Research

Tracing patterns in neural disorders
by Hubert Filser

Neurodegeneration, inflammation, vascular disease: In the new Munich Cluster for Systems Neurology (SyNergy), basic and clinical researchers work together to tease out mechanisms common to different neurological ailments.

For the complete article, see www.en.lmu.de/news/insightlmu/2013/01_01.pdf

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Understanding Asia
by Kerstin Maierhöfer

How has Asian cinema developed in the past decade? Will China come to dominate the global market for conventional cars? What caused the Sino-Japanese War? The Asia Studies Group at LMU discusses these questions and many more.

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Making room for life: Pediatric palliative care at LMU
by Nicola Holzapfel

In Bavaria alone, 600 children succumb to illness each year. For the past 10 years, the Working Group on Pediatric Palliative Medicine at Dr. von Hauner’s Children’s Hospital at LMU has done its utmost to make the last phase of their lives comfortable.

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“A Brasileira” LMU – the newest representative abroad
by Elizabeth Willoughby

She came to Germany for an internship and stayed for a degree, doctorate and postdoc. Now, Dr. Leticia Fröhlich Arch-angelo is LMU’s newest representative, stationed in São Paulo, Brazil. On board since the end of 2012, she couldn’t be in a better place to achieve the goals set out.

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More news on LMU Munich at www.en.lmu.de/news
Understanding Asia
by Kerstin Maierhöfer

How has Asian cinema developed in the past decade? Will China come to dominate the global market for conventional cars? What caused the Sino-Japanese War? The Asia Studies Group at LMU discusses these questions and many more.

The idea came to him during a lecture. In 2008, Thomas Kösters attended an interdisciplinary series of lectures on the course of history and politics in East and Southeast Asia. “That was what sparked my interest,” he says. To complement his studies in Political Science, Thomas, who is now 27, wanted to know more about the cultural, economic and political developments in Asia. So he and his friend Ludwig Bader decided to set up a study circle, where interested fellow students could discuss all kinds of issues concerning Asia. Their professor publicized the idea during a lecture, and the response was so positive that he also arranged to have a room made available for the meetings. The Asia Studies Group (AG) got off the ground a few days after – and for the past 5 years it has convened once every week during term.

From the beginning the AG has adopted an interdisciplinary stance. Its core membership consists of students of all disciplines ranging from Sinology, Political Science or Medicine to Physics – and they put together an impressive program. At every meeting, someone gives a talk on a topic of her own choice, which the audience then discusses further. Subjects range from Japanese cinema to recent developments in Myanmar to the history of Cambodia. Members attend events of mutual interest, and organize talks given by prominent speakers. Last month they were able to engage journalist Ulrike Gruska of Reporters Without Borders to talk on censorship in China, entitled “The Party Blogs Back”. International researchers have also been on the guest list, the latest being Russ Glenn from Leiden University.

The informal setting is the vital ingredient

How has the AG managed to organize events like this on a shoestring budget? “We have a marvelous network which can make almost anything happen,” says Christoph Beischl, who was among the founding figures. Partners such as the Young Forum of the Foreign Affairs Association or the Harvard Project for Asian and International Relations (HPAIR) help with the realization of cooperative projects, and LMU actively supports the network. The Geschwister-Scholl-Institute provides office supplies and space for regular meetings, the Center for Applied Political Research donates equipment for workshops, and faculty members in various institutes contact interesting guests. “Being able to do so much by informal means, without a budget or any official status, is what makes it all so much fun,” say the initiators of the venture.

Using the network’s informal contacts to get things done has proven to be an effective strategy. There is always someone who has the time and the motivation to tackle the next problem. “That works very well,” says Christoph. Indeed, according to him, the AG has been successful precisely because it has virtually no institutionalized structures. “People do it for their own satisfaction,” argues Thomas, “and the less formal, the more fun, and the greater each member’s commitment.” Someone did once have the idea that participants should receive certificates for their efforts, Christoph remarks. “But then hardly anybody wanted one,” he says, with a smile.

“A highlight of my student life”

Over the years, the AG has launched many initiatives – arranged internships in Asia for students, participated in student exchanges, and organized several conferences. Indeed, it has become much more than a learning network. “Many of my student friendships began in the AG,” says Thomas, and he is not the only one to whom the network means a great deal. “We have always had a colorful mix of people whom one might otherwise never have come across.” In fact, one German-Korean couple who met through an internship organized by the AG recently married.

Many of the founders have now left LMU. Since he finished his degree, Thomas Kösters has been involved in a program for young entrepreneurs at the Technische Universität München, and Christoph Beischl hopes to do a doctorate. But they are still engaged in the AG – for they know there’s always more to learn about Asia.

Translation: Paul Hardy
Monika Führer’s profession is a constant reminder that life is transient, but her job is to “make room for life”, she says. Führer is Professor for Pediatric Palliative Medicine at Dr. von Hauner’s Children’s Hospital. She looks after children who are so seriously ill that they have no hope of survival. But when she describes what she does, she does not mention death: “The aim of palliative medicine is to help patients to live their lives to the full, to give them the best possible quality of life for the time permitted by the progression of their illness.”

When Monika Führer first met her, Nora was 5 years old. Symptoms of leukemia appeared in her first year of life. She had undergone chemotherapy and received a bone-marrow transplant at a very early age. But her cancer returned. Nora’s case was to take on a special significance for Führer. At any one time, some 20,000 children in Germany are terminally ill. Most have been born with congenital diseases or malformations, and perinatal complications. Only 10-15% of them suffer from malignancies – like Nora.

When time is priceless

It is not unusual for such youngsters to spend months of their lives in hospital. “Long stays in hospital test families to their limits,” says Führer, for the child’s dearest wish is to go home. And when parents must accept that there is no further hope, they too desperately want to look after their child at home. “The time they still have together is beyond price”, says Monika Führer.

Exactly 10 years ago, in April 2003, a Working Group on Pediatric Palliative Medicine was set up at Dr. von Hauner’s by Monika Führer and Gian Domenico Borasio, who held the Chair of Palliative Medicine at LMU at the time. In the first project of its kind in Southern Germany, all steps undertaken to improve the palliative care of sick children in Munich since then have been developed by this group. In 2004, for example, it initiated “Home – Hospiz ohne Mauern” (“Hospice without Walls”), which made it possible for seriously ill children to be cared for as outpatients in their own homes. The team has since looked after more than 350 patients. Nora was one of the first.

Making wishes come true

Führer and her colleagues coordinate the efforts of care-givers, working together with clinical specialists, nursing staff, voluntary hospice visitors and therapists. “We now have many more ways of alleviating symptoms, so that the patients are as comfortable as possible,” Führer points out. The parents of patients can call an emergency number at any time. And that means that Monika Führer and her team must be accessible at all times of the day and night.

Two years after receiving her second transplantation, Nora developed severe respiratory problems. The transplantation had triggered a condition that ravaged her internal organs and finally attacked the lungs. The little girl was in intensive care for 7 months. “It was a dreadful time for her, especially the nights. In the intensive-care unit, the doctors were fighting for the lives of their patients. It was no place for a child whose case was beyond recall,” Professor Führer remembers.

Planning is underway for a new Palliative Care Unit for young patients, to be built at the University Medical Center in Großhadern. “Nora played a major part in the decision to build this new unit. Her case demonstrated how situations can arise in which children who are terminally ill cannot be optimally cared for at home,” says Führer. The new Unit will make it possible for parents to be in constant attendance, and siblings are welcome to visit at any time. Monika Führer also recalls the case of a 17-year-old who could not go home but missed her dog terribly. Visitors to the new Unit can bring pets with them.

Professor Führer and her team spare no effort to open up ways for these children to realize their most cherished aspirations. “The goal is to make the child’s wishes come true.” Having spent months in the intensive-care ward, Nora asked: “Will I ever see the sun again?” And Monika Führer and her colleagues were able to arrange for her to spend her last weeks in her own home. “Nora died peacefully at home,” says Führer. She was 11 years old.

Translation: Paul Hardy
Allergology

Growing up on a farm reduces the risk of asthma and allergies. Allergy specialist Erika von Mutius is studying why this is so, as the answer could suggest new ways of preventing such disorders.

For the complete article, see www.en.lmu.de/news/insightlmu/2013/01_02.pdf

Indian Buddhism

Birch-bark treasures

Experts in Indological Studies at LMU are in the process of analyzing 2,000-year-old Indian Buddhist documents that came to light about 15 years ago. Some of the documents date from the first century BC, making them by far the oldest examples of Indian Buddhist literature. The texts provide insights into a literary tradition which was thought to have been irretrievably lost, and they help researchers to reconstruct crucial phases in the development of Buddhism in India. Furthermore, the scrolls confirm the vital role played by the Gandhara region, which lies in what is now Northwestern Pakistan, in the spread of Buddhism into Central Asia and China. At LMU Munich a team of researchers led by LMU Indological scholar Professor Jens-Uwe Hartmann and Professor Harry Falk of the Free University of Berlin has just begun the arduous job of editing the manuscripts. Most of the texts survive only as fragments, which must first be collated and reassembled. The planned duration of the project of the Bavarian Academy of Sciences and Humanities is 21 years. The ultimate goal of the project is to prepare a modern edition of all the Gandhari manuscripts. In addition, the researchers plan to produce a dictionary of the Gandhari language and a survey of its grammar. However, the project will primarily be concerned with illuminating the development of Gandhari literature and the history of Buddhism in Gandhara. It is already clear that the results will lead to a new understanding of the earliest phases of Buddhism in India.

Paleontology

Fossil fishes found in Kenya

A research team led by LMU’s Professor Bettina Reichenbacher has uncovered a rich trove of fossil fish in the Tugen Hills Range in Kenya. The new fossils are between 10 and 12 million years old, and promise to reveal important details of the evolutionary history of freshwater fish in East Africa. The researchers expect to identify several previously unknown species among the many specimens that they have recovered. Moreover, the specimens will shed light on the ecological and climatic conditions that prevailed in the region during the Middle Miocene. “For instance, we can tell whether these fish lived in tropical lakes or in drier habitats that were subject to periodic droughts,” says Bettina Reichenbacher. As the East African Rift Valley, to which the Tugen Hills belong, is sometimes referred to as “the cradle of mankind”, this kind of information will help researchers pinpoint the onset of dry conditions in the Middle Miocene, when tropical forests were gradually being replaced by open grassland with less tree cover. This transition is of great interest, as the transformation of woodland into savannah is thought to have favored the diversification of hominids, the evolutionary lineage to which modern humans belong. The expedition was supported by the German Research Foundation (DFG) and the Bavarian State Collection for Paleontology and Geology.

Fossil fishes found in Kenya
Dr. Archangelo is a researcher at the Laboratory of Molecular and Cell Biology at the Hematology and Hemotherapy Center at the state university in Campinas, São Paulo, one of the best universities in Latin America. In February she came to Munich to participate in a scientific congress and to discuss with the LMU International Office further developing LMU’s relations with Brazil.

The third LMU representative abroad, Dr. Archangelo will play an important role in developing connections between LMU and Brazilian universities, making research and study opportunities at LMU known to Brazilians, assisting in the building up of research associations and eventually setting up exchange programs.

**Finding partners at home**

Research and innovation in Brazil is intense and dynamic in the business sector as well as within its network of universities, research institutions and between the São Paulo and Bavaria state governments. Dr. Archangelo says she will actively pursue certain programs, such as Science Without Borders (CSF), in which the Brazilian government is highly invested. CSF seeks to promote, expand and consolidate science, technology and innovation internationally through sponsoring internships abroad and by attracting researchers from abroad. Dr. Archangelo aims to become a channel between CSF and LMU.

An LMU alumna, she has an intimate knowledge of the university. During her ten years in Germany, Dr. Archangelo did her internship, a second diploma and gene research in Göttingen, as well as her PhD and postdoc in Munich. She will draw on her experiences working in laboratories in Brazil and in Germany that have provided her with inside expertise in the science sector of both countries and a long-established network of contacts in both academic communities. She is keenly aware of the challenges in forming international peer-to-peer relationships and cooperations.

**This science is also about bridges**

“The borders of the scientific community are not the same as international borders,” says Dr. Archangelo. “Research is often based on collaborative work and international cooperation. My experience as a scientist will be of great importance to help envision the possibilities and create projects of interest for the LMU International Office.

“During my research I’ve already had a project approved by the German DFG and the Brazilian FAPESP foundation to promote international collaboration between my former German and current Brazilian laboratories. I have a good network in both countries, which will help me build bridges between LMU and Brazilian universities, especially in the biology and medical departments.” It is no coincidence, therefore, that her first project is to arrange cooperative programs between these biology and medical faculties. Dr. Archangelo’s initial focus will be on Unicamp, where she does her research, and USP in São Paulo city, another of the best universities on the continent. She’s looking forward to her involvement in these activities outside of her laboratory, and to facilitate opening doors for LMU activities through Brazil to all of Latin America. “I’ve always dreamed of having contact with people from different cultures as well as living and working in different countries,” she says. “Working as an LMU representative will allow me to move in a direction in which I can help to pave the way of mobility for the next generation of scientists. I am very thrilled about helping students and research this way. It keeps me with one foot in each country.”

[www.en.lmu.de/about_lmu/contact/int_office/representatives](http://www.en.lmu.de/about_lmu/contact/int_office/representatives)
LMU introduces Massive Open Online Courses

Starting this summer, LMU Munich plans to make Massive Open Online Courses (MOOCs) available online to interested learners all over the world. With this step, LMU joins a group of internationally renowned universities that have begun to explore new forms of collaborative learning, in partnership with the Coursera consortium. Coursera was founded at Stanford University, and numbers leading institutions such as Princeton and Columbia among its members. MOOCs are at the forefront of a technological advance that utilizes many of the tools and strategies that have marked the rise of Web 2.0 – such as those developed by Social Media – specifically for educational purposes. LMU plans to offer a set of four courses in the fields of business administration, cell and developmental biology, mathematical philosophy and volcanology, each of which has been designed under the supervision of an established researcher. The courses will be accessible via the Coursera platform from summer 2013. Registration for these courses is already open. Within the first four weeks, LMU’s courses have already attracted more than 20,000 subscribers.

www.lmu.de/moocs

Elite Network of Bavaria: Funding for four new programs

The Elite Network of Bavaria has agreed to fund three International Doctoral Programs (IDPs) at LMU, one on “Evidence-Based Economics” (Coordinator: Professor Joachim Winter), one in the area of the Learning Sciences on “Scientific Thinking and Argumentation” (Professor Frank Fischer) and a third in Art History, entitled “MIMESIS: Munich Doctoral Program for Literature and the Arts” (Professors Christopher Balme and Tobias Döring). All of these programs offer a structured learning experience, have an interdisciplinary and distinctly international orientation, and will stimulate cooperation between different research institutions and specialisms. Graduate students enrolled in these programs also benefit from the broad network of international contacts built up by each of the researchers involved. Moreover, a proposal submitted by Dr. Philippe Cordez for a Junior Research Group on “Premodern Objects: An Archaeology of Empirical Experience” was also approved for funding.

www.en.lmu.de/about_lmu/people/grants/erc_grants

ERC Grants: LMU defends its top position

The results of the European Research Council’s funding programs for 2012 show that LMU was again among the most successful competitors. Ten LMU researchers were awarded prestigious and highly endowed ERC grants. Six of them received Advanced Investigator Grants, while Starting Grants went to four others. The total amount of ERC funding acquired by applicants from LMU last year was approximately 19.5 million euros. LMU thus remains the most successful of the German participants in this highly competitive field, in terms of the numbers of both Starting Grants and Advanced Grants won, and has consolidated its position among the top ten research institutions in Europe. Since the first round of the support schemes in 2007, 33 proposals submitted by LMU researchers have been selected for funding by the ERC.

www.lmu.de/moocs

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