





October 13th, 2008

# 3. Newsletter

Dear HBRS Alumni students,

In our third HBRS Alumni newsletter we will present last year's developments of Hannover Biomedical Research School (HBRS) as well as that of MHH. HBRS continues to be very successful. We have organized several memorable events like the first HBRS Symposium with members of our International Advisory Board, the first HBRS Master Class on "Innate Immunity" at MHH as well as the first HBRS Summer School on "Signaling and Immunity" in Goslar. We have introduced a new online application tool for all PhD programs to make efficient. selection processes more Furthermore. MHH celebrated the inaugurations of the new Hans Borst Center for Heart Stem Cell and Research (hosting the Excellence Cluster REBIRTH) and of the new Twincore building (in cooperation with the Helmholtz Centre of Infection Research in Braunschweig). Enjoy reading about our current activities as well as news from your fellow Alumni.

Thanks for your warm support and interest!



Reinhold E. Schmidt, Dean of HBRS

# Current status of HBRS and news

HBRS currently comprises of three international programs (the MD/PhD PhD program Medicine", the PhD "Molecular program "Infection Biology" and the PhD program "Regenerative Sciences") and two DFG-funded research training groups, one being a joint European program. A structured doctoral program for medical students was also successfully established (StrucMed; Dr.med./Dr.med.dent.), as well as two HBRS-associated Master programs "Biomedicine" (in its third vear) and "Biochemistry" (start October 2009).

The new PhD program Regenerative Sciences successfully started off in October 2007 with currently 14 students. Students mainly work in research groups being part of the Cluster of Excellence "REBIRTH". A unique curriculum of weekly obligatory seminars has been organized in addition to the range of courses/ seminars offered by HBRS. The office is located in the new Hans Borst Centre. Since August 2008, a new scientific coordinator, Dr. Daniela Pelz, is busy managing the program, as well as matters of personnel developments for HBRS and REBIRTH.

**Orientation weeks** October 2007; in front of new town hall









Currently, the various programs of HBRS host  $\sim 180$  PhD students. In addition, 43 medical students were accepted for StrucMed as well as 40 new Master students (in two programs) this year. Of the PhD students, about 50% are international and around 25% have a medical background ( $\sim 50\%$  women).

#### Master Class Innate Immunity July 2008; with Prof. Bruce Beutler and Prof. Shizuo Akira



# First Master Class on Innate Immunity

### A report on the Master class by Henoch Hong, MD/PhD:

How are pathogens sensed by the immune system? Which signalling cascades are involved in the activation of the immune system? How are innate and adaptive immunity linked to each other? In one way or the other, the (at least partial) answer to all of these questions will be Toll-like receptors. Beyond any doubt, exploring Toll-like receptors belong to one of the most crucial and fascinating discoveries in the field of innate immunity.

And here they were, at the first "Master Class on Innate Immunity" held by the Hannover Biomedical Research School: Mr. Bruce Beutler, the discoverer of tumour necrosis factor and Tolllike receptor-4 and Mr. Shizuo Akira, the leading pioneer in the characterization of Toll-like receptors and one of the most cited scientists in the world, both of them likely candidates for the Nobel Prize. And to make a personal confession: I've always been a great fan of Mr. Akira, since the start of my diploma thesis, since the first time I really entered the field of innate immunology.I had read many of his articles and admired his work and was thus looking forward to meet him in person.

The Master Class started with two keynote lectures. Mr. Beutler spoke about his major discoveries and the genetic screening approaches to discover mechanisms of the innate immunity. Mr. Akira on the other hand addressed the issue of innate immunity sensing, that is, the roles of MDA5 and RIG-1 and of course Toll-like receptors. The lectures were both inspiring, in content as well as in presentation.

Subsequently, attendees of the Master Class were divided into two groups, each group supervised by one of the keynote lecturers. Within this workshop, we presented our work followed by extensive discussion led by Mr. Akira or Mr. Beutler respectively. Their remarks and questions were simple, understandable and very often helpful and never aloof.

Thursday's workshop was followed by the traditional HBRS summer party on the balcony of the MD/PhD office. So there was room to talk to these living legends and to get to know them beyond their science and research work. And it's hard to say what was more impressive and imposing: their grandeur and greatness in science or their natural, nice and gentle behaviour and personality when talking to them in person.

A great compliment to the organizers of the Master Class! And to conclude my personal observations in one German word: "Toll!"

# One year PhD program "Regenerative Sciences"

August 2008; Dr. Daniela Pelz, new scientific coordinator









### And another report of the Master Class by Namita Saran, PhD Regenerative Sciences:

For a PhD student it's always a dream to get appreciation from a renowned science community and I think during the Innate Immunity Master Class everyone one of us got a chance to speak about our own research and got fabulous feedback from the group as well as from the speakers Prof. Beutler and Prof. Akira. The presentations from both the main speakers were extremely valuable for the people working in the same field.

It was a wonderful opportunity for all of us and we gained a lot of information from the work presented by students working on cancer, viruses, T or B cell, TLRs, DCs, miRNAs and mouse models.

The ideas gotten from Prof. Beutler and Prof. Akira were very motivating and full of enthusiasm, even when they were concerning negative results.

Besides the scientific aspects the lunch with delicious sandwiches, soups, sweets etc was great. In addition the speech from Prof Schmidt for closing ceremony was very promising about a second Master class in near future. Conclusively, we really want to thank MHH on behalf of all students for organizing such an educational event.

**Note**: *HBRS office now plans to organize Master Classes on different topics every year!* 

# New online application tool

In 2008, a new online application tool was successfully established for all three PhD programs. All candidate files can now be studied and evaluated by authorized persons whenever they want. This makes selection processes much easier. You find the website on <u>www.hbrs-</u> <u>application.de</u>

# "Everything should be as simple as it is, but not simpler."

Albert Einstein (1879-1955)



www.hbrs-application.de

# Activities 2008

In November 2007, the first 1-week Bioinformatics courses were organized in cooperation with the Technical University of Braunschweig (Prof. Schomburg). These courses will now become a permanent part of HBRS "soft skill" list.

On January 17<sup>th</sup>/18<sup>th</sup> 2007, a seminar on "Stress Management" was given by Grit Kümmerle for the first time. It will certainly be repeated next year.

The HIRSIB/ZIB Summer School on Infection Biology was held in Quedlinburg from May 18<sup>th</sup>-23<sup>rd</sup>. A special lecture was held by Prof. Aaron Ciechanover, holder of the Nobel Prize. Also, an excursion by steam train and a party with some wild dancing was enjoyed by all students and speakers!

The annual "Intercultural Communication Workshop" together with MSc/PhD programs of Göttingen was held in the HVHS Alte Molkerei Frille (near Minden) from June 13<sup>th</sup>-15<sup>th</sup>, 2008. Our trainer were as usual Alexia and Stephan Petersen (Aachen). One highlight was, of course, watching the soccer matches of the European championship in the evenings.







On July 10<sup>th</sup>/11<sup>th</sup>, the first Master class on "Innate Immunity" was organized at MHH (see reports above).

The first HBRS summer school on "Signaling and immunity" took place from September 28<sup>th</sup>-October 2<sup>nd</sup>, in Goslar. About 20 outstanding key speakers from all over the world participated (*more in the next issue*!).

Apart from the scientific work, students enjoyed several parties (Indian, Christmas, and Barbeque) and other cultural and social events being organized also in cooperation with the International Office.

This year, the PhD programs altogether received around 800 applications from all over the world (50% from India) in the new online application system.

HBRS orientation weeks start on October 6<sup>th</sup>. The second HBRS symposium together with five members of the International Advisory Board will take place on October 13<sup>th</sup> (presentations by selected PhD students of all HBRS programs), followed by the joint opening ceremony in the evening. Prof. Jörg Hacker (president of Paul Ehrlich Institute, Berlin) will give this year's "Fritz Hartmann Lecture" on infectious diseases.

**Final exams MD/PhD** November 2007; Invited speaker Prof. Dr. F.Y. Liew; University of Glasgow, UK



# **Final exams**

In November 2007 and June 2008, nineteen MD/PhD students successfully passed their final exams (Adbul Mannan Baru, Aaheli Roy Choudhury, Jaba Gamrekelashvili, Eric Hesse, Kumaravelu Jagavelu, Adan Chari Jirmo, Gustavo Salguero Lopez, Aravind Sekhar, Meera Shah, Leena Srivastava, Basant Kumar Thakur, Anastassiia Vertii, Rannar Airik, Prajeeth C.K., Mingmin Chen, Andri Pramono, Erkhembulgan Purevdorj, Anurag Kumar Singh, Murat Ünalan). The next exams are expected for November 7<sup>th</sup>.

#### Award of HBRS PhD prize October 2007; Rahul Purwar (MD/PhD)



The final exams in the PhD program "Infection Biology" took place on February 14<sup>th</sup>, 2008 (Maike de Buhr, Nicolas Fasnacht, Kay Johswich, Priyanka Narang, Peter Reichardt, Sebastian Seth, Jessica Thalmann, Stefanie Weiss) followed by the next ones on June 27<sup>th</sup>, 2008 (Vanessa Barroso, Davide Ferraris, Julia Heinzmann, Marcin Lyszkiewicz, Patrick Olbermann, Julia Puulverer, Kerstin Radtke, Upneet Sandhu, Sven Christian Sensken, Nuno Viegas, Caroline Zhaoui, Beata Zygmunt). The next final exams are scheduled for January 30<sup>th</sup>, 2009.

**Award of Wilhelm Hirte PhD Prize** January 2008; Kay Johswich (hD Infection Biology)









# News in Research

In this section, we will regularly publish short reviews of important and recent achievements in selected research fields, or useful tips! Everybody is welcome to contribute.

# Go with the flow – leukocytes do not crawl, they flow!



by Tim Worbs, Germany

PhD Infection Biology, final exam Feb. 2007 (Wilhelm Hirte PhD prize 2007); currently Institute of Immunology, MHH

In contrast to most other cell types, immune cells exhibit an astonishing degree of motility: Granulocytes and monocytes rapidly rush into infected tissues, being the first line of defense to fight of the intruding pathogens. Dendritic cells (DC), once activated by appropriate danger signals, mature and quickly move, via afferent lymphatics, from those peripheral tissues towards draining lymph nodes to "spread the news". Naive lymphocytes constantly recirculate through secondary lymphoid organs in search for cognate antigen, and within lymph nodes, they perform an extremely fast random walk migration while scanning the local antigen repertoire. Finally, as effector cells, they enter peripheral sites of infection to deliver the killing blow.

Despite this omnipresence of movement within the immune system, the basic mechanisms of immune cell migration is not completely understood, yet. For a long time, it has been assumed that leukocytes would move by anchoring themselves by means of integrinintegrin ligand-interactions at the front of the cell, then dragging themselves forward using the integrin connection to transduce forces. In fact, this "crawling" mechanim, fuelled by the machinery of the actomyosin cytoskeleton, had been observed for much more "stationary" cell types such as fibroblasts moving on 2D surfaces in vitro. It might turn out, however, that leukocytes *in vivo* tell an altogether different story of movement regarding the requirement for integrins.

Recently, a research group around Dr. Michael Sixt of the Max-Planck-Institute for Biochemistry in Munich succeeded in generating, for the first time ever, mice deficient for all 24 integrin heterodimers known to be expressed on the surface of leukocytes [1]. Although these animals turned out to be not viable, it was nontheless possible to differentiate DCs in vitro from bone marrow isolated from the integrin-null (Int<sup>-/-</sup>) mice. Being comparable to wild type DCs regarding the expression of (non-integrin) surface markers as well as the potential for maturation, these Int<sup>-/-</sup> DCs were subsequently tested for their migration capabilities in a number of *in vitro* and *in vivo* setups. While the motility of Int<sup>-/-</sup> DCs was again found to be severely impaired during in vitro migration on 2D surfaces, they actually moved with basically identical characteristics within 3D collagen gels and even skin explants cultured in vitro.

Importantly, the question remained, if also *in vivo*, under completely physiological environmental conditions, DCs migrated normally in the absence integrin-mediated contacts. Due of to а cooperation with the Institute of Immunology of Hannover Medical School, intravital 2-photon microscopy was used to simultaneously study the migration behavior of wild type and Int<sup>-/-</sup> DCs within the popliteal lymph nodes of living, anesthetized mice. And indeed, also within the "natural habitat" of the lymph node, wild type and Int<sup>-/-</sup> DCs exhibited comparable velocity and directionality while making their way from the subcapsular sinus towards the deeper paracortical T cell area.



Dentritic cell

(continue) **→** 







Taken together, these results, published in a recent issue of Nature [1], therefore favor a new and different scenario of fast-paced leukocyte movement: Largely independent of integrinmediated physical adhesion contacts with the cellular surrounding, the DCs might move primarily by pushing the front part of the cell body forward due to constant actinpolymerization at the leading edge. The nucleus, being the "thickest" and least flexible element of cellular architecture, remains in the back part of the cell near the so-called uropod during this mode of migration. Only when encountering extremely narrow pathways, through which the nucleus does not fit by itself, myosin-dependent contraction of the uropod seems to kick in to push the nucleus through the gap.

Of course, integrins are by no means indespensible for leukocyte trafficking: In particular the arrest of recirculating lymphocytes during lymph node homing via high-endothelial venules relies crucially on integrin action. The fast migration of leukocytes within tissues, on the other hand, might be fully explainable without the strong adhesion forces generated by integrinintegrin-ligand interactions. Actually, there is even evidence that the integrin-mediated adhesion might be intentionally kept in check to prevent an impairment of the fast interstitial migration at least of lymphocytes in lymph nodes [2].

1. Lämmermann T, Bader BL, Monkley SJ, Worbs T, Wedlich-Söldner R, Hirsch K, Keller M, Förster R, Critchley DR, Fässler R, Sixt M. Rapid leukocyte migration by integrin-independent flowing and squeezing. Nature. 2008 May 1;453(7191):51-5.

2. Woolf E, Grigorova I, Sagiv A, Grabovsky V, Feigelson SW, Shulman Z, Hartmann T, Sixt M, Cyster JG, Alon R. Lymph node chemokines promote sustained T lymphocyte motility without triggering stable integrin adhesiveness in the absence of shear forces. Nat Immunol. 2007 Oct;8(10):1076-85. Epub 2007 Aug 26.

"Basic research is what I'm doing when I don't know what I'm doing."

Wernher von Braun (1912-1977)

# News from MHH

On May 23<sup>rd</sup>, 2008, the new Hans-Borst Center for Heart and Stem Cell Research was inaugurated. It now mainly hosts research groups of the Excellence Cluster REBIRTH, altogether around 110 scientists. The Braukmann-Wittenberg Foundation as well as funds from the Excellence Initiative made this building possible (costs 13 Million Euro). There is also a seminar room available now for the lectures of the PhD program "Regenerative Sciences.

# **New MHH Research Centre** May 2008; inauguration of the Hans Borst Center



On June 30<sup>th</sup>, 2008, MHH again received the certificate "family-oriented institution" by the German Ministry for Family (Minister Dr. Ursula von der Leyen).

On January 25<sup>th</sup>, 2008, MHH, Leibniz University Hannover and TiHo founded CrossBIT, a consortium for Biocompatibility and Implantimmunology in medical techniques. It is located in the "Medial Parc", right next to MHH. Aim is to improve implants of all different kinds (cardiovascular, dental, bone regeneration, cochlear etc.) for future clinical applications/ treatment of patients.







In addition, a new integrated center for transplantation research and treatment is funded with 50 Million Euro by the German ministry of education and research (BMBF) from 2008.

On August 28<sup>th</sup>, 2008, the Helmholtz Centre of Infection Research in Braunschweig and MHH officially inaugurated the new Research Institute "Twincore" located in the former Max-Planck building. This institute will mainly focus on research in the field of "Infection and Immunity", whereby basic research is combined with clinical applied aspects. Prof. Ulrich Kalinke (former Paul-Ehrlich Institute Langen) was chosen to be the head of this new institute.

#### Twincore

August 2008; inauguration. Prof. Bitter-Suermann (MHH), Prof. Balling (HZI), Prof. Kalinke



# **HIRSIB** Opening

On 15<sup>th</sup> November 2007, the official opening ceremony for the Helmholtz International Research School for Infection Biology took place at the HZI.

HIRSIB was initiated in order to train early stage research scientists in the field of infection biology as a joint co-operation between the well renowned research institutions Helmholtz Centre for Infection Research, the Hannover Medical School and the University of Veterinary Medicine Hannover, coordinated by the Helmholtz Centre for Infection Research in Braunschweig. HIRSIB is integrated into the Centre for Infection Biology (ZIB) at Hannover Medical School and therefore also part of the Hannover Biomedical Research School (HBRS).

HIRSB Opening Ceremony November 2007, New Infection Biology Students



The synergized research and teaching potential of the affiliated institutes gives the unique chance to offer a platform for excellent education and research projects. The 6-year program, with English as the teaching language, is focused on the complex interactions between host and pathogen as well as basic research with the combined tools of immunology, cell biology, molecular biology and structural biology. Moreover, transferable skills as well as interdisciplinary work are important components of the curriculum. 20 students from across the world are accepted each year after a strong selection procedure. The infrastructure and training modules are supported by the President's Initiative and Networking Fund of the Helmholtz Association of German Research Centres. Moreover, the study program is also supported by scholarships provided by the HBRS within its excellence initiative. All PhD Infection Biology students from 2007 onwards are now members of HIRSIB as well as of HBRS

HIRSIB is coordinated by Dr. Sabine Kirchhoff and by her new assistant Sabine Rodriguez.

# We don't know why, but there are some gradients of infection.

Luc Montagnier (\*1932)







# View from abroad

In this section, we will regularly publish short reports of experiences of our Alumni students as Postdocs etc. abroad! Everybody is welcome to contribute.



#### Manvendra K. Singh, India

MD/PhD program; final exam June 2006; PhD prize 2006 currently second Postdoc in Cell and Developmental Biology, School of Medicine, University of Pennsylvania, Philadelphia, USA

### Postdoc in the USA

Postdoctoral training is an opportunity for young researchers to further deepen their understanding of their field of interest. Some researchers switch their fields to acquire new technical skills. Most of us believe that this is the beginning of a carrier as an independent researcher, which makes the Postdoctoral training very crucial. In today's world, Postdoctoral researchers are the key to the research process in every part of the world, yet they are often undervalued, underpaid and have very limited prospect for future employment. Coming to the U.S. from Europe was the strangest of experiences. After finishing my PhD in developmental biology at Hannover Medical School, I was quite sure that I needed something very different after three and half years of fairly intensive work. I was very excited with the thought that I am going to be a part of Columbia University (one of USA's top 10 universities) and going to spend next few years of my life in New York City (a city that never sleeps). Just one month after my PhD defense, I arrived in New York City in that apprehensive state of mind that might be very typical of most European or Asian Postdocs just starting out. My mind was full with thoughts and doubts about whether my project would work out. Would I end up writing a paper? Where would it lead to, will I be able to get a job after this etc. The lab at Columbia was far more chaotic than at Hannover, partly because of its size but also due to the nature of the supervisor. The lab had some 20 "lab members"-mostly Postdoctoral fellows. Just a couple of them were graduate students and technicians. This was not very surprising, as American labs are known for their huge Postdoc populations; in some labs,

they include 90% of the people.

The atmosphere of the lab as a whole was perhaps not as close-knit or communal as the one I had left behind in Hannover. The lab was not the kind of place that was congenial to "hanging out" either. Competition and work pressure in U.S. is very high and it is essential to get publication as soon and as many as possible.

The three and half years of my PhD training at Hannover Medical School prepared me to handle such situation. On the other hand living in New York City especially in Manhattan was very exciting. Columbia Medical campus is situated on the Upper West Side of Manhattan, close to some of the biggest and best attractions of the city (15 minutes subway ride for Central Park, the Natural History Museum of Art, and Time Square).

# A typical Postdoc life.....but don't let this happen to you 🕲



Cartoon by Alex Dent (adopted from NIH catalyst Newsletters)

The worst problem for Postdocs is uncertainty, as they don't know where they are going to be in next few years. The caliber of US Postdocs in general is very high. Most of the Postdocs aim to have their own laboratory one day but that will need some luck. Regardless of where they train, what they publish the average age at which a Postdoc gets awarded his or her first independent research grant has been creeping up over time from age 37 in 1980, to 42 in 2002. According to latest survey in U.S. only 6% of the much-desired 'RO1' research grants go to new investigators.

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Despite all the trials and tribulations that come with being a Postdoc, it is often considered one of the most productive periods of a scientist's career. The average length of a Postdoc in the USA is four to five years. My two years of Postdoc at Columbia were not what I expected, what I wanted to do as a Postdoc but I was satisfied with the outcome, decided to do another Postdoc and moved to the University of Pennsylvania. Now I am doing what I wanted to do. Making the from Postdoc transition to independent investigator is very tough in the US but the battle is on. To sum up, regardless of the competition and work pressure, the US is still the most-desired destination for European and Asian Postdocs.

# Announcements

*Marriages:* Many of our students have married during their stay in Hannover. In the past year, we know of Rannar Airik. *Congratulations!!* 

*Children* **©:** There are new "HBRS babies" by Wahid, Sonja & Andreas, Rannar, Meta, Masami,.... *Congratulations!!* 

# Prizes

Some of Alumni students were awarded important prizes for their research achievements:

**Rahul Purwar** (MD/PhD, exam November 2006) received the HBRS PhD prize 2007 (1.000,-Euros).

**Tim Worbs** (PhD Infection Biology, exam February 2007) received the Otto-Westphal Promotionspreis by the DGfI in 2007 (1.500,-Euro).

**Kay Johswich** (PhD Infection Biology, exam January 2008) received the Wilhelm-Hirte PhD prize by MHH (1.000,- Euro).

# Retirements

Mrs Helene Hass, housekeeper of the student hostels Karl-Wichert-Allee and Nobelring, retired in July 2008. Successor is Mrs Kathrin Polenski, who fortunately speaks a little bit of English.....©

# What is....doing?

Natalie Evans:



Natalie is currently a full-time mum looking after her son Oliver, who will be one in October. She left as Administrative Coordinator of the PhD in Infection Biology in August 2007. Natalie, still based in the Hannover region, misses all her students and hopes they are all well.

Maren Mönkemeyer and Ulrike Wittkopp (PhD Infection Biology):



Maren started her job last October as product manager at QUISISANA, Ulrike joint the same company in March for product development. QUISIANA Pharma is a young company, founded 1.5 years ago with the headoffice in Hannover City. They produce/ buy generic pharmaceuticals (on prescription and over-the-counter) and sell them on the German market. As the company is very young, currently only two products are on the market but Maren and Ulrike are both working hard to bring up more! They have lots of fun with their colleagues (now there are 10 employees in Germany) and every day brings new tasks, information and problems to solve.

P.S. If you would like to get in touch with anybody from this section or from the huge Alumni list below, please contact the HBRS office. We will be happy to assist you!







# Current list of HBRS Alumni students



### MD/PhD program "Molecular Medicine"

year 2000 (final exams 2003)

**1.) Masoumeh Attaran-Bandarabadi:** Gastroenterology/Hepatology/Endocrinology, MHH

2.) Yasmin Dulkys: three children, Hannover

**3.) Veit Erpenbeck:** Habilitation at MHH 2007; Merck AG Darmstadt

**4.) Masami Rudolph:** Molecular Biology, MHH; from Oct. 2007 Otolaryngology, University Clinics Ulm

**5.) Gernot Sellge** Institute Pasteur, Molecular Microbiology, Paris

**6.) Julia Skokowa:** Pediatric Hematology & Oncology, MHH (Junior group leader)

7.) Andreas Tiede: Hematology & Oncology, MHH

#### year 2001 (final exams 2004/2005)

**8.) A. Wahid Ansari:** Immunology, Imperial College London, UK

**9.) Ferdinand Bahlmann:** Nephrology, MHH; Epoplus GmbH Hannover

**10.)** Asha Balakrishnan: Molecular Oncology, Institute for Cancer Research and Treatment (IRCC), Turin, Italy; from 2007 Medicine, UCSF, San Francisco, USA

**11.)** Christian Bernreuther: Neuropathology, University Clinics Hamburg-Eppendorf

**12.) Frank Bollig:** Molecular Genetics, Institute for Molecular Biotechnology (IMB), Jena

**13.) Marc H. Dahlke:** Liver Stem Cell Group, Surgery, Regensburg

**14.) Meta Djojosubroto:** Gene Therapy & Stem Cell Biology, Jules Gonin Eye Hospital, Lausanne, Switzerland

**15.) Julia Freise:** Rheumatology; from 2006 Pneumology, MHH

16.) Christoph Happel: Pediatric Cardiology, MHH

**17.) Vladimira Jakubcakova:** Genes & Behavior, Max-Planck-Institute for Biophysical Chemistry, Göttingen; from 2007 MPI Psychiatry Munich

**18.) Yijiang Li:** Thoracic & Cardiovascular Surgery, MHH

#### **19.) Jianyun Liu:** Beijing (V.R China)

**20.) Tom Lüdde:** EMBL Mouse Biology Unit, Monterotondo, Italy; from 2007 university clinics Aachen

21.) Ebru Serinsöz-Pfeiffer: mother, Hannover

**22.) Frank Tacke:** Mount Sinai School of Medicine New York; from 2006 Medical Clinics III, Aachen (Habilitation)

**23.) Mathewos Tessema:** Pathology, CRF 225, New Mexico, HSC, USA

**24.) Sonja Werwitzke:** Hematology & Oncology, MHH



year 2002 (final exams 2005/2006/2007)

**25.) Diya Abraham:** Genes & Behavior, Max-Planck-Institute for Biophysical Chemistry, Göttingen; from 2008 Dept. of Neurology, UCSF, San Francisco, USA

**26.)** Syed Raza Ali: Pharmacology, University of California, San Diego, USA

27.) Georg Bohn: Pediatrics, MHH

**28.) Thomas Gebhardt:** Microbiology & Immunology, The University of Melbourne, Australia

**29.)** Shashi Kant: Biochemistry & Molecular Pharmacology, Worcester, Massachussetts, USA

**30.) Claudia Karacsonyi:** Cell Biology, NHLBI, NIH, Bethesda, USA

**31.) Varsha Kumar:** Theodor Kocher Institute, Bern, Switzerland

**32.) Gesa Meyer:** Lohmann Animal Health GmbH, Cuxhaven

**33.)** Anika Hoffmann (Meyerholz): Pediatric Pneumology, MHH

**34.)** Christina Nassenstein: Fraunhofer Institute, Hannover; from 2007 Allergy and Clinical Immunology, Johns Hopkins University School of Medicine, Baltimore, USA; from March 2009 Anatomy and Cell Biology, University of Giessen (Junior group leader)







**35.)** Axel Schambach: Experimental Hematology, MHH (Junior group leader)

**36.) Amar Deep Sharma:** Gastroenterology/ Hepatology/Endocrinology, MHH; from 2006 Developmental and Stem cell Biology, UCSF, San Francisco, USA

**37.) Krishna K. Singh:** Mount Sinai Hospital, Toronto, Canada

**38.)** Manvendra K. Singh: Genetics & Development, Columbia University, New York, USA; from 2008 Cell and Developmental Biology, School of Medicine, University of Pennsylvania, Philadelphia, USA

**39.) Frank Traub:** General, Visceral- and Transplant Surgery, Tübingen

**40.) Linding Wang:** Virology, MHH; from 2007 Wuhan Institute of Virology, Chinese Academy of Sciences, China

41.) Aravind Sekhar: Molecular Biology, MHH

year 2003 (final exams 2006/2007)

42.) Khaled Alkharsah: Virology, MHH

42.) Tammy Chang: Grenoble, France

**43.)** Anuhar Chaturvedi: Lund, Sweden, from 2007 Hematology & Oncology, Marburg, Germany

**44.) Dorothea Dijkstra:** Dermatology, MHH; from 2008 Fraunhofer Institute ITEM Hannover

**45.) Dorothea Gadzicki:** Junior professor, Pathology, MHH

**46.) Jaba Gamrekelashvili:** Gastroenterology, MHH (Twincore)

**47.)** Arnab Ghosh: Pediatric Hematology & Oncology, MHH; from 2007 Memorial Sloan Kettering Institute, New York, USA

**48.) Shipra Gupta:** Pharmacology, Experimental and Clinical Peptide Research, MHH; from 2007 Transplant Immunology, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, USA

49.) Eric Hesse: Harvard Medical School, USA

50.) Kumaravelu Jagavelu: Cardiology, MHH

51.) Andri Pramono: mother, Bonn

**52.) Rahul Purwar:** Dermatology, MHH; from 2007 Dermatology, Harvard Medical School, Boston, USA

53.) Bishnudeo Roy: HZI Braunschweig

**54.) Gustavo Salguero Lopez:** Hematology & Oncology, MHH

**55.)** Anastassiia Vertii: UMASS Doxsey Lab, Worcester, Massachussetts, USA

year 2004 (final exams 2007/2008)

56.) Rannar Airik: Molecular Biology, MHH

**57.)** Abdul Mannan Baru: from 2008 Albert Einstein College of Medicine, New York, USA; currently applying for Postdoc in Germany

**58.) Mingmin Chen:** Gastroenterology, MHH

59.) Prajeeth C.K.: Clinical Immunology, MHH

60.) Adan Chari Jirmo: Clinical Immunology, MHH

**61.) Erkhembulgan Purevdorj:** Gastroenterology, MHH

**62.)** Aaheli Choudhury Roy: Gastroenterology/ REBIRTH, MHH

63.) Meera Shah: Postdoc, USA

64.) Anurag K. Singh: Gastroenterology, MHH

65.) Leena Srivastava: Postdoc, USA

**66.) Basant Thakur:** Pediatric Hematology & Oncology, MHH

**67.) Murat Ünalan:** Pediatric Hematology & Oncology, MHH

#### HBRS Indian party March 2008









# PhD program "Infection Biology"

year 2003 (final exams 2006/2007/2008)

1.) Simon Berberich: Immunology, MHH

**2.) Tanja Bosse:** HZI Braunschweig; from Sept. 2007 Virology MHH

**3.) Eva Gellermann/nee Brüning:** Virology, MHH; from 2008 dental prosthetics (CrossBIT), MHH

**4.) Michael Düwel:** GSF - National Research Center for Environment and Health, Munich, Germany

5.) Heidi Imhoff: Essex Pharma GmbH, Munich, Germany

**6.)** Susanne Lerch: ICON Clinical Research GmbH, Frankfurt, Germany

7.) Petra Lüthje: Karolinska Institute/NOLabs, Helsingborg, Sweden

**8.) Maren Mönkemeyer:** Clinical Immunology, MHH; from Oct. 2007 QUISIANA Pharma, Hannover

9.) Patrick Olbermann: Med. Microbiology, MHH

**10.) Simone Reinwald:** Walter and Eliza Hall Institute of Medical Research, Melbourne, Australia

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12.) Jessica Thalmann: Nephrology, MHH

13.) Kristina Theusner: Virology, MHH

14.) Angelika Waltermann: University of Hannover

15.) Claudia Welz: TiHo, Hannover

**16.) Ulrike Wittkopp:** Nephrology, MHH; from 2008 QUISIANA Pharma, Hannover

17.) Tim Worbs: Immunology, MHH

#### year 2004 (final exams 2007/2008)

**18.) Vanessa Barroso:** Microbial Pathogenicity, HZI, Braunschweig

19.) Maike de Buhr: Central Animal Laboratory, MHH

**20.)** Nicolas Fasnacht: Experimental Immunology, HZI, Braunschweig

**21.) Davide Ferraris:** Structural Biology, HZI, Braunschweig

**22.) Julia Heinzmann:** Friedrich-Loeffler-Institute of Farm Animal Genetics in Mariensee

23.) Kay Johswich: Med. Microbiology, MHH

24.) Marcin Lyszkiewicz: Immunology, MHH

25.) Priyanka Narang: University of York, UK

26.) Julia Pulverer: Molecular Biotechnology, HZI Braunschweig

27.) Kerstin Radtke: Virology, MHH

28.) Peter Reichardt:

# **29.)** Upneet Sandhu: Gene regulation and Differentiation, HZI, Braunschweig

30.) Sven-Christian Sensken: Immunology, MHH

**31.) Nuno Viegas:** Molecular Immunology, HZI, Braunschweig

**32.) Stefanie Weiß:** Wolfson Institute of Biomedical Research, University College London, UK

**33.) Caroline Zaoui:** Cell Biology, HZI, Braunschweig

34.) Beata Zygmunt: Vaccine Research, HZI, Braunschweig

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