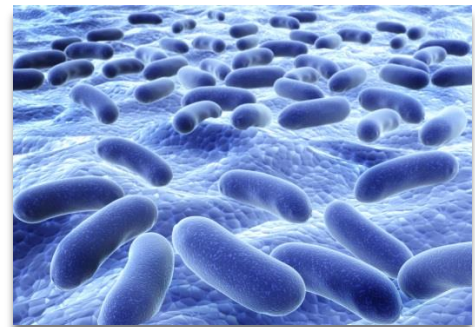
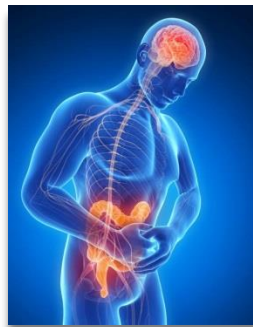


NEUROGUT



COST Action BM 1106 GENIEUR Training School

“Molecular Methods in IBS Research: genetics, epigenetics and microbiota research”



Heidelberg, March 11 - 13, 2016

*“ZMBH” - Zentrum für Molekulare Biologie der Universität Heidelberg,
Im Neuenheimer Feld 282, 69120 Heidelberg, Germany*



COST is supported by
the EU Framework Programme
Horizon 2020

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NEUROGUT

COST Action BM 1106 GENIEUR Training School

Heidelberg, March 11 - 13, 2016
Programme

Organised by WG3 (Genetics and Epigenetics) and WG4 (Microbiota) www.GENIEUR.eu
Co-organised by www.neurogut.eu

“Molecular Methods in IBS Research: genetics, epigenetics and microbiota research”

Goal	Training and Education
Description of the TS and how it will serve the identified goal(s)	One of the major goals of GENIEUR is the encouragement of young colleagues to get engaged in translational neurogastroenterology research. With this Training School we will offer a platform not only for the young scientists but also for the more established colleagues from all Working Groups involved in the Action to get introduced to the background knowledge about the <i>state of the art</i> in experimental methods and analysis techniques in genetics/epigenetics as well as in microbiota research.
Identification of WGs involved	WGs 3 & 4
Specific outputs and outcomes	Getting a solid background in methodological and data analysis skills in genetics/epigenetics and microbiota research

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Organising Committee

Beate Niesler, Heidelberg, Germany

Magnus Simrén, Gothenburg, Sweden

Mirjana Rajilić-Stojanović, Belgrade, Serbia

John Penders, Maastricht, Netherlands

The COST Action BM 1106 GENIEUR Training School is supported by



Friday, March 11, 2016 - Genetics/Epigenetics

ZMBH, Room 001

8:00 Welcome Address

Morning Session ZMBH, Room 001

Background Genetics & Epigenetics in IBS

Chairs: *Beate Niesler, Jim Kaput (Nestlé)*

08:30 Twin studies and family studies in IBS (*May-Bente Bengtson, Tönsberg, Norway*)

09:15 Mendelian traits versus complex genetics (*Lejla Kapur-Poiskić, Sarajevo, Bosnia-Herzegovina*)

10:00 Coffee Break

10:30 Candidate gene approaches versus genome wide analysis (*Beate Niesler, Heidelberg, Germany*)

11:15 Epigenetics (*Javier Santos, Barcelona, Spain*)

12:00 Nutrigenomics (*Jim Kaput, Systems, Nestlé Institute of Health Research, Lausanne, Switzerland*)

13:00 Lunch Break

Afternoon Session ZMBH, Room 001

Data Analysis - Biostatistics of Genetic and Epigenetic Data

Chairs: *Dominique Scherer, Rosa Gonzalez*

14:30 Statistical analysis of genetic data: background and practical examples (*Dominique Scherer, Heidelberg, Germany*)

15:15 Statistical analysis of epigenetic data: background and practical examples (*Rosa Gonzalez, Heidelberg, Germany*)

16:00 Coffee Break

16:30 Data mining approaches in complex disorders: Experimental Designs (GWAS versus Systems Research) (*Jim Kaput, Nestlé Institute of Health Research, Lausanne, Switzerland*)

17:15 End of Day 1

Saturday, March 12, 2016 - Methods

Morning Session *ZMBH, Room 001*

Chairs: *David Ibberson, Per Hoffmann*

High Throughput Techniques

08:30 High Throughput Technologies (*Per Hoffmann, Dept. of Biomedicine, University of Basel, Switzerland and Forschungszentrum Jülich and Institute of Human Genetics, Bonn, Germany*)

09:15 Next generation Sequencing (*David Ibberson, Deep Sequencing Core Facility, CellNetworks, Heidelberg*)

10:00 Coffee Break

DNA and RNA analysis

Chairs: *Maik Prüss, Adrian Palmer*

10:30 From DNA Shearing and Nucleic Acid Extraction to Biomarker Extraction (*Adrian Palmer, Covaris Europe*)

11:15 Simultaneous single-molecule quantification of DNA, RNA and protein - Digital Multiplex Gene Expression/DNA Copy Number and Protein Analysis in Standard Samples and Challenging Formalin-Fixed Paraffin-Embedded (tissue) Samples/3D Biology (*Maik Prüss, nanoString, Germany*)

12:00 Lunch Break

Afternoon Session *CIP-ANA, Institute of Anatomy, INF 307, 1st Floor, Room 126*

14:00 CLC Genomics Workbench & Ingenuity Pathway Analysis - a perfect combination for data analysis and data mining (*Anne Arens, Mario Ricketts, Qiagen, Germany*)

- Introduction to CLC Genomics Workbench
- Data Analysis of Microbes (metagenomics, microbial typing, genome finishing)
- Hands-on: RNA-Seq Analysis using CLC Genomics Workbench & Ingenuity Pathway Analysis

17:00 End of Day 2

20:00 Dinner and Get Together at *Vetter's Alt Heidelberger Brauhaus*

Sunday, March 13, 2016 - Microbiota

Morning Session *ZMBH, Room 001*

Background Microbiota research

Chairs: *Mirjana Rajilić-Stojanović, John Penders*

08:30 Microbiota studies: pitfalls from a microbiologist's perspective and setting up a microbiota study (*Mirjana Rajilić-Stojanović, Belgrade, Serbia*)

09:15 The establishment of the human gut microbiota (*John Penders, Maastricht, The Netherlands*)

10:00 Coffee Break

10:30 General introduction into microbiota analysis methods and terminologies – (*Chays Manichanh, Vall d'Hebron, Barcelona, Spain*)

11:15. Analysis of microbiome data: from simple visualisations to multivariate and network analysis (*Sara Vieira-Silva, Leuven, Belgium*)

12:00 Lunch Break

Afternoon Session *ZMBH, Room 001*

Microbiota relevance to IBS

Chairs: *Chays Manichanh, Daisy Jonkers*

13:00 Microbiota and diet (*Muriel Derrien, Research scientist - Gut Microbiota program co-leader - Danone Nutricia Research, Paris, France*)

13:45 Microbiota in FGID (*Mirjana Rajilić-Stojanović, Belgrade, Serbia*)

14:30 Coffee Break

15:00 The role of the microbiota in gut –brain interactions (*Gerard Clark, Cork, Ireland*)

15:45 Host-microbe cross-talk in the human gut - example of *Akkermansia muciniphila* (*Muriel Derrien, Danone Nutricia Research, Paris, France*)

16:15 Therapeutic targeting of the microbiota (*Daisy Jonkers, Maastricht, The Netherlands*)

17:00 End of Training School

HOW TO GET TO THE MEETING VENUE

“ZMBH” - Zentrum für Molekulare Biologie der Universität Heidelberg, Im Neuenheimer Feld 282, D-69120 Heidelberg, Germany

FROM THE AIRPORT

The nearest airport to Heidelberg is the one in Frankfurt/Main (FRAPORT). You will need roughly 40 – 45 minutes by train to get to the Heidelberg Main Station. It might take longer when you're travelling by car due to frequent road constructions and very heavy traffic.

BY RAILWAY

You can view the German railway schedules or book train tickets online (e.g. from Frankfurt/Main to Heidelberg) through the “Deutsche Bahn AG” (only in German!) at www.bahn.de.

BY PUBLIC TRANSPORTATION, STARTING AT THE HEIDELBERG MAIN STATION (HAUPTBAHNHOF)

A website with all the necessary time schedules and information is available (only in German!) at www.vrn.de. Directions in English will follow below:

CHOOSE ONE OF THE FOLLOWING OPTIONS

- Take tram No. 21 or 24 and get off at "Jahnstrasse"

OR

- Take bus line No. 32 and get off at the stop called "Chirurgische Klinik" right in front of the German Cancer Research Center (DKFZ)

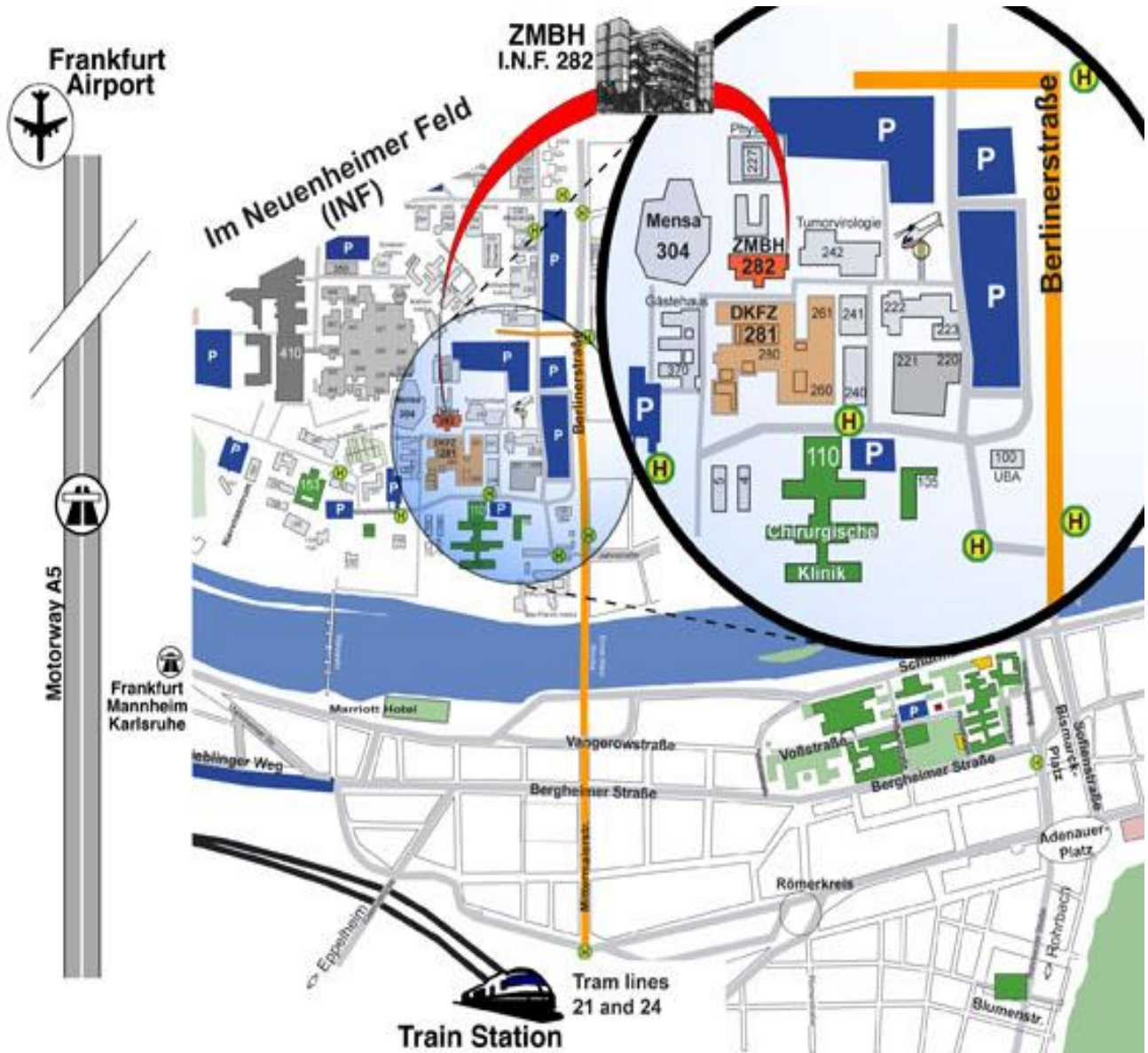
OR

- Take bus line No. 31 and get off at the stop called "Bunsengymnasium"

THEN:

- Walk towards the "Neuenheimer Feld" (pdf with a map of the Neuenheimer Feld). The ZMBH is located right behind the DKFZ.

Map of the Campus “Im Neuenheimer Feld” and the
ZMBH – INF 282



Recommended Hotels in Heidelberg

Hotel Name	Address	Phone	Homepage	Price in € Single Room
Boarding House	Rohrbacher Str. 32 (between Old City and Campus)	+49-(0)6221- 434050	http://boardinghouse-hd.de/	69 - 89
Café Frisch	Jahnstr. 34 (10 min walking distance to campus/conference site, close to the banks of the river)	+49-(0)6221- 45750	http://cafe-frisch.de/	68 - 78
Guest House	Bergheimer Str. 24	+49-(0)6221- 872710	http://guesthouse-hd.de	Studios – starting at 79
Hotel Auerstein	Dossenheimer Landstr. 82 (more rural area /city limits)	+49-(0)6221- 6499700	http://auerstein.de	79 - 129
Hotel Bayrischer Hof	Rohrbacher Str. 2	+49-(0)6221- 872880	http://bayrischer-hof-heidelberg.de	110
Hotel Central	Kaiserstr. 75 (close to the main station)	+49-(0)6221- 20641	http://www.hotel.de/de/hotel-central/hotel-118631/	59 - 84
Hotel Denner	Bergheimer Str. 8	+49-(0)6221- 604510	http://denner-hotel.de	89 - 99
Hotel Ibis	Willy-Brandt-Platz 3 (next to the main station)	+49-(0)6221- 9130	http://ibis-heidelberg.com	58 - 68
Hotel Qube	Bergheimer Str. 74	+49-(0)6221- 187990	http://qube-hotel-heidelberg.de/	99 - 109
nH Hotel	Bergheimer Str. 91	+49-(0)6221- 132710	http://www.nh-hotels.de/hotel/nh-heidelberg	Starting at 111 €

Please note that prices and services (e.g. with/without breakfast) may vary when you are booking through online booking services such as “booking.com” etc.

For further information please visit Heidelberg’s Tourism homepage: <https://www.tourism-heidelberg.com/>