

Hannover Medical School
Hannover Biomedical Research School



Curriculum

PhD Program “Molecular Medicine”

PhD Program “Infection Biology” and “DEWIN: Dynamics of Host-Pathogen Interactions”

Helmholtz International Research School for Infection Biology

PhD Program “Regenerative Sciences”

European Research Training group (IRTG 1273)

“Strategies of human pathogens to establish acute and chronic infections”

Research Training group (GRK 1441)

”Allergic response in lung and skin”

Winter and Summer Semester 2011/2012

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Winter and Summer Semester 2011/2012

www.mh-hannover.de/hbrs.html

PhD Curriculum**Hannover Medical School****Academic Year****Winter Semester 2011/2012**

Start: October 10th, 2011

End: February 17th, 2012

PhD “Molecular Medicine” intermediate examination: by February 28th, 2012

PhD “Infection Biology” intermediate examination: March 21st, 2012

PhD 'Regenerative Sciences' intermediate examination: by March 31st, 2012

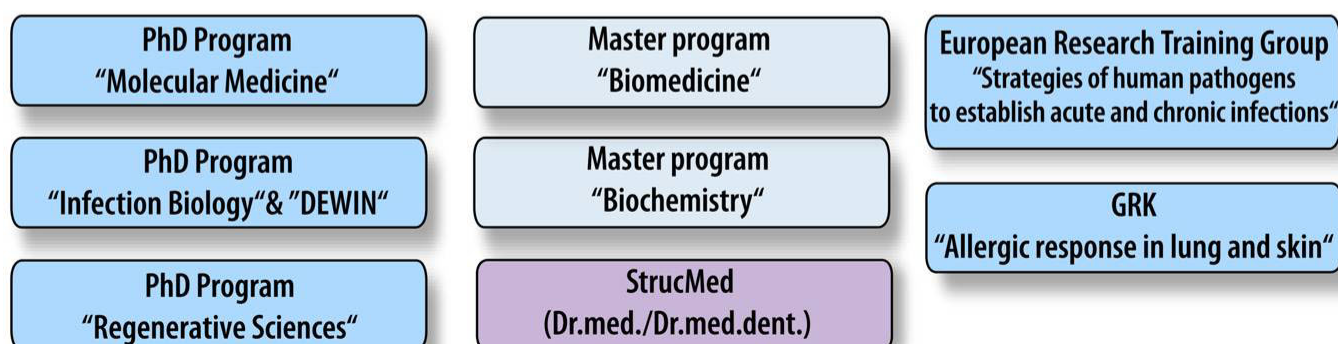
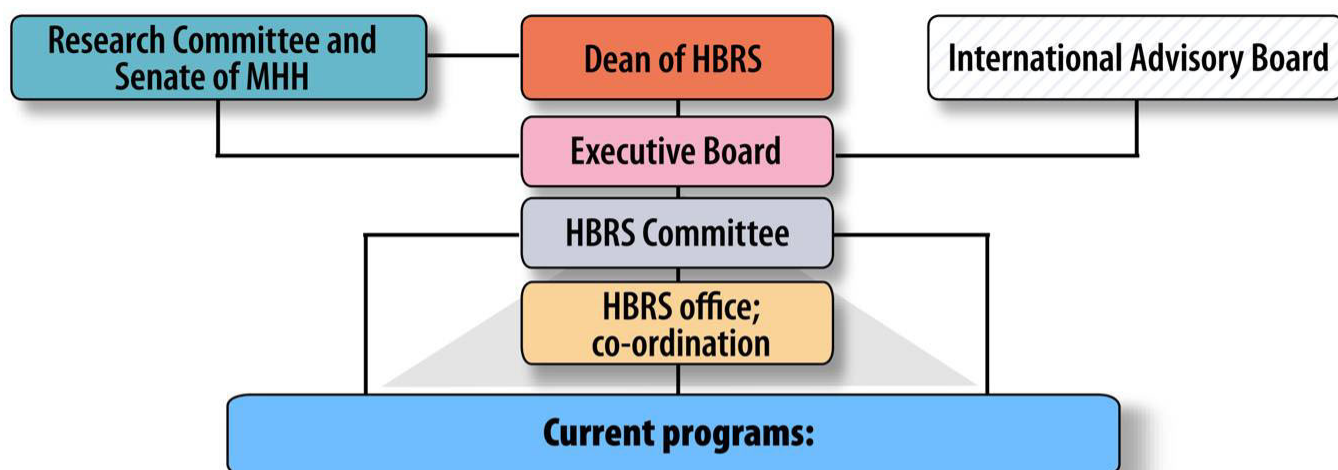
Summer Semester 2012

Start: April 2nd, 2012

End: July 20th, 2012

Organization of Hannover Biomedical Research School

Hannover Biomedical Research School



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Prof. Dr. Thomas Thum	Prof. Dr. Dietmar Manstein
Prof. Dr. Siegfried Weiss	Prof. Dr. Armin Braun
Annika Kühl	Christine Happel
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Michaela Mai	Maya Sethi
Kerstin Fricke	Robert Ramm

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European Research Training group (IRTG 1273)
”Strategies of human pathogens to establish acute and chronic infections”

Prof. Dr. S. Suerbaum (Speaker in Hannover)

Contact/coordination: Petra Kleinhans and Susanne Maibom, Assistants to the Coordinator, Institute of Microbiology and Hospital Epidemiology, Carl-Neuberg-Str. 1, D-30625 Hannover, Phone: +49 511-532-6770, Fax: + 49 511-532-4355, IRTG1273@mh-hannover.de

Helmholtz International Research School for Infection Biology

Dr. H. Hauser (Speaker)

Dr. Siegfried Weiss

Prof. Dr. Reinhold Förster

Prof. Dr. Valentin-Weigand

Contact/coordination: Dr. André Oumard, Sabine Kirchhoff, Helmholtz Centre for Infection Research, Inhoffenstr.7, 38124 Braunschweig; Tel. +49-531-61815111; Fax. -61815002; school@helmholtz-hzi.de

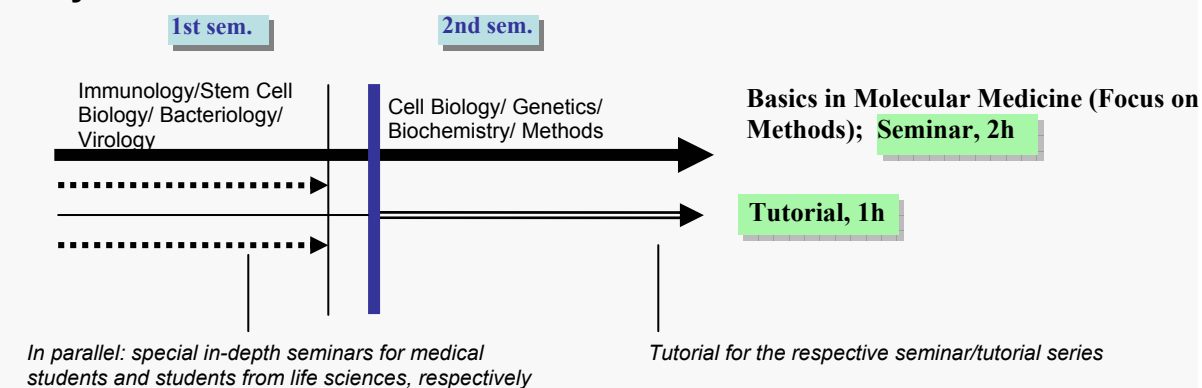
Zentrum für Infektionsbiologie – ZIB, am Institut für Immunologie, Medizinische Hochschule Hannover, Carl-Neuberg-Str. 1, D-30625 Hannover, Tel. +49-511-532-9742, Fax: -9722, zib@mh-hannover.de, Dr. Sabine Johann, Simone Zimmer

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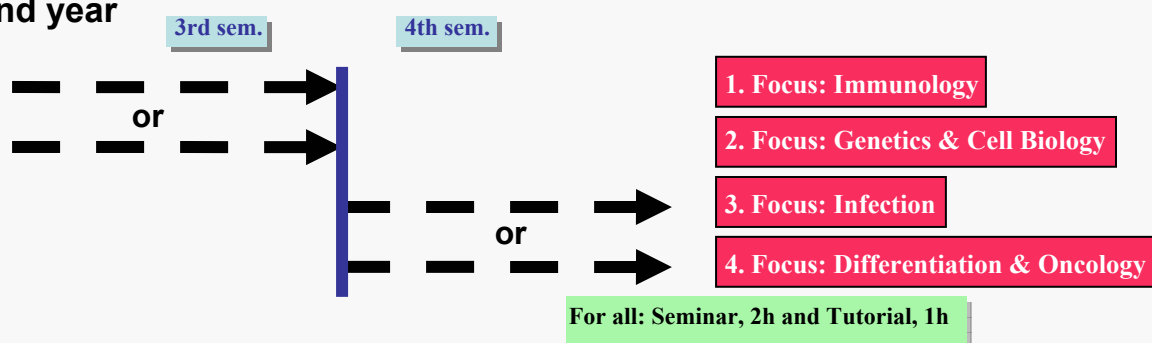
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Curriculum PhD “Molecular Medicine”

1st year



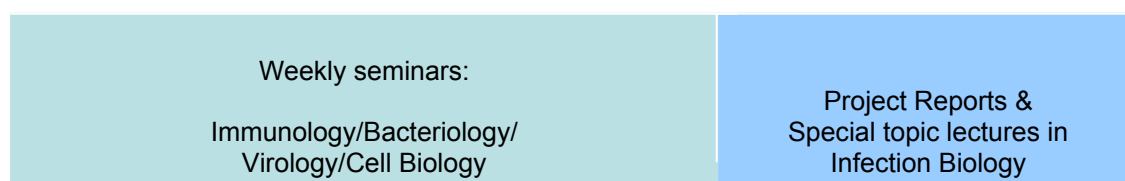
2nd year



3rd year: concentration on individual research projects

Curriculum PhD “Infection Biology” and “DEWIN”

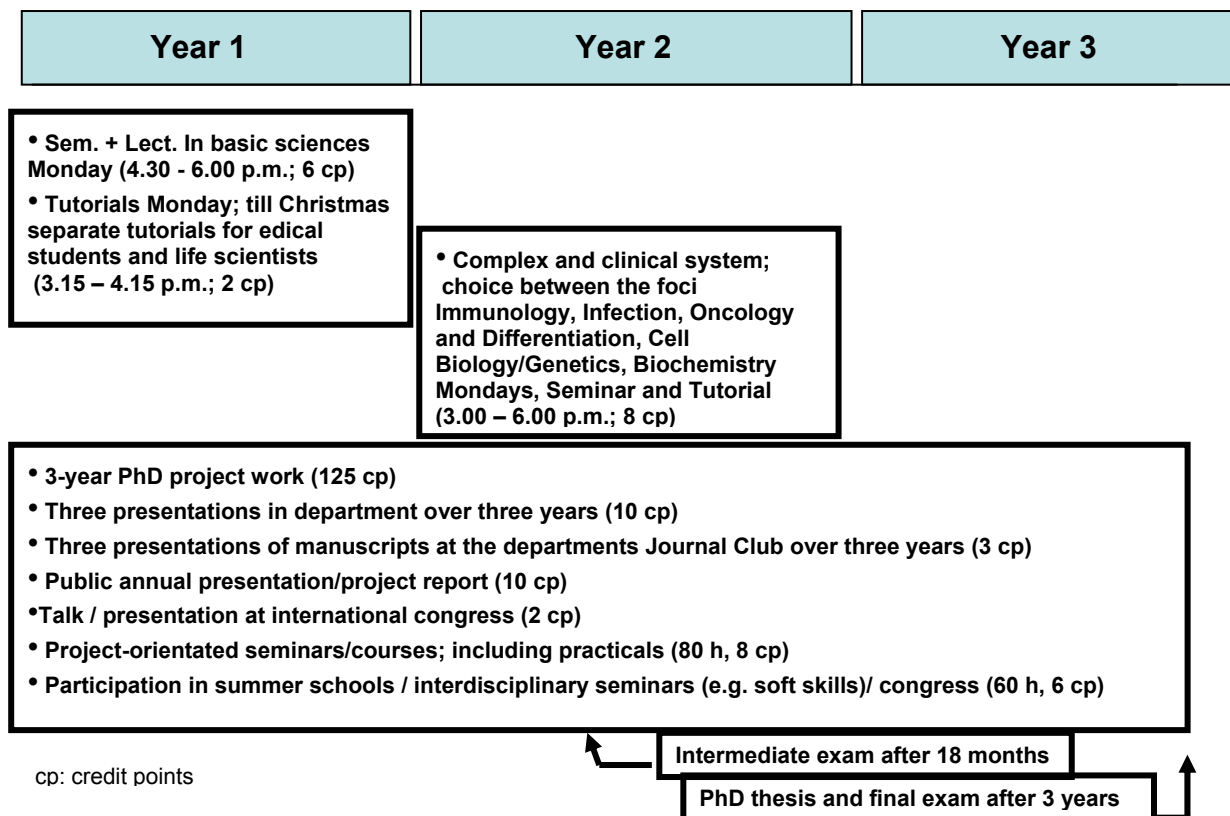
1st Year



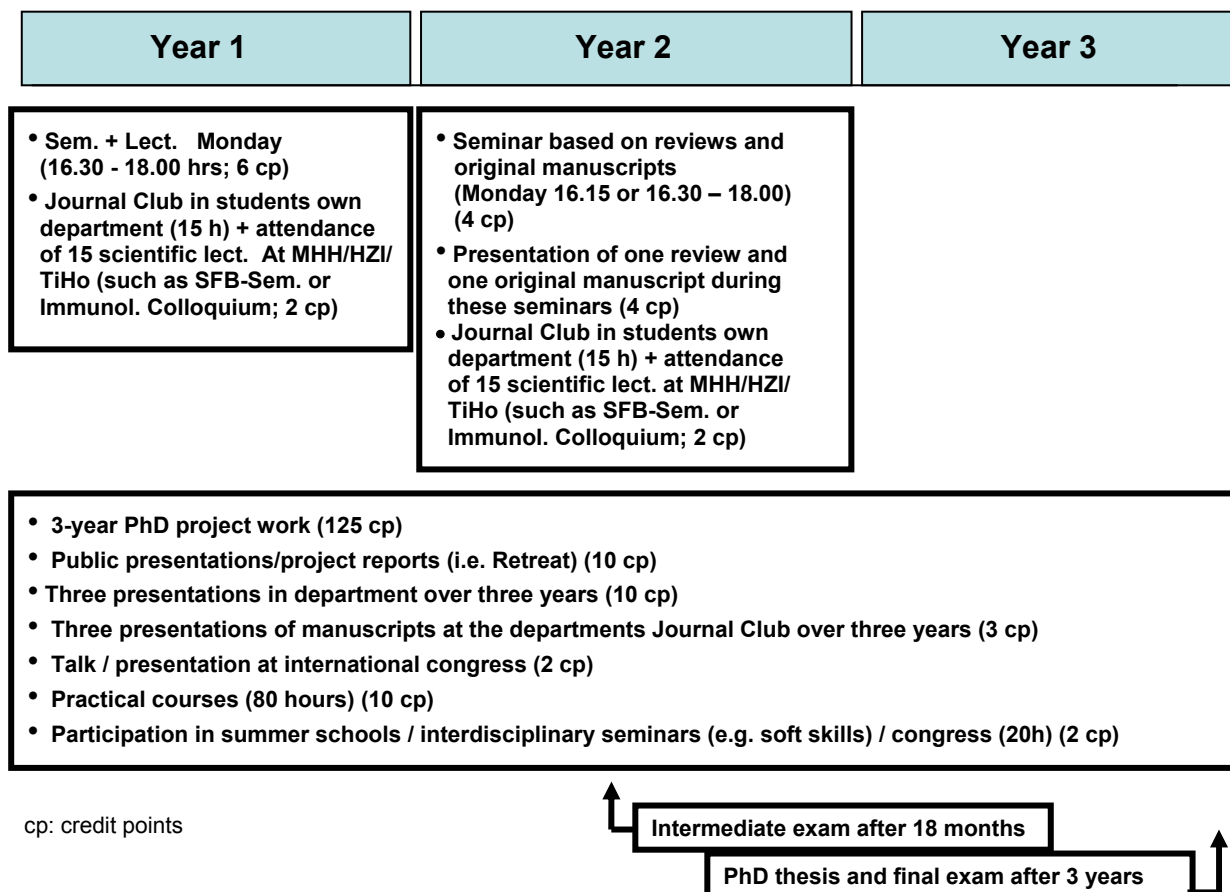
2nd Year



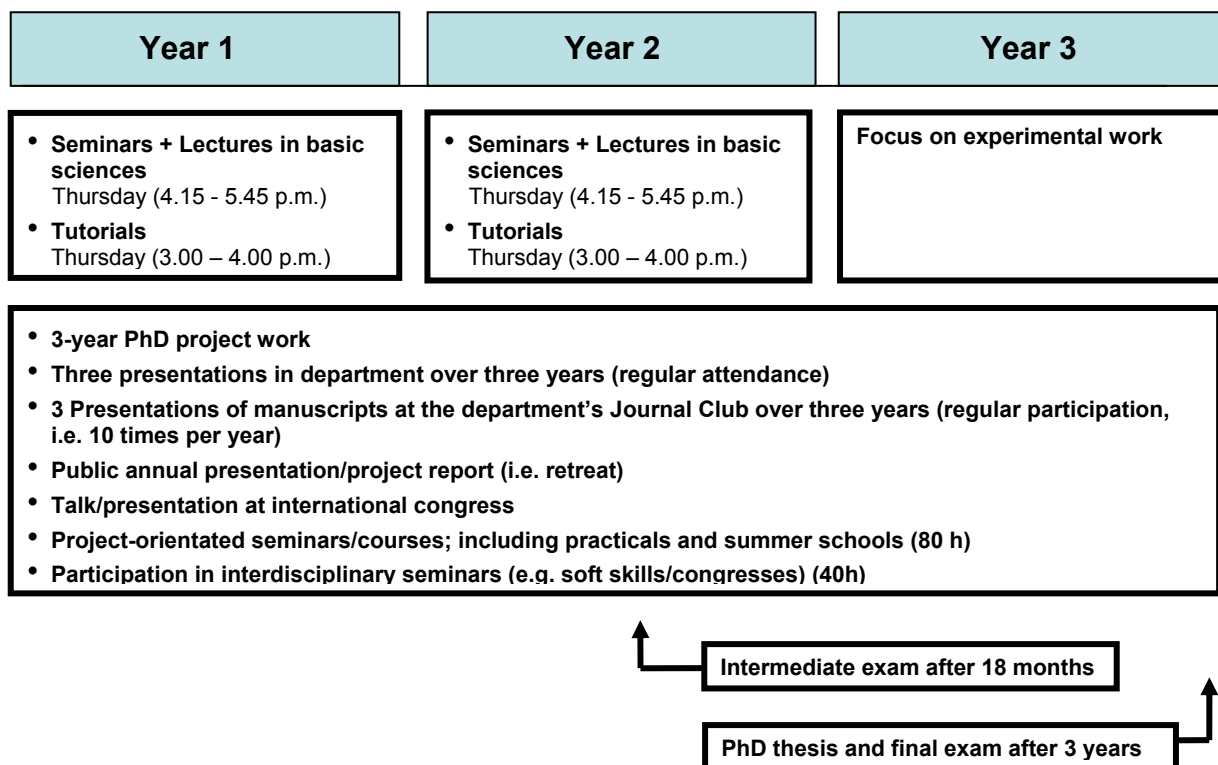
Structure of the PhD program “Molecular Medicine“



Structure of the PhD Program “Infection Biology“ and “DEWIN”



Structure of the PhD-Program “Regenerative Sciences”



You may replace up to 30 hours of the Thursday seminars and tutorials by the additional offers

”Meet the Investigator” or ”Method based seminar”

see page 49

Obligatory

PhD "Molecular Medicine"

1st Semester

Note: The curriculum of the first year is more orientated towards basics and methods in the different disciplines.

PhD "Molecular Medicine": There are some alternative in-depth seminars/ tutorials on Mondays for medical students and students from life sciences till Christmas (see pages 15/16) and the respective tutorial for the seminars.

HBRS Opening Ceremony Lecture Hall "R"	Monday,	10.10.11	5.00 p.m.	
1.) General Immunology				
The hematopoietic wonderland: of stem cells and immunodeficiencies Andreas Krüger Lecture hall B (building J2)	Monday,	17.10.11	4.30 – 6 p.m.	2 hrs
Immune responses to infections Ulrich Kalinke	Monday,	24.10.11	4.30 – 6 p.m.	2 hrs
What went wrong? Of selection and autoimmunity Immo Prinz	Monday,	31.10.11	4.30 – 6 p.m.	2 hrs
Polio in the pool: of antibodies and vaccination Oliver Pabst	Monday,	07.11.11	4.30 – 6 p.m.	2 hrs
Divide to conquer: of killer cells and viruses Georg Behrens	Monday,	14.11.11	4.30 – 6 p.m.	2 hrs
2.) General Bacteriology				
Paradigms of Infection Biology: Metabolism and Virulence Dirk Hofreuter	Monday	21.11.11	4.30 – 6 p.m.	2 hrs

Introduction to Medical Microbiology: Common themes in bacterial pathogenesis Sebastian Suerbaum	Monday,	28.11.11	4.30 – 6 p.m.	2 hrs
Paradigms of Infection Biology: the gastrointestinal habitat; Helicobacter and Campylobacter Christine Josenhans	Monday,	05.12.11	4.30 – 6 p.m.	2 hrs
Paradigms of Infection Biology: Salmonella Mathias Hornef	Monday,	12.12.11	4.30 – 6 p.m.	2 hrs
Paradigms of Infection Biology: Mycobacteria Franz Bange	Monday,	19.12.11	4.30 – 6 p.m.	2 hrs
Paradigms of Infection Biology: Listeria and Chlamydia Andreas Klos	Monday	09.01.12	4.30 – 6 p.m.	2 hrs

3.) General Virology				
Overview: Virus families and viral diseases Albert Heim	Monday,	16.01.12	4.30 – 6 p.m	2 hrs
Tutorial Albert Heim (HBRS seminar room 1140, J4)	Monday,	23.01.12	3.15 – 4.15 p.m	1 hr
Attachment and entry Beate Sodeik	Monday,	23.01.12	4.30 – 6 p.m	2 hrs
Tutorial Sodeik (HBRS seminar room 1140, J4)	Monday,	30.01.12	3.15 – 4.15 p.m	1 hr
Replication of RNA viruses Thomas Pietschmann	Monday,	30.01.12	4.30 – 6 p.m	2 hrs
Tutorial Pietschmann (HBRS seminar room 1140, J4)	Monday,	06.02.12	3.15 – 4.15 p.m	1 hr
Transcription, RNA processing and replication of DNA viruses Jens Bohne	Monday,	06.02.12	4.30 – 6 p.m	2 hrs

Tutorial Bohne (HBRS seminar room 1140, J4)	Monday,	13.02.12	3.15 – 4.15 p.m	1 hr
Assembly, Egress, Maturation Eike Steinmann (TwinCore)	Monday,	13.02.12	4.30 – 6 p.m	2 hrs

Location **Hannover Biomedical Research School, Lecture hall B, I 2**

***only for PhD “Molecular Medicine” medical students: Some more basics in Life Sciences**

As there are not many medical students this year, we will arrange an individual program for you! Or you visit the tutorials for life scientists or PhD “Infection Biology”

Mondays, 3.15 – 4.15 p.m.

[Microbiology, Developmental Biology (Kispert), Biochemistry (Kotlyarov), Virology (Verhagen), Genetics (Schubert)]

Location ask at PhD office

**** only for PhD students from life sciences: Some basics in Medicine/Techniques**

No tutorial, Opening ceremony lecture Hall R	Monday,	10.10.11		
<u>ONLY for PhD “Molecular Medicine”:</u> Welcome: General introduction, lectures, expectations etc.; answering of all questions, election of class speaker Susanne Kruse	Monday,	17.10.11	3.45 – 4.15 p.m.	30 min
Clinical Immunology: pathogenesis of an autoimmune disease (Lupus erythematosus) Torsten Witte	Monday,	24.10.11	3.15 - 4.15 p.m.	1 hr
Gene Technology Security Ruth Knorr	Monday,	31.10.11	3.15 - 4.15 p.m.	1 hr
Hematology: pathogenesis of malignant diseases Matthias Eder	Monday,	07.11.11	3.15 - 4.15 p.m.	1 hr
Protein tyrosine kinases and human cancer Li (Dept. Baum)	Monday,	14.11.11	3.15 - 4.15	1 hr
Super resolution light microscopy Rudolf Bauerfeind	Monday,	21.11.11	3.15 - 4.15 p.m.	1 hr
Electron Microscopy Stephanie Groos	Monday,	28.11.11	3.15 - 4.15 p.m.	1 hr
FACS analysis Roland Jacobs	Monday,	05.12.11	3.15 - 4.15 p.m.	1 hr

No tutorial because of animal course	Monday,	12.12.11	3.15 - 4.15 p.m.	1 hr
Cell Sorting Mathias Ballmeier	Monday,	09.01.12	3.15 - 4.15 p.m.	1 hr
Is it Allergy? Clinical presentations and diagnostic workups Ulrike Raap	Monday,	16.01.12	3.15 - 4.15 p.m.	1 hr

Location Hannover Biomedical Research School, HBRS seminar room 1140, I 4, 2nd floor (level 01)

2nd Semester

Curriculum PhD Molecular Medicine

PhD MM: please attend the whole of the seminars and tutorials listed below.

Tutorial Wölk (HBRS seminar room 1140, J4)	Monday	02.04.12	3.15 – 4.15 p.m.	1 hr
Viral pathogenesis (host defense and viral interference) Martin Messerle Lecture hall B	Monday	02.04.12	4.30 – 6 p.m.	2 hrs
No seminar and tutorial, public holiday!	Monday	09.04.12		
4.) General Cell Biology				
Tutorial Messerle (HBRS seminar room 1140, J4)	Monday,	16.04.12	3.15 – 4.15 p.m	1 hr
Intracellular trafficking Melanie Brinkmann Lecture hall B	Monday	16.04.12	4.30 – 6 p.m.	2 hrs
Tutorial Brinkmann (HBRS seminar room 1140, J4)	Monday,	23.04.12	3.15 – 4.15 p.m	1 hr
Cell cycle Hans J. Hauser Lecture hall B	Monday,	23.04.12	4.30 – 6 p.m	2 hrs
Tutorial Hauser (HBRS seminar room 1140, J4)	Wednesday,	02.05.12	3.15 – 4.15 p.m.	1 hr
Interactive cell function Petra Dersch Lecture hall B	Wednesday,	02.05.12	4.30 – 6 p.m	2 hrs
(Now only for PhD MM) All seminars and tutorials in HBRS seminarroom				
Tutorial Hornef	Monday,	07.05.12	3.15 – 4.15 p.m	1 hr
Molecular mechanisms of protein & membrane trafficking Ernst Ungewickell	Monday,	07.05.12	4.30 – 6 p.m	2 hrs

5.) Biochemistry and Genetics; methods			
Tutorial Ungewickell	Monday,	14.05.12	3.15 – 4.15 p.m 1 hr
Human gene finding; basics of human genes (intro in general genetics, mapping: mouse, human) M. Stuhmann Spangenberg	Monday,	14.05.12	4.30 – 6 p.m 2 hrs
Tutorial Stuhmann-Spangenberg	Monday	21.05.12	3.15 – 4.15 p.m 1 hr
Strategies to analyse gene function <i>in vivo</i> Achim Gossler	Monday	21.05.12	4.30 – 6 p.m 2 hrs
No seminar and tutorial, public holiday!	Monday	28.05.12	
Tutorial Gossler	Monday,	04.06.12	3.15 – 4.15 p.m 1 hr
Next Generation Sequencing Kai Heinecke (group Schlegelberger)	Monday,	04.06.12	4.30 – 6 p.m 2 hrs
Tutorial Heinecke	Monday,	11.06.12	3.15 – 4.15 p.m 1 hr
Signal transduction (general principles, classes of receptors, intracellular signalling cascades) Mathias Gaestel	Monday,	11.06.12	4.30 – 6 p.m 2 hrs
Tutorial Gaestel	Monday,	18.06.12	3.15 – 4.15 p.m 1 hr
Mass spectrometry and protein analysis Andreas Pich	Monday,	18.06.12	4.30 – 6 p.m 2 hrs
Tutorial Shot gun and targeted mass spectrometry Pich	Monday,	25.06.12	3.15 – 4.15 p.m 1 hr
Spectroscopy, hydrodynamics, structure, imaging Ute Curth	Monday, Seminar	25.06.12	4.30 – 6. p.m 2 hrs

Tutorial Curth	Monday, 02.07.12	3.15 – 4.15 p.m	1 hr
Stem cells Christopher Baum	Monday, 02.07.12 Lesson starts at 5.15 p.m.	5.15 – 6.45 p.m	2 hrs
Tutorial Baum	Monday, 09.07.12	3.15 – 4.15 p.m	1 hr
Proteomics applied to clinical research and diagnostics (Eva Mischak-Weissinger) Sylvia Borchers	Monday, 09.07.12 seminar + tutorial	4.30 – 6.30 p.m	2 hrs
No tutorial	Monday, 16.07.12		

Location Hannover Biomedical Research School, I 4, 2nd floor, HBRS seminar room 1140 (HBRS seminar room)

**PhD program “Molecular Medicine” and Research Training Group
GRK 1441 “Allergic response in lung and skin”**

3rd Semester

Note: The curriculum of the second year is more orientated towards research and applied aspects in the different disciplines. Every student has the choice between two major foci each semester. You may vary in the choice of modules between the two foci. Please, choose the ones most appropriate for you and your project!

1. Focus: Immunology

Opening ceremony of HBRS	Monday,	10.10.11		
1. Immune cells and organs				
Lymphoid cells and organs of the intestine Matthias Lochner (TwinCore)	Monday,	17.10.11	3 – 5 p.m	2 hrs
No tutorial	Monday,	17.10.11	5 – 6 p.m	1 hr
From stem cells to T cells Andreas Krüger	Monday	24.10.11	3 – 5 p.m.	3 hrs
Tutorial Lochner	Monday	24.10.11	5 – 6 p.m.	1 hr
Regulation and function of NK cells Roland Jacobs	Monday,	31.10.11	3 – 5 p.m	2 hrs
Tutorial Krüger	Monday,	31.10.11	5 – 6 p.m	1 hr
T and B cell differentiation Fritz Melchers (Berlin/Basel)	Monday,	07.11.11	3 – 6 p.m	3 hrs
2. Autoimmunity				
Fc- and GPCR-mediated mechanism in autoimmune inflammation (Gessner) Kristina Wiege	Monday	14.11.11	3 – 5 p.m.	2 hrs
Tutorial Jacobs	Monday	14.11.11	5 – 6 p.m	2 hr

The complement system and its regulation Andreas Klos	Monday,	21.11.11	3 – 5 p.m	2 hrs
Tutorial (Gessner) K. Wiege	Monday,	21.11.11	5 – 6 p.m	1 hr
Autoimmunity, Tolerance, Tregs Matthias Hardtke-Wolenski	Monday,	28.11.11	3 – 5 p.m	2 hrs
Tutorial Klos	Monday,	28.11.11	5 – 6 p.m	1 hr
3. Allergy and Asthma				
Mechanisms in allergic inflammation (asthma) Norbert Krug (Fraunhofer Institute)	Monday	05.12.11	3 – 5 p.m.	2 hrs
Tutorial Jäckel	Monday	05.12.11	5 – 6 p.m	1 hr
Allergic skin diseases Thomas Werfel	Monday,	12.12.11	3 – 5 p.m	2 hrs
Tutorial Krug	Monday,	12.12.11	5 – 6 p.m	1 hr
Primary immunodeficiencies in humans – what can they teach us about the immune system? Christian Hennig	Monday,	19.12.11	3 – 5 p.m	2 hrs
Tutorial Werfel	Monday,	19.12.11	5 – 6 p.m	1 hr
Neuroimmune interactions in asthma bronchiale Armin Braun (Fraunhofer Institute)	Monday	09.01.12	3 – 5 p.m.	2 hrs
Tutorial Hennig	Monday	09.01.12	5 – 6 p.m	1 hr
Genetic causes of complex diseases: approaches and pitfalls Michael Kabesch	Monday,	16.01.12	3 – 5 p.m	2 hrs
Tutorial Braun	Monday,	16.01.12	5 – 6 p.m	1 hr
Studying allergic airway inflammation: of mice and man Anna-Maria Dittrich	Monday,	23.01.12	3 – 5 p.m	2 hrs
Tutorial Kabesch	Monday,	23.01.12	5 – 6 p.m	1 hr

5. Signaling and therapy				
Regulation of immune responses by CD45 molecules Reinhard Schwinzer	Monday	30.01.12	3 – 5 p.m.	2 hrs
Tutorial Dittrich	Monday	30.01.12	5 – 6 p.m.	1 hr
Post transcriptional gene regulation Helmut Holtmann	Monday,	06.02.12	3 – 5 p.m.	2 hrs
Tutorial Schwinzer	Monday,	06.02.12	5 – 6 p.m.	1 hr
Major Histocompatibility complex as key for adoptive immunotherapy B. Eiz-Vesper	Monday,	13.02.12	3 – 5 p.m.	2 hrs
Tutorial Holtmann	Monday,	13.02.12	5 – 6 p.m.	1 hr
MAP kinase signaling and tumor treatment Christine Falk	Monday,	20.02.12	3 – 5 p.m.	2 hrs
Tutorial B. Eiz-Vesper/C.Figueiredo	Monday,	20.02.12	5 – 6 p.m.	1 hr
Tutorial Falk	Monday,	27.02.12	5 – 6 p.m.	1 hr

Location **Building I4, level SO (ground floor), seminar room S1400 (right to the main entrance)**

2. Focus: Genetics and Cell Biology

Opening ceremony	Monday,	10.10.11		
1. Techniques and diagnostics/therapy				
Endocytosis: Mechanisms and functions in health and disease Yulia Kiyan (kiian.ioulia@mh-hannover.de)	Monday	17.10.11	3 – 5 p.m.	2 hrs
No tutorial	Monday	17.10.11		
Title follows (Miscroscopy) Matthias Ochs	Monday,	24.10.11	3 – 5 p.m	2 hrs
Tutorial Kiyan	Monday,	24.10.11	5 – 6 p.m	1 hr
No seminar, but longer day on 14.11.!!	Monday,	31.10.11	3 – 5 p.m	2 hrs
Tutorial Ochs	Monday,	31.10.11	5 – 6 p.m	1 hr
Stress-dependent signal transduction in eukaryotic cells Matthias Gaestel Seminar+Tutorial same day!	Monday,	07.11.11	3 – 5 p.m	2 hrs
Tutorial Gaestel	Monday,	07.11.11	5 – 6 p.m	1 hr
2. Genetics				
The rise and fall of TSPY (Testis-Specific Protein, Y-encoded) Stephanie Schubert	Monday	14.11.11	3 – 5 p.m.	2 hrs
Viral vectors for gene transfer in vitro and vivo Renata Stripecke	Monday	14.11.11	5 – 7 p.m.	2 hrs
Membrane domains (focus Transmembrane signaling!) Robert Lindner	Monday,	21.11.11	3 – 5 p.m	2 hrs
Tutorial Stripecke	Monday,	21.11.11	5 – 6 p.m.	1hrs
Molecular biology of heart failure Denise Hilfiker	Monday,	28.11.11	3 – 5 p.m	2 hrs
Tutorial Lindner	Monday,	28.11.11	5 –6 p.m	1 hr

3. Transmembrane Signaling				
The role of clathrin and associated proteins in membrane sculpturing Ernst Ungewickell	Monday	05.12.11	3 – 5 p.m.	2 hrs
Tutorial Hilfiker	Monday	05.12.11	5 – 6 p.m	1 hr
Embryonic and somatic cloning in mammals <i>(focus Genetics!)</i> Heiner Niemann	Monday,	12.12.11	3 – 5 p.m	2 hrs
Tutorial Ungewickell	Monday,	12.12.11	5 – 6 p.m	1 hr
Small GTPases as targets of bacterial toxins Harald Genth	Monday,	19.12.11	3 – 5 p.m	2 hrs
Tutorial Niemann	Monday,	19.12.11	5 – 6 p.m	1 hr
How molecular motors work Dietmar Manstein.	Monday	09.01.12	3 – 5 p.m.	2 hrs
Tutorial Genth	Monday	09.01.12	5 – 6 p.m	1 hr
4. Cell Biology and disease				
Glycosylation and diseases (Francoise Routier) Hans Bakker	Monday,	16.01.12	3 – 5 p.m	2 hrs
Tutorial Manstein	Monday,	16.01.12	5 – 6 p.m	2 hr
Cancer and Genes Brigitte Schlegelberger	Monday,	23.01.12	3 – 5 p.m	2 hrs
Tutorial (Routier) Hans Bakker	Monday,	23.01.12	5 - 6 p.m	2 hr
Pathophysiology of arteriosclerosis Karsten Grote	Monday	30.01.12	3 – 5 p.m.	2 hrs
Tutorial Schlegelberger	Monday	30.01.12	5 – 6 p.m	1 hr
Micro RNAs from disease mechanisms to therapeutic approaches Thomas Thum	Monday,	06.02.12	3 – 5 p.m	2 hrs
Tutorial Karsten Grote	Monday,	06.02.12	5 – 6 p.m	1 hr

Functions of Syndecans in inflammatory diseases Frank Echtermeyer	Monday,	13.02.12	3 – 5 p.m	2 hrs
Tutorial (Thum) Jan Fiedler	Monday,	13.02.12	5 – 6 p.m	1 hr
Tutorial/ Seminar Hermann Haller (stem cells in renal injury)	Monday,	20.02.12	3 – 5 p.m	2 hrs
Tutorial Echtermeyer	Monday,	20.02.12	5 – 6 p.m	1 hr

Location **Building I4, 2nd floor (Ebene 1), seminar room 1031 (Master program)**

**PhD program “Molecular Medicine” and Research Training Group
GRK 1441 “Allergic response in lung and skin”**

4th Semester

3. Focus: Infection and Immunity

1. Innate Immunity			
Evolutionary aspects of the Immune System Siegfried Weiss (HZI)	Monday	02.04.12	3 – 5 p.m. 2 hrs
No tutorial	Monday,	02.04.12	5 – 6 p.m. 1 hr
<i>No seminars, public holiday</i>	<i>Monday 09.04.12</i>		
Immune response in HIV Reinhold E. Schmidt	Monday,	16.04.12	3 – 5 p.m. 2 hrs
Tutorial Weiss	Monday,	16.04.12	5 – 6 p.m. 1 hr
War and peace at mucosal surfaces Oliver Pabst	Monday,	23.04.12	3 – 5 p.m. 2 hrs
Tutorial Schmidt	Monday,	23.04.12	5 – 6 p.m. 1 hr
2. Infection and disease			
Acute and chronic bacterial infection of the lung Ulrich Maus/ Kathrin Steinwede	Wednesday	02.05.12	3 – 5 p.m. 2 hrs
Tutorial Pabst	Wednesday	02.05.12	5 – 6 p.m. 1 hr
From Virus pathogenesis to viral therapie Ute Modlich	Monday,	07.05.12	3 – 5 p.m. 2 hrs
Tutorial Maus/ Steinwede	Monday,	07.05.12	5 – 6 p.m. 1 hr
Myocardial woundhealing – Inflammation moderates repair (Location:building K5, elevator D, level 3, room 2390) Gregor Theilmeyer	Monday,	14.05.12	3 – 5 p.m. 2 hrs
Tutorial Modlich	Monday,	14.05.12	5 – 7 p.m. 2 hrs

Genetic susceptibility of infectious disease B. Tümmler	Monday	21.05.12	3 – 5 p.m.	2 hrs
Tutorial Theilmeier ditto location	Monday	21.05.12	5 – 6 p.m	1 hr
<i>No seminars, public holiday</i>	<i>Monday 28.05.12</i>			
3. Genetics and disease				
Genetic engineering of cells and mice for development of disease models Dagmar Wirth (HZI)	Monday,	04.06.12	3 – 5 p.m	2 hrs
No tutorial	Monday,	04.06.12	5 – 6 p.m	1 hr
Viral hepatitis: From immunopathogenesis to immunotherapy Verena Schaphoff	Monday,	11.06.12	3 – 5 p.m	2 hrs
Tutorial Wirth	Monday,	11.06.12	5 – 6 p.m	1 hr
Basic concepts in vaccinology Carlos Guzman (HZI)	Monday	18.06.12	3 – 5 p.m.	2 hrs
Tutorial Schlaphoff	Monday	18.06.12	5 – 6 p.m	1 hr
Tutorial Tümmler	Monday	18.06.12	6 – 7	1 hr
4. Infection and immune system				
Immune regulation in the mucosa Dunja Bruder (HZI)	Monday,	25.06.12	3 – 5 p.m	2 hrs
Tutorial Guzman (HZI)	Monday,	25.06.12	5 – 6 p.m	1 hr
Host-pathogen interactions Eva Medina (HZI)	Monday,	02.07.12	3 – 5 p.m	2 hrs
Tutorial Bruder (HZI)	Monday,	02.07.12	5 – 6 p.m	1 hr
Tutorial Medina	Monday,	09.07.12	5 – 6 p.m	1 hr

Location Building I4, level SO (ground floor), seminar room S1400 (right to the main entrance)

4. Focus: Differentiation and Oncology

1. Development and cancer			
From fly to cancer Nils v. Neuhoff	Monday	02.04.12	3 – 5 p.m. 2 hrs
No tutorial	Monday	02.04.12	
<i>No seminars, public holiday</i>	<i>Monday 09.04.12</i>		
Liver organogenesis and hepatic stem cell differentiation Michael Ott	Monday,	16.04.12	3 – 5 p.m. 2 hrs
Tutorial v. Neuhoff	Monday,	16.04.12	5 – 6 p.m. 1 hr
Epigenetics in cancer Ulrich Lehmann	Monday,	23.04.12	3 – 5 p.m. 2 hrs
Tutorial Ott	Monday,	23.04.12	5 – 6 p.m. 1 hr
2. Stem cells and cancer			
Tumor stem cells (Hans-H. Kreipe) Christgen	Wednesday!	02.05.12	3 – 5 p.m. 2 hrs
Tutorial Lehmann	Wednesday!	02.05.12	5 – 6 p.m. 1 hr
Inborn errors in hematopoiesis Karl Welte / Julia Skokowa	Monday,	07.05.12	3 – 5 p.m. 2 hrs
(Tutorial Kreipe) Christgen	Monday,	07.05.12	5 – 6 p.m. 1 hr
Adoptive T cell therapies in hematopoietic stem cell transplantation Martin Sauer	Monday,	14.05.12	3 – 5 p.m. 2 hrs
Tutorial Welte	Monday,	14.05.12	5 – 6 p.m. 1 hr
T-box genes in development and disease A. Kispert	Monday	21.05.12	3 – 5 p.m. 2 hrs
Tutorial Sauer	Monday	21.05.12	5 – 6 p.m. 1 hr

<i>No seminars, public holiday</i>	<i>Monday 28.05.12</i>		
3. Signaling and cancer			
Oncogenes and myeloproliferation Matthias Eder	Monday, 04.06.12	3 – 5 p.m	2 hrs
Tutorial Kispert	Monday, 04.06.12	5 – 6 p.m	1 hr
RNAi-based target validation in hematopoietic cells Michaela Scherr	Monday, 11.06.12	3 – 5 p.m	2 hrs
Tutorial Eder	Monday, 11.06.12	5 – 6 p.m	1 hr
Molecular mechanisms of senescence and their importance for aging <i>in vivo</i> Anette Melk/ substitute	Monday 18.06.12	3 – 5 p.m.	2 hrs
Tutorial Scherr	Monday 18.06.12	5 – 6 p.m	1 hr
Innovative treatment options for genetic diseases and perspectives for regenerative medicine Axel Schambach	Monday, 25.06.12	3 – 5 p.m	2 hrs
Tutorial Melk/ substitute	Monday, 25.06.12	5 – 6 p.m	1 hr
Genomic integrity and development of cancer Beate Vajen	Monday, 02.07.12	3 – 5 p.m	2 hrs
Tutorial Schambach	Monday, 02.07.12	5 – 6 p.m	1 hr
Tutorial Vajen	Monday, 09.07.12	5 – 6 p.m	1 hr

Location building I4, 2nd floor (Ebene 1), seminar room 1031 (Master program)

PhD program "Infection Biology"

1st Semester				
Tutorials: Mondays, 15:15 -16:15 hrs			Seminars: Mondays, 16:30 - 18:00 hrs	
Location: Room 1140, Building J4, level1			Location: Lecture Hall B, Building J2	
DATE	TYPE	FOCUS	LECTURER	SUBJECT
10.10.2011	HBRS Opening: 17:00 - 19:00 hrs (Building J6, Level S0, Lecture Hall R)			
17.10.2011	Seminar	Immunology I	Krüger	The Hematopoetic Wonderland: Of Stem Cells and Immunodeficiencies
24.10.2011	Seminar	Immunology II	Kalinke	Immune responses to infections
31.10.2011	Seminar	Immunology III	Prinz	What Went Wrong? Of Selection and Autoimmunity
07.11.2011	Seminar	Immunology IV	Pabst	Polio in the Pool: Of Antibodies and Vaccination
14.11.2011	Seminar	Immunology V	Behrens	Divide to Conquer: Of Killer Cells and Viruses
21.11.2011	Seminar	Microbiology I	Hofreuter	Metabolism and Virulence
28.11.2011	Seminar	Microbiology II	Suerbaum	Introduction to Medical Microbiology: Common themes in bacterial pathogenesis
05.12.2011	Seminar	Microbiology III	Josenhans	Paradigms of Infection Biology: The gastrointestinal habitat; Helicobacter and Campylobacter

12.12.2011	Seminar	Microbiology IV	Hornef	Paradigms of Infection Biology: Salmonella
19.12.2011	Seminar	Microbiology V	Bange	Paradigms of Infection Biology: Mycobacteria
09.01.2012	Seminar	Microbiology VI	Klos	Paradigms of Infection Biology: Chlamydia and Listeria
16.01.2012	Seminar	Virology I	Heim	Overview: Virus Families and Viral Diseases
23.01.2012	Tutorial	Virology I	Heim	
	Seminar	Virology II	Sodeik	Attachment and Entry of Viruses
30.01.2012	Tutorial	Virology II	Sodeik	
	Seminar	Virology III	Pietschmann	Replication of RNA viruses
06.02.2012	Tutorial	Virology III	Pietschmann	
	Seminar	Virology IV	Bohne	Transcription, RNA Processing, Replication of DNA viruses
13.02.2012	Tutorial	Virology IV	Bohne	
	Seminar	Virology V	Steinmann	Assembly, Egress and Maturation of Viruses

PhD Program “Infection Biology”

2nd Semester
Times & Location: Mondays, 16:30 - 18:00 hrs, Lecture Hall B, Building J2

DATE	TYPE	FOCUS	LECTURER	SUBJECT
02.04.2012	Tutorial	Virology V	Wölk	
	Seminar	Virology VI	Messerle	Viral Pathogenesis (Host defense and viral interference)
16.04.2012	Tutorial	Virology VI	Messerle	
	Seminar	Cell Biology I	Brinkmann	Intracellular Trafficking
23.04.2012	Tutorial	Cell Biology I	Brinkmann	Intracellular Trafficking
	Seminar	Cell Biology II	Hauser	Cell Cycle
02.05.2012 Wednesday	Tutorial	Cell Biology II	Hauser	Cell Cycle
	Seminar	Cell Biology III	Hornef	Interactive Cell Function

Times & Location: Mondays, 16:30 - 18:00 hrs, MHH, TPFZ / K11, Seminar Room SO-1420

DATE	FOCUS	SUPERVISOR	STUDENT	SUBJECT
07.05.2012	Project Presentation	Förster	Yu	
	Project Presentation	Förster	Kohli	
	Project Presentation	Wedemeyer	Owusu Sekyere	
14.05.2012	Project Presentation	Messerle	Thiel	
	Project Presentation	Schulz / Kay-Jackson	Zischke	
	Project Presentation	Schulz	Gramolelli	
21.05.2012	Rügen Summer School			

29.05.2012				
	Project Presentation	Hauser	Shin	
	Topic Focus			
04.06.2012	Project Presentation	Weiß	Kocijancic	
	Project Presentation	Dersch	Geyer	
	Project Presentation	Häußler	Schniederjans	
11.06.2012	Project Presentation	Kalinke	Bittorf	
	Project Presentation	Kalinke	Hirche	
	Project Presentation	Manns / Wursthorn	Taranta	
18.06.2012	Project Presentation	von Hahn	Van	
	Project Presentation	Sparwasser	Solmaz	
	Project Presentation	Sodeik	Ivanova	
25.06.2012	Project Presentation	Hofreuter	Mohr	
	Project Presentation	Hornef	Zhang	
	Project Presentation	Valentin-Weigand	Ruangkiattikul	
02.07.2012	Project Presentation	Pietschmann	Perin	
	Project Presentation	Ciesek	Wilson	
	Project Presentation	Prinz	Sandrock	
09.07.2012	Project Presentation	Stiesch	Voigt	
	Project Presentation	Behrens	Tappe	
16.07.2012	Project Presentation	Cicin-Sain	Oduro	
	Topic Focus			

PhD Program "DEWIN"**3rd Semester****Times & Location:** Mondays, 16:30 – 18:00 hrs, MHH, TPFZ / K11, Seminar Room SO-1420

DATE	FOCUS	SUPERVISOR	STUDENT	SUBJECT
10.10.2011	HBRS Opening: 17:00 - 19:00 hrs (Building J6, Level S0, Lecture Hall R)			
17.10.2011	Original Paper IM	Weiß	Heinrich	Kane et al., Immunity
	Topic IM		Frahm	B cell responses during infection
24.10.2011	Original Paper VIR	Sodeik	Richter	Hrecka et al., Nature
	Topic VIR		Kleine-Albers	Why location matters – intracellular transport during viral infection
31.10.2011	Original Paper MB	Josenhans	Basic	Safari et al., PNAS
	Topic MB		Casilag	Bacterial effectors
07.11.2011	Original Paper IM	Förster	Ugur	Li et al., Nature Immunology
	Topic IM		Bartholomäus	Differentiation and function of T-helper cells during infection
14.11.2011	Original Paper VIR	Messerle	Bialy	Monette et al., JCB
	Topic VIR		Gnirß	Inhibition of Cell Death by Viruses
21.11.2011	Original Paper CB	Hauser	Schwerk	Guarda et al., Immunity
	Topic Focus		Topic Focus	
28.11.2011	Original Paper IM	Hühn	Stahl	Biton et al., Nature Immunology
	Topic IM		Heinrich	Limiting the immune response
05.12.2011	Original Paper IM	Prinz	Wang	Haribhai et al., Immunity
	Topic IM		Behler	The inflammasome and its modulation by bacterial and viral infections

12.12.2011	Original Paper MB	Suerbaum	Casilag	Winter et al., Nature
	Topic MB		Basic	Virulence regulation in pathogenic bacteria
19.12.2011	Original Paper IM	Sparwasser	Frahm	Dudeck et al., Immunity
	Topic IM		Kashani	Innate immune responses against infections II: PAMPs, TLR, NOD
09.01.2012	Original Paper VIR	Schulz	Kleine-Albers	Morizono et al., CHM
	Topic VIR		Bialy	Viral Oncogenesis
16.01.2012	Topic CB	Hornef	Schwerk	Host and pathogen mechanisms in chronic HCV infection
	Topic Focus		Topic Focus	
23.01.2012	Original Paper IM	Behrens	Behler	Krausgruber et al., Nature Immunology
	Topic IM		Stahl	Antigen presentation in bacterial and viral infection.
30.01.2012	Original Paper IM	Kalinke	Kashani	Egen et al., Immunity
	Topic IM		Ugur	Innate immune responses against infections I: Cytokines, chemokines, complement, acute phase proteins etc
06.02.2012	Original Paper VIR	Cicin-Sain	Gnirß	Yoo et al., Plos Pathogens
	Topic VIR		Richter	Latency and Reactivation of Herpesviruses
13.02.2012	Original Paper IM	Pabst	Bartholomäus	Ma et al., Nature Immunology
	Topic IM		Wang	Balancing immunity and tolerance in the intestine

PhD Program “DEWIN”**4th Semester****Times & Location:** Mondays, 16:30 - 18:00 hrs, MHH, TPFZ / K11, Seminar Room SO-1420

DATE	FOCUS	SUPERVISOR	STUDENT	SUBJECT
02.04.2012	Project Presentation	Bleich	Basic	
	Topic Focus			
16.04.2012	Project Presentation	Kalinke	Bartholomäus	
	Project Presentation	Kalinke	Heinrich	
23.04.2012	Project Presentation	Maus	Behler	
	Topic Focus			
02.05.2012 Wednesday!!	Project Presentation	Sodeik	Bialy	
	Topic Focus			
07.05.2012	Project Presentation	Häußler	Casilag	
	Topic Focus			
14.05.2012	Project Presentation	Pöhlmann	Gnirß	
	Project Presentation	Prinz	Kashani	
21.05.2012	Rügen Summer School			
29.05.2012	Project Presentation	Messerle	Kleine-Albers	
	Topic Focus			
04.06.2012	Project Presentation	Schulz	Richter	
	Topic Focus			

11.06.2012	Project Presentation	Hauser	Schwerk	
	Topic Focus			
18.06.2012	Project Presentation	Förster	Stahl	
	Topic Focus			
25.06.2012	Project Presentation	Pabst	Ugur	
	Topic Focus			
02.07.2012	Project Presentation	Sparwasser	Wang	
	Topic Focus			
09.07.2012	Project Presentation	Weiß	Frahm	
	Topic Focus			
16.07.2012	Project Presentation			
	Topic Focus			

RETREATS:November 10th, 2011 for the Class of 2010February 7th, 2012 for the Class of 2009**PhD Final Exams:**January 20th, 2012July 13th, 2012

PhD Program “Regenerative Sciences”

Chairman of program committee: Prof. Christopher Baum
 Vice-chairman: N.N.

Time (in general):

Tutorials Thursday, 3.00 – 4.00 pm
 Seminars Thursday, 4.15 – 5.45 pm

May 17th, 2012 is Ascension Day (Christi Himmelfahrt) which is a public holiday. Therefore, this week's teaching is shifted from Thursday to Tuesday (i.e. to May 15th, 2012).

Exceptions in day and time are printed in **bold**.

Location (in general)

Semester 1 & 2 MHH, building I 4, HBRS seminar room 1140, level 1
 Semester 3 & 4 MHH, building I 11 – Hans-Borst-Zentrum, seminar room 6040, level S0

Note the * and ** for seminar and tutorial!

1st semester				
Introductory lecture 1 Welcome address, the curriculum of REBIRTH & HBRS, Q&A	seminar*	Thursday, 13.10.2011	4.15 – 5.45 pm	Christopher Baum
	tutorial	Thursday, 20.10.2011	3.00 – 4.00 pm	Christopher Baum
Introductory lecture 2 Principles of regenerative sciences and the REBIRTH approach	seminar	Thursday, 20.10.2011	4.15 – 5.45 pm	Christopher Baum
	tutorial	Thursday, 27.10.2011	3.00 – 4.00 pm	Christopher Baum <i>et al.</i>
Principles of developmental biology and organogenesis 1 Commitment, differentiation, apoptosis, patterning - Morphogenetic gradients and cell-cell communication - Genetic and epigenetic mechanisms	seminar	Thursday, 27.10.2011	4.15 – 5.45 pm	Andreas Kispert
	tutorial	Thursday, 03.11.2011	3.45 – 4.45 pm	Andreas Kispert
Principles of developmental biology and organogenesis 2 - Model systems in developmental biology - Embryogenesis and fetal development	seminar	Thursday, 03.11.2011	2.00 – 3.30 pm	Achim Gossler
	tutorial	Thursday, 10.11.2011	4.45 – 5.45 pm	Achim Gossler
Principles of stem cell biology 1 - Embryonic derivation of stem cells - Culture methods	seminar	Thursday, 10.11.2011	3.00 – 4.30 pm	Thomas Müller
	tutorial	Thursday, 17.11.2011	3.00 – 4.00 pm	Thomas Müller
Principles of stem cell biology 2 - Tumor stem cells and mechanisms of transformation - Principles of cell cycle regulation	seminar	Thursday, 17.11.2011	4.15 – 5.45 pm	N.N.
	tutorial	Thursday, 24.11.2011	3.00 – 4.00 pm	N.N.

Cellular senescence, tumor suppression and organismal aging	seminar	Thursday, 24.11.2011	4.15 – 5.45 pm	Lars Zender
	tutorial	Thursday, 01.12.2011	3.00 – 4.00 pm	Lars Zender
Basic mechanisms of inflammation 1 - Innate and adaptive immunity	seminar	Thursday, 01.12.2011	4.15 – 5.45 pm	Georg Behrens Andreas Krueger
	tutorial	Thursday, 08.12.2011	5.00 – 6.00 pm	Andreas Krueger
Basic mechanisms of inflammation 2 - Infection & Cancer	seminar	Tuesday, 06.12.2011	4.15 – 5.45 pm	Thomas Schulz
	tutorial	Thursday, 15.12.2011	3.00 – 4.00 pm	Thomas Schulz
Principles of cell engineering 1 - microRNAs and downstream targets – technical approaches - Use of miRNA target identification software - Design of miRNA - luciferase-gene reporter assays (tutorial)	seminar	Thursday, 15.12.2011	4.15 – 5.45 pm	Thomas Thum
	tutorial	Thursday, 05.01.2012	3.00 – 4.00 pm	Thomas Thum
Principles of growth factor signalling 2 - Cytokines and hormones and their receptors	seminar	Thursday, 05.01.2012	4.15 – 5.45 pm	Karl Welte/ Julia Skokowa
	tutorial	Thursday, 12.01.2011	3.00 – 4.00 pm	Karl Welte/ Julia Skokowa
Principles of chromosomal instability	seminar	Thursday, 12.01.2011	4.15 – 5.45 pm	Gudrun Göhring
	tutorial	Thursday, 19.01.2012	3.00 – 4.00 pm	Gudrun Göhring
Principles of growth factor signalling 1 - Paracrine and juxtacrine signalling - Signalling pathways involved in the regulation of growth and differentiation	seminar	Thursday, 19.01.2012	4.15 – 5.45 pm	Matthias Gaestel
	tutorial	Thursday, 26.01.2012	3.00 – 4.00 pm	Matthias Gaestel
Principles of cell engineering 2 - Transient DNA delivery - Episomal maintenance - Stable DNA delivery	seminar	Thursday, 26.01.2012	4.15 – 5.45 pm	Christopher Baum Jürgen Bode Axel Schambach
	tutorial	Thursday, 02.02.2012	3.00 – 4.00 pm	Jürgen Bode Axel Schambach

Principles of cell engineering 3 - Homologous recombination - Site-specific DNA modification	seminar	Thursday, 02.02.2012	4.15 – 5.45 pm	Axel Schambach Toni Cathomen
	tutorial	Thursday, 09.02.2012	3.00 – 4.00 pm	Axel Schambach Christopher Baum Toni Cathomen
Principles of cell engineering 4 - Cell expansion - Bioreactors	seminar	Thursday, 09.02.2012	4.15 – 5.45 pm	Thomas Scheper
	tutorial**	Thursday, 16.02.2012	2.45 – 3.45 pm	Thomas Scheper

Please note the following changes:

*

- The seminar 'Introductory lecture 1' on October 13th (Christopher Baum) will take place in seminarroom 78 in building I6, level S0, room 4170, 4.15 – 5.45 pm.

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- The tutorial on Thursday, February 16th, 2012 will NOT take place at MHH but at the Institute for Technical Chemistry Leibniz University of Hannover (LUH)
Callinstr. 3
30167 Hannover
Callinstr. 3 (LUH) can easily be reached by tram no. 4 directly from MHH to station Schneiderberg/Wilhelm-Busch-Museum (20 minutes tram)

PhD Program “Regenerative Sciences”

2nd semester				
Principles of growth factor engineering - Engineering growth factors and their receptors for regenerative medicine - Molecular and structural approaches (tutorial)	seminar*	Thursday, 05.04.2012	3.00 – 4.30 pm	Christopher Baum
	tutorial*	Thursday, 05.04.2012	4.45 – 5.45 pm	Trevor Huyton
Principles of materials sciences for regenerative medicine 1 - Ceramic materials (seminar) - Chemistry (tutorial)	seminar*	Thursday, 12.04.2012	3.00 – 4.30 pm	Peter Behrens
	tutorial*	Thursday, 12.04.2012	4.45 – 5.45 pm	Peter Behrens
Principles of materials sciences for regenerative medicine 2 - Polymeric and metallic materials (seminar) - Cell-Biomaterial Interactions (seminar) - Cell technologies (tutorial)	seminar*	Thursday, 19.04.2012	3.00 – 4.30 pm	Birgit Glasmacher
	tutorial*	Thursday, 19.04.2012	4.45 – 5.45 pm	Birgit Glasmacher Nicola Hofmann
Laser technology in medicine 1 Imaging - Basics of Microscopy - Contrast Mechanisms - Modern Approaches in Imaging - Superresolution Microscopy	seminar*	Thursday, 26.04.2012	3.00 – 4.30 pm	Boris Chichkov
	tutorial**	Thursday, 26.04.2012	4.45 – 5.45 pm	Boris Chichkov
Principles of materials sciences for regenerative medicine 3 - Nanoparticles in medicine (NPs) (seminar) - Nano-manufacturing & nanoanalytics using lasers (tutorial)	seminar*	Thursday, 03.05.2012	3.00 – 4.30 pm	Laszlo Sajti
	tutorial**	Thursday, 03.05.2012	4.45 – 5.45 pm	Laszlo Sajti
Laser technology in medicine 2 Laser Manipulation/Machining - Surface Treatment, Structuring, Polymerization - Laser-Tissue Interaction - Laser Manipulation of Cells	seminar*	Thursday, 10.05.2012	3.00 – 4.30 pm	Boris Chichkov
	tutorial**	Thursday, 10.05.2012	4.45 – 5.45 pm	Boris Chichkov
Cardiovascular Tissue Engineering: Principles	seminar	Tuesday, 15.05.2012	4.15 – 5.45 pm	Andres Hilfiker
	tutorial	Thursday, 24.05.2012	3.00 – 4.00 pm	Andres Hilfiker
Tissue processing and preservation	seminar	Thursday, 24.05.2012	4.15 – 5.45 pm	Willem Wolkers
	tutorial	Thursday, 31.05.2012	3.00 – 4.00 pm	Willem Wolkers

Animal models of human disease 1 - murine models of human disease	seminar	Thursday, 31.05.2012	4.15 – 5.45 pm	Achim Gossler
	tutorial	Thursday, 07.06.2012	3.00 – 4.00 pm	Achim Gossler
Animal models of human disease 2 - primate models - humanized mouse models	seminar	Thursday, 07.06.2012	4.15 – 5.45 pm	Ulrich Martin Thomas Moritz
	tutorial	Thursday, 14.06.2012	3.00 – 4.00 pm	Thomas Moritz
Animal models of human disease 3 - transgenic pigs - xenotransplantation - donor animal engineering	seminar	Thursday, 14.06.2012	4.15 – 5.45 pm	Heiner Niemann
	tutorial	Thursday, 21.06.2012	3.00 – 4.00 pm	Heiner Niemann
Principles of organ transplantation 1 - Heart, lung, and vessels	seminar	Thursday, 21.06.2012	4.15 – 5.45 pm	Axel Haverich <i>et al.</i>
	tutorial	Thursday, 28.06.2012	3.00 – 4.00 pm	Axel Haverich <i>et al.</i>
Principles of organ transplantation 2 - Liver, pancreas, and β -cells	seminar	Thursday, 28.06.2012	4.15 – 5.45 pm	Michael Ott
	tutorial	Thursday, 05.07.2012	3.00 – 4.00 pm	Michael Ott
Stem cell based organ regeneration - Heart and β -cells, and clinical translation	seminar	Thursday, 05.07.2012	4.15 – 5.45 pm	Robert Zweigerdt
	tutorial	Thursday, 12.07.2012	3.00 – 4.00 pm	Robert Zweigerdt

Please note the following changes

* The seminars on April 5th, 12th, 19th, 26th, 2012 and May 3rd, 10th, 2012 will be immediately followed by the associated tutorial. The seminars and tutorials on April 12th, 19th, 26th, and May 3rd, 10th, 2012 will NOT take place at MHH, please find the respective addresses below.

** Teaching taking place at the Laser Centre requires registration one week in advance, i.e.

Register until April 19th for the seminar on April 24th (Prof. Chichkov)

Register until April 24th for the seminar on May 3rd (Dr. Sajti)

Register until May 3rd for the seminar on May 10th (Prof. Chichkov)

Please register with Annette Broll or Daniela Pelz, you may of course register for all 3 seminars at the same time.

Additional information on „Principles of materials sciences for regenerative medicine”, part 1, 2 and 3

General topics:

- materials engineering, biomaterials in medicine,
- *ex vivo* and *in vivo* application,
- degradable materials,
- cell-biomaterial interactions

Literature: Biomaterials Science, BD Ratner, AS Hoffman, FJ Schoen, JE Lemons (eds.) Elsevier Amsterdam 2004; has been purchased by REBIRTH for the students.

Locations of lectures and tutorials:

1 Prof. Dr. Peter Behrens (12.04.2011)

Institute for Inorganic Chemistry (AC)

Leibniz University Hannover (LUH)

Callinstrasse 9; D-30167 Hannover

Tel.: +49 (511) 762 3660

Secr.: +49 (511) 762 3697; Fax: +49 (511) 762 3006

Email: Peter.Behrens@acb.uni-hannover.de

Callinstrasse 9 (LUH) can easily be reached by tram no. 4 directly from MHH to station Schneiderberg/Wilhelm-Busch-Museum (20 minutes tram)

2 Prof. Birgit Glasmacher, (19.04.2011)

Institute for Multiphase Processes & Centre for Biomedical Engineering (zbm)

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Callinstrasse 36 (LUH) can easily be reached by tram no. 4 directly from MHH to station Schneiderberg/Wilhelm-Busch-Museum (20 minutes tram)

3 Prof Dr. Boris Chichkov (26.04.2012 & 10.05.2012)

Laser Zentrum Hannover e.V.

Department: Nanotechnology

Hollerithallee 8, D-30419 Hannover

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Email: b.chichkov@lzh.de

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LZH can easily be reached by tram no. 4 directly from MHH to station Marienwerder /Wissenschaftspark (35 minutes tram)

4 Dr. Laszlo Sajti

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Department: Nanotechnology

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LZH can easily be reached by tram no. 4 directly from MHH to station Marienwerder /Wissenschaftspark (35 minutes tram)

PhD Program "Regenerative Sciences"

3 rd semester				
Regenerative Approaches: Blood and Immunity 1 - Principles of hematopoietic stem cell transplantation, lymphocyte infusions and transfusion medicine (seminar) - HLA system and HLA compatibility (tutorial)	seminar	Thursday, 13.10.2011	4.15 – 5.45 pm	Matthias Eder
	tutorial	Thursday, 20.10.2011	3.00 – 4.00 pm	Constanca Figueiredo
Regenerative Approaches: Blood and Immunity 2 - Embryonic stem cell derived hematopoiesis	seminar	Thursday, 20.10.2011	4.15 – 5.45 pm	Bernhard Schiedlmeier
	tutorial	Thursday, 27.10.2011	3.00 – 4.00 pm	Bernhard Schiedlmeier
Regenerative Approaches: Blood and Immunity 3 - Thymus and T-cell development - B-cell development - Flow Cytometry	seminar	Thursday, 27.10.2011	4.15 – 5.45 pm	Andreas Krueger
	tutorial	Thursday, 03.11.2011	3.00 – 4.00 pm	Andreas Krueger
Regenerative Approaches: Blood and Immunity 5 Genetic disorders of hematopoiesis - Leukemia and leukemogenic stem cells	seminar	Thursday, 03.11.2011	4.15 – 5.45 pm	Julia Skokowa
	tutorial	Tuesday, 08.11.2011	3.00 – 4.00 pm	Julia Skokowa Axel Schambach
Regenerative Approaches: Blood and Immunity 4 - Antigen presenting cells	seminar	Tuesday, 08.11.2011	4.15 – 5.45 pm	Renata Stripecke
	tutorial	Thursday, 17.11.2011	3.00 – 4.00 pm	Renata Stripecke
Genotoxicity and Monitoring	seminar	Thursday, 17.11.2011	4.15 – 5.45 pm	Ute Modlich Christopher Baum
	tutorial	Thursday, 24.11.2011	3.00 – 4.00 pm	Ute Modlich Christopher Baum
Immunotoxicity and Immunomonitoring	seminar	Thursday, 24.11.2011	4.15 – 5.45 pm	Christine Falk
	tutorial	Thursday, 01.12.2011	3.00 – 4.00 pm	Christine Falk
Animal Experiments 1 - the influence of the normal flora and pathogens on laboratory rodents (seminar) - Laboratory rodents: case reports and diseases; presentation of the animal house (tutorial)	seminar	Thursday, 01.12.2011	4.15 – 5.45 pm	André Bleich
	tutorial	Thursday, 08.12.2011	3.00 – 4.00 pm	André Bleich

Animal Experiments 2 - Toxicity Testing of (Inhalation) Biopharmaceuticals (seminar) - Animal House and Equipment for Inhalation Toxicity Testing (tutorial)	seminar	Thursday, 08.12.2011	4.15 – 5.45 pm	Clemens Dasenbrock
	tutorial*	Thursday, 15.12.2011	2.45 – 4.00 pm	Clemens Dasenbrock
Measuring through the microscope: Quantitative structural assessment of organs, tissues and cells - Basic principles of design-based stereology (seminar) - Applications of stereology to the lung (tutorial)	seminar	Thursday, 15.12.2011	4.15 – 5.45 pm	Matthias Ochs
	tutorial	Thursday, 05.01.2012	3.00 – 4.00 pm	Matthias Ochs
Regenerative Approaches: Liver 1 - Physiology and pathophysiological changes of the liver - Infectious and metabolic liver diseases	seminar	Thursday, 05.01.2012	4.15 – 5.45 pm	Michael Ott
	tutorial	Thursday, 12.01.2012	3.00 – 4.00 pm	Michael Ott
Regenerative Approaches: Liver 2+3 - Liver regeneration and stem cells - ES-derived generation of hepatocytes - liver cell therapy, basics in translation	seminar	Thursday, 12.01.2012	4.15 – 5.45 pm	Tobias Cantz
	tutorial	Thursday, 19.01.2012	3.00 – 4.00 pm	Tobias Cantz
Regenerative Approaches: Liver 4 - liver tissue engineering - extracorporeal devices / artificial liver	seminar	Thursday, 19.01.2012	4.15 – 5.45 pm	Tobias Cantz
	tutorial	Thursday, 26.01.2011	3.00 – 4.00 pm	Tobias Cantz
Regenerative Approaches: Pancreas 1 - Biochemistry/Pathobiochemistry of pancreatic β -cells	seminar	Thursday, 26.01.2011	4.15 – 5.45 pm	Sigurd Lenzen
	tutorial	Thursday, 02.02.2012	2.00 – 3.00 pm	Sigurd Lenzen
Regenerative Approaches: Pancreas 2 - Differentiation of ES cells into insulin-producing cells	seminar	Thursday, 02.02.2011	3.15 – 4.45 pm	Ortwin Naujok
	tutorial	Thursday, 09.02.2011	3.00 – 4.00 pm	Ortwin Naujok
MicroRNAs in cardiovascular diseases - regeneration and therapeutic approaches	seminar	Thursday, 09.02.2011	4.15 – 5.45 pm	Thomas Thum
	tutorial	Thursday, 16.02.2011	3.00 – 4.00 pm	Thomas Thum

*** Please note the following change**

The tutorial: 'Animal House and Equipment for Inhalation Toxicity Testing' on December 15th 2011. 2.45 - 4:00 pm, location: Fraunhofer ITEM, Nikolai-Fuchs-Str. 1, Main entrance: Stadtfelddamm, Seminar room S 1a.

PhD Program “Regenerative Sciences”

4 th semester				
Molecular biology of heart failure (seminar) Physiological measurements at mouse heart (tutorial)	seminar	Thursday, 05.04.2012	3.00 – 4.30 pm	Jörg Heineke
	tutorial	Thursday, 12.04.2012	3.00 – 4.00 pm	Jörg Heineke
Regenerative Approaches: Skin	seminar	Thursday, 12.04.2012	4.15 – 5.45 pm	Hans-Oliver Rennekampff
	tutorial	Thursday, 19.04.2012	3.00 – 4.00 pm	Hans-Oliver Rennekampff
Regenerative Approaches: Heart and vessels 2 - Cardiac differentiation of ES & myocardial TE	seminar	Thursday, 19.04.2012	4.15 – 5.45 pm	Ina Gruh
	tutorial	Thursday, 26.04.2012	3.00 – 4.00 pm	Ina Gruh
Regenerative Approaches: Heart and vessels 1 - Angiogenesis und Arteriogenesis in Development and Disease	seminar	Thursday, 26.04.2012	4.15 – 5.45 pm	Florian Limbourg
	tutorial	Thursday, 03.05.2012	3.00 – 4.00 pm	Florian Limbourg
Regenerative Approaches: Lung 1	seminar	Thursday, 03.05.2012	4.15 – 5.45 pm	Ulrich Martin
	tutorial	Thursday, 10.05.2012	3.00 – 4.00 pm	Ulrich Martin
Regenerative Approaches: Lung 2	seminar	Thursday, 10.05.2012	4.15 – 5.45 pm	Ulrich Martin
	tutorial	Tuesday, 15.05.2012	3.00 – 4.00 pm	Ulrich Martin
Regenerative Approaches: Nerve - Degeneration and regeneration in the central and peripheral nervous system - Animal models of acute and chronic neurotoxicity - Cell therapy in the nervous system: neuronal and non-neuronal cells - Application modes - Clinical trials	seminar	Tuesday, 15.05.2012	4.15 – 5.45 pm	Susanne Petri
	tutorial	Thursday, 24.05.2012	3.00 – 4.00 pm	Susanne Petri
Regenerative Approaches: Heart and vessels 3 - Cell Therapy for Myocardial Infarction: Basic Concepts and Clinical Applications	seminar	Thursday, 24.05.2012	4.15 – 5.45 pm	Kai Wollert
	tutorial	Thursday, 31.05.2012	3.00 – 4.00 pm	Kai Wollert

Regenerative Approaches: Cartilage, bone and tendon - mesenchymal stem cells, mesenchymal tissues - signaling pathways - autologous/ allogenic/ xenogenic/ prosthesis/ tissue engineering - animal models - translation: from basic research to clinical therapies - treatment options for bone fractures, osteoarthritis (articular cartilage damage), tendon ruptures	seminar	Thursday, 31.05.2012	4.15 – 5.45 pm	Andrea Hoffmann
	tutorial*	Thursday, 07.06.2012	3.00 – 4.00 pm	Andrea Hoffmann
Design of clinical trials & regulation	seminar	Thursday, 07.06.2012	4.15 – 5.45 pm	Heiko von der Leyen
	tutorial	Thursday, 14.06.2012	3.00 – 4.00 pm	Heiko von der Leyen
Good Manufacturing Practice (GMP) & Quality Control (QC), Advanced Therapy Medicinal Products (ATMP)	seminar	Thursday, 14.06.2012	4.15 – 5.45 pm	Marc Barthold
	tutorial	Thursday, 21.06.2012	3.00 – 4.00 pm	Marc Barthold
Patent Protection of Academic Inventions	seminar	Thursday, 21.06.2012	4.15 – 5.45 pm	Ralf Cordes
	tutorial	Thursday, 28.06.2012	3.00 – 4.00 pm	Ralf Cordes
Upscaling and manufacturing	seminar	Thursday, 28.07.2012	4.15 – 5.45 pm	Cornelia Kasper
	tutorial	Thursday, 05.07.2012	3.00 – 4.00 pm	Cornelia Kasper
Marketing and industrial partnerships	seminar	Thursday, 12.07.2012	4.15 – 5.45 pm	N.N.

* Please note the following changes

* Location: VIANNA (Verbundinstitut für Audioneurotechnologie und Nanobiomaterialien),
Feodor-Lynen-Str. 35, First floor

Additional offers:

Meet The Investigator					
	Investigator	Department	Location	Date¹	Time¹
	Thomas Thum ²	IFB	I03-02-3340 Office TT	01.02.2012	3.00 - 4.00 pm
	Willem Wolkers	LUH, IMP	Office WW		
	Ulrich Martin	MHH, LEBAO			
	Christopher Baum	MHH, Exp. Hematology			
Method Based Seminar					
Title	Lecturer	Department	Location	Date¹	Time¹
Cardiovascular Phenotyping ³	Sandor Batkai	IFB	Seminar room I3 03	08.02.2012	3.30 - 5.00 pm
Techniques in microRNA Research ³	Jan Fiedler	IFB	Seminar room I3 03	15.02.2012	3.30 - 5.00 pm
RNAi based functional genetic screens to identify new targets in regenerative medicine	Lars Zender	HZI, Braunschweig			
Culture of human iPSC and subcloning of hiPSC colonies	Tobias Cantz	MHH, REBIRTH			
Real-time PCR & Analysis	Ortwin Naujok	MHH, Clin. Biochemistry			
Cryopreservation of blood and cryomicroscopy	Nicola Hofmann	LUH, IMP			
Biomaterials and Biocompatibility	Frank Witte	MHH, Orthopedy	Annastift Anna-von-Borries-Straße 1-7 Hannover		
Lyophilised heart valves	Willem Wolkers	LUH, IMP		29.05.2012	4.45 - 5.45 pm
Processing and storage of tissues in an industrial setting ⁴	Michael Harder	Corlife	Feodor-Lynen-Str. 23	05.06.2012	10.00 - 12.00 am

1 given if known already, all other dates and times will be announced by E-mail

2 maximum number of participants: 5

3 maximum number of participants: 12

4 maximum number of participants: 10

Date and time for all semesters on appointment (registration required), you will be notified by E-mail.

Research Training Groups [(E)GRKs]

European Research Training Group (IRTG) 1273: "Strategies of human pathogens to establish acute and chronic infections"

Biweekly programme block (Mondays, 16.00-18.30, Twincore seminar room or Library of MHH Microbiology) composed of

1. lectures by invited guest speakers (including a one hour discussion of the graduate students with the guest)
2. review and original paper presentations by graduate students
3. project presentations by graduate students

Laboratory courses (groups of 2-5 graduate students, dates and topics to be announced separately)

Summer Retreat 2012

Enquiries: kleinhans.petra@mh-hannover.de or maibom.susanne@mh-hannover.de

Research Training Group GRK 1441: "Allergic response in lung and skin"

Curriculum follows the PhD program "Molecular Medicine" (from page 12)

Information: Prof. T. Werfel c/o Eva Satzke, GRK 1441, <mailto:satzke.eva@mh-hannover.de>, phone: ++49 (0) 511.9246.450

Specific seminars and practicals

(see special announcements provided by the HBRS office, program offices and the respective departments)

Organized by the HBRS Office:

Presentation of projects/retreat (weekend, 2 days; for PhD MM: March 22nd/23rd, 2011)

Gene Technology Security (September 2012 in English)

Translation Workshop (Drug development, Patenting, Clinical studies etc.: May 2012)

Bioinformatics (1-week workshop, April 2011)

Career Day (February 24th, 2012)

Project Management in the Biotech Industry (October 29th, Grote-Westrick)

GMP/ GLP workshop (November 29th, Fleischauer & further representatives of ITEM)

Presentation seminar (October 2011 and April 2012, Meuselbach)

Scientific communication/ writing, “tips and tricks” (January 27th, 2012, Kruse)

Scientific writing, advanced (3 days, May 2012 John Chandler)

Animal Experiments (3 days, week December 12th-16th, 2011, Hedrich/ Dorsch)

Conflict Management (December 6th/7th, 2011, G. Kümmele, Berlin) and

Stress Management (January 10th/11th 2012, G. Kümmele)

Time Management (April 18th and May 9th, Golin)

Team Work and Leadership (May 23rd, Golin)

Intercultural communication (weekend, June 1st-3rd, 2012; A. and S. Petersen, Aachen; together with MSc./PhD programs in Göttingen)

Seminars on Career perspectives (continuously)

Seminars offered by Helmholtz Centre for Infection Research Braunschweig, Twincore, Fraunhofer Institute or TiHo: see announcements

Lectures (see special announcements and websites)

Interdisciplinary

- Seminars of the (European) Research Training Groups
- Seminars of the SFBs
- Seminars of the PhD program “Infection Biology”; Seminars of “Rebirth”
- Immunological Colloquium
- Biochemical Colloquium
- Gastroenterology Colloquium
- Microbiological Colloquium, Virological Colloquium
- Biological and Biochemical Questions (BBQ)

In the departments (a must!!)

- Labseminars
- Journal-Clubs (these should be in English!)

Internal practical courses

The supervisors will provide you with special practical trainings if needed. You might also ask your cosupervisors or fellow PhD students for help.

Program offices and HBRS will offer a number of short practical courses (see announcements).

German Classes

Tuesdays: 4.00 p.m. – 5.30 p.m. (beginners, Gesine Mann), HBRS seminar room 1140 (building I 4, level 01); Tuesdays: 7.00 p.m. – 8.30 p.m (advanced, Mrs Petra Marotz, Tel. 3681227)

Scientific English

Mondays: 6.15 p.m. – 7.30 p.m.; Mrs Lydia Lange; HBRS seminar room 1140 (I 4, level 01)

Optional

Note: You are welcome to visit most of the seminars/courses organized for the German Biology and Biochemistry students, as well as medical students. You are also welcome to visit seminars/courses offered by all programs of HBRS [including the Graduate School at the University of Veterinary Medicine Hannover (TiHo)].

<http://www.mh-hannover.de/hbrs.html>
<http://www.helmholtz-hzi.de>

Rules and Requirements for Postgraduate (PhD) Studies and Examinations in structured doctoral programs of Hannover Biomedical Research School (HBRS), Hannover Medical School

On December 15th, 2000 the Senate of the Hannover Medical School approved the following **Rules and Requirements for Postgraduate (PhD) Studies and Examinations in structured doctoral programs of Hannover Biomedical Research School (HBRS)** (alternatively Dr.rer.nat. for life scientists). (*Modifications on June 4th 2002, February 11th 2004, April 21st 2005, March 14th 2007, April 15th, 2009*)

Chapter One

Objective of PhD Studies

§ 1 Objective

Research studies at the Hannover Medical School (MHH) for the purpose of obtaining a PhD degree (hereinafter referred to as PhD studies) shall facilitate postgraduate training with a focus on specific research projects with a view to enabling the candidate to do in-depth scientific work on his or her own and to provide him or her with additional professional qualifications for future assignments in research or related areas of work. PhD studies shall foster the development of outstandingly gifted up-and-coming academics. The standard time allowed for completing PhD studies shall be three years. Once these PhD studies have been successfully completed, and the PhD examination has been passed, the MHH will award the degree of a Doctor of Philosophy (PhD) to medical students, veterinarians, life scientists, or Dr. rer. nat. to natural scientists and pharmacists (not to medical students).

Chapter Two

Requirements for Access and Admission

§ 2 Access

- (1) Anybody having successfully completed university studies in medicine, veterinary medicine or natural sciences (normally Master, Diploma or Staatsexamen) shall have access to PhD studies.
- (2) Applicants are required to render evidence of above-average results obtained at university. The applicant's past career must reveal his or her particular qualification for and dedication to scientific work. A physician or dentist will provide evidence of such qualification and dedication by his or her highly expert doctoral thesis in human medicine or dentistry, with at least its experimental or analytical part completed. Decision on whether or not a candidate qualifies for access to PhD studies is up to the PhD Program Committee (§ 4).

§ 3 Admission to PhD Studies

- (1) The number of applicants that can be admitted to PhD studies is limited; the number depends on the respective program. The applicants should not be older than 30 years. The respective PhD Program Committee shall select the applicants to be admitted (§ 4). As a rule, the President of the MHH will give notice of the date of commencement of PhD studies once a year.
- (2) Details of the as a rule three-step selection process (written application, written test in home countries, interview) are regulated in the respective program 'rules of admission'.
- (3) Application papers shall be submitted to the chairperson of the PhD Program Committee. Details of application procedures are described in the respective program 'guidelines for applicants'.
- (4) On the basis of this application the PhD Program Committee shall decide on admission to PhD studies.

Chapter Three

PhD Program Committee

§ 4 PhD Program Committee

(1) The respective PhD Program Committee shall be responsible for the conduct of PhD studies pursuant to the provisions relating to the Rules and Requirements for postgraduate studies and examinations to obtain a PhD (Dr.rer.nat.) degree.

(2) The PhD Program Committee shall be as a rule composed of four professors (or competent habilitated/senior scientists), a university scientist with a doctor's degree, and a student from every study year who have a joint vote. The members of the PhD Program Committee shall be appointed by the scientists of a respective program for a period of four years, or two years as regards the student member. Re-election shall be admissible. The PhD students shall suggest candidates from among their ranks. The respective PhD Program Committee shall be affirmed by the Research Committee of MHH. The PhD Program Committee is then constituted by the Dean of HBRS and shall elect a professor from among its ranks as chairman.

(3) The PhD Program Committee will meet regularly.

(4) The PhD Program Committee will evaluate proposed projects (open projects) according to quality (with external referees if necessary), financial support, guarantee of independence for PhD student.

(5) The PhD Program Committee shall appoint a team of co-ordinators for each PhD student. Team members shall be habilitated or equally qualified. The team of co-ordinators shall be composed of the student's personal supervisor at the MHH or partner institutes, and two further scientists qualified as university teachers whose professional activity shall be closely related to the subject of the project. In case of several PhD students doing research in the same line, the respective co-ordinators' teams can be composed of the same individuals.

Chapter Four

Curriculum

§ 5 Contents of Studies

(1) The contents to be learned shall be conveyed to the students through their experimental or equivalent theoretical research work and through project-related as well as inter-disciplinary research-oriented courses and seminars. For that purpose, the PhD Program Committee shall prepare and submit, after consultation with the university institutions or partner institutes involved in these studies, a curriculum indicating compulsory and recommended courses or seminars for each discipline. The courses and seminars shall be held by the teachers and professors of the MHH as well as partner institutes (e.g. the University of Veterinary Medicine Foundation Hannover, the Leibniz University of Hanover, Fraunhofer Institute of Toxicology and Experimental Medicine Hannover, Helmholtz Center for Infection Research Braunschweig), including visiting professors. Teaching shall be in English. Lectures and seminars of different programs are mutually acknowledged. PhD students may also register for suitable courses or seminars offered by other scientific schools (Leibniz University, University of Veterinary Medicine, etc.). Students are encouraged to do active teaching themselves, e.g. by giving lectures at seminars or postgraduate research trainingprogram [Doktorandenkolleg]. Each student's individual progress at PhD courses and seminars shall be monitored and consistently assessed by the respective teachers, with teachers preparing written reports on the results obtained by the student.

(2) PhD students shall design, after consultation concert with their co-ordinators, their respective individual schedules pursuant to the curriculum established by the PhD Program Committee. Such individual schedule shall require approval by the respective co-ordinators' team. The student must complete a minimum of 300 hours at courses and seminars during his or her PhD studies; as a rule, at least 80% thereof must be taken at project-related courses and seminars and up to 20% may be spent on interdisciplinary learning (e.g. experimental techniques and bio-informatics, molecular biology, bio-

statistics, scientific communication etc.). The European Credit Point System has been introduced for assessing tuition results.

During the first year of PhD studies, courses for physicians, dentists and veterinarians are intended to provide participants with a chance to consolidate their knowledge of the fundamental principles of natural sciences and courses for natural scientists are intended to consolidate their knowledge in medical aspects.

(3) The respective PhD programs shall be – in structure and content – in accordance with the modus of granting credit points (cp) according to the European ECTS system. For the 3-year program altogether 180 cp have to be achieved. The granting of ECTS is regulated in the respective program rules.

PhD students could apply for a leave if justified (e.g. in case of pregnancy), but for no more than 12 months.

Short time stays abroad are very much appreciated and will be supported. If students take seminars and courses abroad, they could be acknowledged for the respective PhD program.

§ 6 Co-ordinators

(1) PhD students shall supervised by the members of their respective team of co-ordinators (§ 4) appointed by the PhD Program Committee. The responsibilities of the team shall be:

- a) To act as co-ordinators and to give individual expert advice to PhD students all through their PhD studies.
- b) To evaluate PhD students' progress during their studies by reading their reports and conducting tests, and to assess their written final examination papers.
- c) Within a time of probation of 6 months, PhD students are evaluated. Within this time peroid, student status can be changed easily on both sides in agreement with the team of co-ordinators and PhD Program Committee. The PhD Program Committee can upon request decide about the termination of collaboration with the student.

Within the scope of their research project, students have to work with appropriate methods on a clearly defined subject so that, with some realistic prospect of success, scientific knowledge can be expected to be incremented and the results of such research should be published in international peer-review journals. The co-ordinators shall make sure, and satisfy the PhD Program Committee to that effect, that students are not entrusted with any tasks unrelated to their PhD studies.

(2) The co-ordinators shall be responsible for the financing of the respective research project and shall make efforts, during the standard period of PhD studies (three years), to raise the money needed for the PhD students they are in charge of. Any scholarships available at the MHH shall be awarded by resolution of the HBRS Committee of MHH.

(3) Co-ordinators should assist PhD students in planning their further professional career.

(4) The responsibilities of co-ordinators for PhD students shall end upon the date when the latter pass their PhD examination (§ 10), which is normally three years but no later than five years after commencement of PhD studies.

§ 7 Scientific Colloquia

PhD students shall be invited once every year by the PhD Program Committee to attend a public colloquium held at the MHH, giving them an opportunity to give a lecture on the current state of their research (§5). The contents of such lecture, constituting an interim report, shall be submitted in writing by the PhD student to the PhD Program Committee. The PhD Program Committee shall decide whether or not this progress report constitutes a sufficient step towards the successful completion of the student's research. If the Committee's comment is negative, such result shall be communicated in writing to the student and his or her co-ordinators' team, indicating the reasons. Pursuant to a period of one month, the student shall submit a modified work plan for the next year of his research, giving due consideration to the recommendations made.

Chapter Five

Examinations

§ 8 Intermediate Examination

The oral intermediate examination shall be held no later than 18 months after commencement of PhD studies. By way of exception, which must be well-founded, the intermediate examination can be taken at a later date. If a student wishes such exception, he shall apply in writing to the PhD Program Committee adding a comment prepared by his co-ordinators' team. The dates for intermediate examinations shall be determined by the PhD Program Committee. The intermediate examination shall be held by a member of the PhD Program Committee and an expert (chairman) in the special field and shall cover topics from the student's research project and from the courses and seminars the student has registered for. The examination usually is held in English. If the student fails the intermediate examination he shall be allowed to retake it once, pursuant to a period of at least three and no more than six months as the examiners may decide. If the student fails again, he or she shall be deemed to have finally and absolutely failed. Following such final and absolute failure the student shall be taken off the register. The "chairman" shall report the result of the intermediate examination to the PhD Program Committee. The result of the exam will account for 20% of the final mark (PhD or Dr.rer.nat.).

§ 9 Requirements for Signing up for PhD Examination

After completion of PhD studies, which is normally at the end of the third year, the PhD examination shall be held by the co-ordinators' team. The PhD student shall submit the following documents when signing up for the PhD examination:

1. Certificate of regular attendance at and completion of courses and seminars according to the curriculum, i.e. a total of at least 300 hours, and of three colloquia pursuant to § 7;
2. Certificate of intermediate examination;
3. A scientific thesis (dissertation) prepared in English or German by the PhD student on the research project the student worked on during his or her PhD studies, with introduction, materials and methods, results, discussion and summary. The thesis shall constitute an essential original scientific contribution to the discipline the student's research project pertains to;
4. Alternatively (instead of thesis), usually two first author publications in internationally peer review science journals. The PhD student's personal contribution to such publications shall be clearly identified. In that context, "accepted" shall be deemed equivalent to "published". As for this publication requirement, exceptions are possible with reasons to be given by the co-ordinator. The publications must be correlated as regards their subject matter, and shall be supplemented by a detailed description under a joint title in English or German of the research subject, including an overall summary and a discussion of results.

To assess the thesis or the publications, the PhD Program Committee shall procure at least one external expert's opinion, as well as one internal expert's opinion. To be on the safe side, one expert shall be nominated as substitute in case of unforeseen drop outs. For the Dr. rer. nat., the external expert has to have a natural scientist qualification. In addition, the co-ordinators' team shall prepare an expert report on the dissertation or the publications, and such report together with the external and internal expert's opinion shall serve to make the final assessment. If one of the expert reports detects any shortcomings in the dissertation, the PhD Program Committee can be requested to have such shortcomings eliminated or remedied as a precondition for acceptance of the thesis. The chairperson can allow a reasonable period for the PhD candidate to remedy the shortcomings and recommend that he or she submit the thesis anew. In that respect, the chairperson of the PhD Program Committee can extend this period once only. The experts shall assess the thesis again once the shortcomings have been remedied. If, based on such second experts' vote, the PhD Program Committee declines to accept the thesis, the candidate shall be deemed to have failed the PhD examination finally and absolutely. In that case, the PhD student shall be taken off the register.

§ 10 PhD Examination

The PhD examination consists of a public lecture (15 min, in English) held by the PhD student at the Hannover Medical School on the subject of his research, a subsequent public disputation of the project of at least 30 minutes of duration to assess the knowledge acquired by the student on the subject of his specific area of research as well as on interdisciplinary subjects. The interview also serves to assess whether the candidate has acquired, and is able to apply, any knowledge and skills relating to the scientific environment of the subject of his research. The examination is taken by the external and internal examiner. The final mark results from: the intermediate exam (20%), the written dissertation/ the two experts' opinions (60%), the oral examination (20%). In justified exceptional cases, the examination committee may deviate from the latter rule.

The oral examination shall be taken on record in abridged form and shall indicate:

the grade earned for the oral examination,
the grade earned for the thesis,
the overall grade average earned for the PhD examination.

It shall be signed by the chairman of the board of examiners.

The following grades can be awarded:

Excellent/ very good/ good / satisfactory
(Failed)
Equivalent to

excellent / summa cum laude,
very good / magna cum laude,
good / cum laude,
passed / rite.

If the candidate fails the final examination he or she shall be allowed to retake it once, pursuant to a period of at least three and no more than six months as the co-ordinators' team may decide. Should the student then fail again, he or she shall be deemed to have finally and absolutely failed the PhD examination. Following such final and absolute failure the student shall be taken off the register. The result of the PhD examination shall be communicated to the PhD Program Committee and the President's office.

Chapter Six

The PhD Doctorate

§ 11 Award of the Academic Degree of a Doctor of Philosophy (PhD)

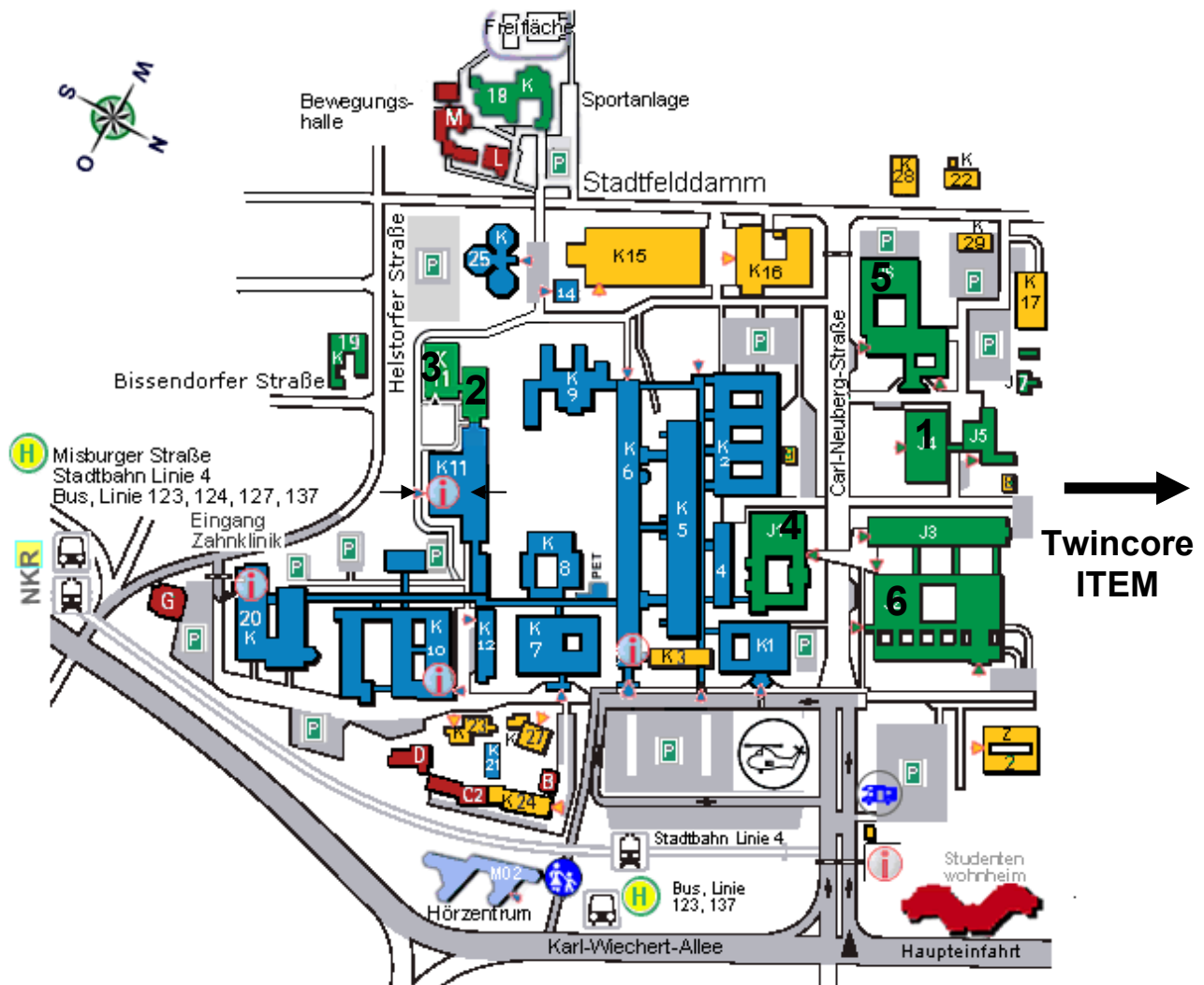
Once the student has passed the PhD examination and has distributed six copies of the dissertation (plus one electronic version), he or she shall be awarded the academic degree of a Doctor of Philosophy (PhD) or a Dr. rer. nat. degree by the MHH. A document as shown in Appendix 1 shall be issued to him or her in evidence of such award. The award shall authorize the candidate to use the academic title of a PhD or Dr. rer. nat..

Coming into Effect

The Rules and Requirements for Postgraduate Studies and Examinations in structured doctoral programs of Hannover Biomedical Research School (HBRS) to obtain a PhD degree (or Dr.rer.nat.), as approved by me, are hereby published within the Hannover Medical School and are coming into effect.

Hannover, March 14th, 2007

The President
Professor Dr. Dieter Bitter-Suermann



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**Twincore
ITEM**

Klinikbereich	Verwaltungs- und Technikbereich
K1 Chirurgische Poliklinik	K22 Kindertagesstätte
K2 Polikliniken West	K3 Verwaltung der Kliniken (Patientenaufnahme)
K4 Laborbau	J8 Flaschengaslager
K5 UBF-Bau	J9 Ätherbunker
K6 Bettenhaus	K15 Mensa / Küche Schule für Diätassistentinnen
K7 Radiologie	K16 Technische Zentrale
K8 Physikalische Therapie	K17 Wäscherei
K9 Psychiatrie	K22 Dampfkesselhaus
K10 Kinderklinik	K23 Mehrzweckgebäude Logopädische Schule (Haus B)
K11 TPFZ/Frauenklinik	K24 Mehrzweckgebäude (Haus C1)
K12 Infektions- und KMT-Station	K27 Verwaltungsgebäude (Haus A)
K14 Immunologische Ambulanz	K28 Abfallzentrale
K20 Zahn-Mund-Kieferklinik	K29 Bereitstellungslager
K25 Neubau KH	
Instituts- und Lehrbereich	Wohnbereich
J1 Klinisches Lehrgebäude	B Wohnhaus B
J2 Vorklinisches Lehrgebäude	C2 Wohnhaus C2
J3 Theoretische Institute I	D Wohnhaus D
J4 Forschungswerkstätten	F Wohnhaus F
J5 Zentrales Tierlabor	G Wohnhaus G
J6 Theoretische Institute II	L Wohnhaus L
J7 Hundehaus	M Wohnhaus M
K18 Krankenpflegeschule Kinderkrankenpflegeschule	
K19 Schulen für Med.-Techn. Assistenten Labor/Radiologie	

1: Building J4 (Forschungswerkstätten)
PhD Office; HBRS seminar room 1140;
Seminar room 1031, level 1,
Seminar room S1400 (ground),
Seminar room Cell Biology (level H)

2: TPFZ Research building
(for entrance see arrows)
PHD Infection Biology Office and DEWIN, level 2
Seminar room 1420, ground floor

3: HBZ Building (Hans Borst Zentrum)
PHD Regenerative Science Office, level 2
Seminar room, ground floor

4: Main lecture hall building (F-N), Library

5: Lecture halls Q, R

6: Lecture halls A-E