine Natural Material Synthesis

The MarNaS – Marine Natural Material Synthesis at the Alfred Wegener Institute for Polar and Marine Research project receives funding for preparations to establish a commercial synthesis laboratory producing nature identical materials from the ocean for application in the fields of pharmacology, active ingredient research and physiological research. One of the first products is an innovative dye, ageladine A, which easily permeates into living cells and tissue, where it acts as a fluorescent depending on the pH-value. This dye has had no side-effects in cells and animals so far and therefore is particularly suitable for in vivo staining and measurements. The dye is intended to be sold as a ready-to-use kit for simplified application. In addition, other highly effective natural materials, the properties of which were researched and described at the AWI, are to be produced and made available to research and the pharmaceutical and active ingredient industries.

BioBASE – Biochemicals for Surface Functionalisation

The BioBASE spin-off project at the Helmholtz Centre Dresden-Rossendorf optimises the potential uses of nano-scale materials characterised by a maximally reactive surface. The new enterprise will provide the market with coating chemicals on a biological basis. Customers for the initial application of this technology include businesses active in the fields of synthetic materials processing and synthetics-based medical products, who can coat their materials in a more environmentally friendly and efficient manner with BioBASE chemicals. Moreover, BioBASE chemicals allow for the universal coating of almost any kind of synthetic material. The type of coating can range from decorative to functional designs.

These promising spin-off projects raise the number of projects funded by Helmholtz Enterprise to a total of 73 since 2005. So far, more than 40 of the start-up concepts receiving funding have ultimately resulted in the formation of a company, and 10 of the 14 company formations in the past year have been previously funded by Helmholtz Enterprise.

The next selection meeting will take place at the end of this year. Applications from Helmholtz centres can be submitted up until the cut-off date 15 October 2012.

Further information:

www.helmholtz.de/enterprise

www.helmholtz.de/enterprise-foerderprogramm

Helmholtz Incorporation Seminar 2012

The Helmholtz Incorporation Seminar took place in Berlin on the 9th and 10th May 2012 in conjunction with the Helmholtz Enterprise selection meeting, attended by more than 40 incorporators from 14 Helmholtz centres. The assembly presented an impressive range of technologies and business models as well as all phases of incorporation, from project status to established enterprise with 30 employees.

The event presented a venue for exchange between incorporators, who all too often encounter very similar problems but still fight their lonely battles within the respective centres. In addition to the exchange of experiences, the focus was on information as regards funding and financing, whereas workshops conveyed know-how ranging from compilation of a business plan, over IP strategies, to negotiations with venture capital firms.



Participants in the Helmholtz Incorporation Seminar in Berlin. Photo: Helmholtz/Bianca Berlin

Research and Innovation Workshops with Industry Enterprises

The Helmholtz Association continues its series of networking events with industry enterprises also in 2012. In early May 2012, the Helmholtz / Zeiss industry workshop took place at the Helmholtz Centre Dresden-Rossendorf, where scientists from various Helmholtz centres generated ideas together with researchers from the Carl Zeiss AG. A research workshop in

the field of energy research between the Helmholtz Association and the Siemens AG is scheduled for September. A Helmholtz / Roche research day is planned for the end of November, following the Innovation Days 2012 in Munich. Interested Helmholtz scientists are invited by way of a competition of ideas.

New Validation Projects Selected

Three more main applications for funding from the Helmholtz Validation Funds (HVF) received a recommendation during the third selection committee meeting in June 2012. These are a project by the German Electron Synchrotron DESY for the commercialisation of electronic systems based on the MTCA.4 standard, a project from the Karlsruhe Institute of Technology for the development of active ingredients in the field of angio-

genesis inhibition, and a project by the German Aerospace Centre for the validation of a honeycomb design gas tank structure for application in the automobile industry. With the addition of these three new projects a total of nine validation projects from as many Helmholtz centres now receive funding for the further development of applied research results to commercial applicability since launch of the HVF.

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