

The EuGeneHeart Technical Training

08 September, 2006

This Booklet

This booklet contains practical information about the first EuGeneHeart training courses. In this booklet, you can find practical information about the training, training modules, training sites. Detailed information about each course is listed in the “Training courses” section. Finally, a monthly timetable of the training courses and an application form are also attached to this booklet.

In the “General information” section, you will find background and practical information about the training courses. In the “Training module” section, the training courses are classified based on the nature of their targeted techniques. If you already know which techniques you want to acquire, “Training module” is a good starting point for your exploration. In addition to information about locations, expertises, key personnel and training courses offered, the “Training site” section also includes lodging and access information of each training site. The “Training course” section is an alphabetically ordered list of available training courses. You can find detailed information about each course in this section.

We hope that you find this booklet useful. Please do not hesitate to contact the DTP and the training sites for more information and further assistance. We look forward to hear from you!

EuGeneHeart Dissemination and Training Panel

1 September 2006

Acknowledgement

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Thanks are due also to other members of the training sites who contributed to this work during the course of the organization.

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General Information

Introduction of the EuGeneHeart training

EuGeneHeart is a research project funded by the European Commission. It aims at the discovery of new treatments and prevention approaches for heart failure. In addition to research activities, this project also includes training activities to exchange knowledge/technologies among consortium laboratories and among their young scientists. The training courses will ultimately serve as a basis for establishing a pan-European training program in specific areas of cardiovascular biology and medicine to help the integration of recent advances in basic science into daily medical applications.

For managing its training activities, the EuGeneHeart consortium designates a Dissemination and Training Panel (DTP) to carry out the practical organization. The DTP consists of a chairperson, supported by an assistant and supervised by a Scientific Committee. The Scientific Committee is composed of experts from diverse fields related to cardiology research, which ensures the quality of the provided training activities.

The training

EuGeneHeart proposed a matrix approach to deepen the current knowledge of molecular signalling processes underlying heart failure. For the integration of data generated from different experiments of the matrix study, the procedures for generating experimental models and for performing assays should be attuned to a standard. Also the personnel involved in the matrix experiments should be familiar with the standardised procedures in order to implement this sophisticated, comprehensive approach. This training courses described in this booklet provide hands-on technical training to help the EuGeneHeart personnel to acquire skills and techniques for performing the matrix experiments. Apart from the technical training, a training for clinical studies is also provided for those who have no experience in clinical cardiology and wish to connect their know-how in basic scientific research to clinical cardiology.

The training package contains four training modules:

- A. Generation and validation of heart failure models
- B. Thorough phenotypic characterization of *in vivo* models
- C. Assays for studying signalling pathways
- D. Clinical cardiology

Six consortium laboratories, located in Berlin, Göttingen, Leuven, Maastricht, Paris, and Utrecht, are to establish training sites to host the EuGeneHeart trainings. These training sites are equipped with modern facilities and experienced personnel. Together, these training sites, based on their individual expertise, provide a wide variety of training courses (see the “Training courses” section). Each training site offers courses in different formats, though hands-on exercises are the core of every course. Some training sites offer a training package which aims at transferring all knowledge in one run, while the other training sites organise their know-how into specific courses, each of which offers an extensive overview of a given technique. Participants have the freedom to assemble their “à la carte” training programs. This means that a participant can choose either to stay in one training site and follow all courses provided by this site, or to

travel among different training sites for different training courses in order to meet individual needs. Some training of techniques (e.g. Mouse intervention) are provided by more than one training site. This is because the laboratories where the training sites reside have different missions. Naturally, the protocols and procedures to perform a certain experiment are likely to be different. It is a unique opportunity to experience and to compare different protocols and procedures for the given technique. This hands-on experience will allow the participants to gain further insight into each techniques and help them in the future to apply or adapt a protocol so that it better suits their research purpose.

Qualification of trainees

Participants can be technicians, PhD students, physician-scientists, postdoctoral scientists who are interested in the courses provided by the listed training sites. Furthermore, additional requirements for individual training courses are specified in the section of "Training courses".

Registration and selection

The training will take place between October and December 2006. The registration starts on 11 September, 2006. Please refer to the "Training courses" section for registration deadlines and schedules of individual training courses.

The training courses are free of charge. The participants are expected to arrange their own lodgings and to cover their own living expenses during the training period. All lodging information is provided in the section "Training sites".

The selection is on a first-come-first-served basis. For registration, please fill up the accompanying registration form and send to the DTP either by e-mail or by fax (see section "contact information"). You can contact the contact person of training sites for any question concerning the training courses and the training site.

Contact information

EuGeneHeart Dissemination and Training Panel (DTP)

Address: Unit of Pharmacology and Therapeutics
Faculty of Medicine
Universit Catholique de Louvain
FATH 5349
52 avenue Mounier
1200 Brussels
Belgium

Contact person: Dr. Yi-Jen Chuang
e-mail: yi-jen.chuang@fath.ucl.ac.be
tel: +32 (0)2 764 54 89
fax: +32 (0)2 764 94 22

The Berlin site

Address: Center for Cardiovascular Research
Hessischen Str. 3-4

10115 Berlin-Mitte
Germany

Web site: www.ccr.charite.de/site/html/en/home.html

Contact person: Dr. Sebastian.Brokat
e-mail: Sebastian.Brokat@charite.de
tel.: +49 (0)30 450 525 283
fax: +49 (0)30 450 525 943

The Göttingen site

Address: University Medicine Goettingen
Department of Cardiology and Pneumology
Robert-Koch-Str. 40
37075 Göttingen
Germany

Contact person: Dr. Axel Kaul
e-mail: a.kaul@med.uni-goettingen.de
tel.: +49 (0) 551 39 85 86
fax.: +49 (0) 551 39 29 53

The Leuven site

Address: Lab. of Experimental Cardiology
Katholieke Universiteit Leuven Campus Gasthuisberg O/N 7th floor
Herestraat 49B-3000 Leuven
Belgium

Contact person: Prof. Karin Sipido
e-mail: Karin.Sipido@med.kuleuven.be
tel: +32 (0)16 34 71 53
fax: +32 (0)16 34 58 44

The Maastricht site

Address: Department of Physiology, CARIM
Maastricht University
P.O. Box 616
6200 MD Maastricht
The Netherlands

Web site: www.fys.unimaas.nl

Contact person: Dr. Marc van Bilsen
e-mail: Marc.vanBilsen@fys.unimaas.nl
tel: +31 (0)43 388 12 04
fax: +31 (0)43 388 41 66

The Paris site

Address: Inserm IFR02 - CEFI

UFR de Médecine paris 7- Denis Diderot, site Bichat
16 rue Henri Huchard
75870 Paris Cedex 18

Web site: www.bichat.inserm.fr
www.xbichat.jussieu.fr

Contact person: Prof. Jean-Jacques Mercadier
email: jjmercadier@wanadoo.fr or mercadie@bichat.inserm.fr
tel: + 33 (0)1 40 258 404
fax: +33 (0)1 40 258 800

The Utrecht site

Address: Hubrecht Laboratory
Interuniversity Cardiology Institute Netherlands
Royal Netherlands Academy of Sciences
Uppsalalaan 8
3584 CT Utrechtthe
Netherlands

Web site: www.niob.knaw.nl

Contact person: Dr P. da Costa Martins (email: p.martins@niob.knaw.nl)
Dr. L. J. De. Windt (email: dewindt@niob.knaw.nl)
tel. +31 (0)30 212 18 85
fax. +31 (0)30 251 64 64

Training Modules

The training courses are divided into four modules, based on the nature of targeted techniques. This section gives a detailed description of each module and provides a list of available training courses within the modules.

The course ID is presented by an English letter, followed by two or three digits. The English letter represents the training modules, which are described in the following subsections. The first digit of the course IDs represents the identification number of the training site which offers the training course. The second and the third digits are for administration purposes. This naming system can help to cross reference when required.

Module A: Generation and validation of heart failure models

Description of the module

This module focuses on building and validating experimental models for heart failure studies. In the initial phase of the project, existing transgenic mouse models and wild-type mice subjected to a well defined intervention will serve as the objects of our study. Although the transgenic mouse models are already available, we intend to introduce this technique to our staffs because (1) it is a valuable technique for the study of heart failure and (2) the project may require more transgenic models in its later phase. Furthermore, the procedures of mouse intervention and model validation are very important steps for homogenising the experimental data.

In the training of “generating transgenic mice”, the trainees will learn how to build general and conditional transgenic mouse models. In the courses of mouse intervention, trainees will be introduced to different mouse intervention techniques, including minimally invasive aortic constriction, myocardial infarction and building a model of chronically exercised mice. In addition, a set of methods for validating heart failure models will be introduced. These validation methods include Echocardiography, MRI, and invasive hemodynamic studies.

Currently, courses for mouse intervention are available at the Berlin, Göttingen, and Paris training sites. The latter two training sites also offer the training for validation of the mouse models. Techniques for generating transgenic mice can be learnt at the Utrecht sites.

Available training courses

Course ID: A.1.4

Course title: Mouse intervention and characterisation

Course ID: A.2.1

Course title: Mouse intervention – mouse/tissue phenotyping

Course ID: A.5.1.1

Course title: Mouse intervention -- Minimally-invasive aortic constriction

Course ID: A.5.1.2

Course title: Mouse intervention -- Mouse myocardial infarction

Course ID: A.5.2.1

Course title: Mouse phenotyping -- Non-invasive blood pressure measurement

Course ID: A.5.2.2

Course title: Mouse phenotyping – Echocardiography (*not available for the 2006 session*)

Course ID: A.5.2.3

Course title: Mouse phenotyping -- Catheter-based *in vivo* hemodynamics of murine hearts

Course ID: A.5.2.4

ID:

Course title: Mouse phenotyping -- 24-hour ECG Holter monitoring and analysis (*not available for the 2006 session*)

Course ID: A.6.1

Course title: Generating transgenic mice

Module B: Thorough phenotypic characterization of in vivo models

Description of the module

In the EuGeneHeart project, four specific phenotypic aspects related to heart failure and hypertrophy are selected for the matrix study. The selected phenotype studies are meant to investigate the processes of fibrosis, apoptosis and cell cycling, energetics and metabolism, and excitation contraction (EC) coupling and calcium signalling in the chosen models. Based on the investigated processes, this training module is divided into four sub-modules:

B1. Fibrosis processes

To characterise fibrosis processes, antibody-directed histochemical staining and/or western blotting is used to qualify and quantify key components of the extra-cellular matrix. The reference laboratories designated for this project in Berlin will organise this training.

B2. Apoptosis and cell cycle analysis

No specific training is currently available.

B3. Energetics and metabolism analysis

The reference laboratory in Maastricht will offer training for energetics and metabolism assays. The training will focus on the assays for fatty acid oxidation, and for glucose uptake and oxidation.

B4. EC coupling and calcium signalling analysis

The training site in Leuven offers advanced EC coupling analyses. In advanced EC coupling analysis, detailed calcium transport kinetics will be studied by using patch clamp techniques, fluorescent probes and confocal imaging. These techniques can be applied to the study of calcium channels, ryanodine receptors (RyRs), sarcoplasmic reticulum calcium-ATPases (SERCAs), sodium/calcium exchangers (NCXs), etc..

Available training courses

Course ID: B.1.1
Course title: Immunostaining of tissues and cells by immunofluorescence

Course ID: B.4.1
Course title: Energetics and metabolism assays

Course ID: B.3.2.1
Course title: Advanced EC coupling analyses -- Patch clamp

Course ID: B.3.2.2 + B.3.2.1
Course title: Advanced EC coupling analyses – Fluorescent probes + Confocal imaging

Module C: Assays for signalling pathways

Description of the module

Several important signalling processes are currently known to be related to heart failure. Since many assays for analysing the signalling processes are generically similar, we therefore set up a training module which covers assays employed in the analyses. In addition to conventional signalling process assays, the assays based on the knowledge of genomics are also included in this training module.

Available training courses

Course ID: C.1.2

Course title: Gene expression and protein quantification

Course ID: C.1.3

Course title: Analysis of cellular models of hypertrophy and fibrosis

Course ID: C.3.1

Course title: Mouse adult cardiac myocytes isolation for cell physiology assays

Course ID: C.4.2

Course title: Cell hypertrophy assays *in vitro* and transcription factor activity

Course ID: C.4.3

Course title: RNA isolation and quantitation: Q-PCR

Course ID: C.6.1

Course title: Gene chip analysis in cultured cell lines

Course ID: C.6.2

Course title: Generation of recombinant viral vectors

Course ID: C.6.3

Course title: si-based gene silencing

Module D: Clinical cardiology

This training module contains only one course. The course provides an overview of clinical studies, diagnostic procedures and major features of cardiovascular diseases. It is an ideal course for those who wish to fill the gap between clinical practice and basic research in cardiology.

Course ID: D.1.5

Course title: Overview on clinical cardiology

Training Sites

In addition to background and course information of individual training sites, this section also provides lodging and access information of each training site. The contact information is listed in the section "General information". All training sites are alphabetically ordered in the following subsections. For administration purpose, an identification number is assigned to each training site. The number is indicated next the name of the training sites.

As previously mentioned, the course ID is presented by an English letter, followed by two or three digits. The English letter represents the training modules, which are described in the following subsections. The first digit of the course IDs represents the training site which offers the training course. The second and the third digits are for administration purposes. This naming system can help to cross reference when required.

The Berlin site (1)

Introduction of the training site

The training site is located at the Center for Cardiovascular Research (CCR) (<http://www.ccr.charite.de/site/html/en/home.html>). The CCR was founded in 2003 by the Charité - University Medicine Berlin and is a research centre that springs out of the Departments of Pharmacology and Toxicology, Cardiology, Nephrology and Clinical Hypertension Research of the Charité and is well embedded in the scientific landscape of the Charité with close connections between clinical and basic science departments. In EuGeneHeart consortium, the centre is a reference laboratory for carrying out the tasks of Estrogen/Androgen/Nuclear receptors analysis and of phenotyping of extra-cellular matrix regulation in different models. Apart from offering technical courses, the training site also offers an overview course on clinical studies, diagnostic procedures and major features of cardiovascular diseases. To take part in this course, one should have basic knowledge and experience on clinical cardiology. Please refer to the "Training courses" section for more details.

Key personnel contribute to this training package are:

- Site manager: Prof. Vera Regitz-Zagrosek
- Training manager: Dr. Sebastian Brokat

Courses offered by the training site

The different training courses will be composed of seminars and practical training units. The seminars will be held by experienced scientists and are targeted to give an introduction into the specific issue. There will be the possibility to discuss current projects of the trainees. Related to the seminars, practical trainings will offer the possibility to use the knowledge acquired in the seminars and discuss problems, advantages and disadvantages of the specific technique.

In order to adapt the training courses on the specific interest of the trainees, an e-mail with the expectations on the training would help to optimize the program.

Course ID: B.1.1
Course title: Immunostaining of tissues and cells by immunofluorescence

Course ID: C.1.2
Course title: Gene expression and protein quantification

Course ID: C.1.3
Course title: Analysis of cellular models of hypertrophy and fibrosis

Course ID: A.1.4
Course title: Mouse intervention and characterisation

Course ID: D.1.5
Course title: Overview on clinical cardiology

Accommodation

Several accommodations situated near the CCR are listed below for your reference.

Hostels:

- [Helterskelterhostel](http://www.helterskelterhostel.com/) (http://www.helterskelterhostel.com/)
- [Heartofgold-hostel](http://www.heartofgold-hostel.de/) (http://www.heartofgold-hostel.de/)

Hotels:

- [La-vie-hotels](http://www.la-vie-hotels.de/sites/start.php) (http://www.la-vie-hotels.de/sites/start.php)
- [Ramada-Berlin-Mitte](http://www.ramada-berlin-mitte.de/) (http://www.ramada-berlin-mitte.de/)
- [Mercure-Hotel](http://www.mercure.com/mercure/fichehotel/de/mer/5341/fiche_hotel.shtml)
(http://www.mercure.com/mercure/fichehotel/de/mer/5341/fiche_hotel.shtml)
- [Honigmond-Berlin](http://www.honigmond-berlin.de/) (http://www.honigmond-berlin.de/)

How to get there

- by plane via [Flughafen Tegel \(TXL\)](#) or [Flughafen Schönefeld \(SXF\)](#),
- by train via [Berlin Hauptbahnhof](#),
- use [Public Transportation System \(BVG\)](#) or Taxi to get to the CCR,
- write an [E-Mail](#) for detailed information. Dr. Sebastian Brokat will be glad to help you!

The Göttingen site (2)

Introduction of the training site

The training site resides at the Heart Centre, University Hospital Goettingen. All mouse and tissue samples required for the matrix of the EuGeneHeart project are prepared at this site. Apart from its involvement in research activities, this centre is the coordinator of the EuGeneHeart project.

The centre has well established mouse intervention and characterisation techniques and have delivered related technical trainings. Most recently, this centre organised a hands-on training session on the technique on minimally invasive transversal aortic banding (MTAB), which attracted many interests and received loads of positive feedback (see also www.EUGeneheart.com for reference). For the course offered herein, the training site extends its offer to a broader technical spectrum, including demonstrations of many challenging techniques, such as catheter assisted in vivo investigation of murine hearts. Please refer to the section, "training course" for more details.

Key personnel of this training site and their tasks are listed below:

- Dr. Bernhard Unsöld (MI, swimming, catheter)
- Dr. Harald Kögler (cardiac and skeletal muscle strips; *ex vivo* lung function)
- Dr. Tim Seidler (gene transfection in adult cardiac myocytes)
- Dr. Mark Hünlich (Echocardiography)
- Dr. Stefan Neef (EC Coupling analysis)
- Dr. Axel Kaul (organisation, course and beyond)

Course offered by the training site

Course ID: A.2.1

Course title: Mouse intervention - mouse/tissue phenotyping

The Göttingen site organizes a 5 day course, allowing 6 participants to dig into the existing knowledge related to mouse intervention and phenotyping. The training will start with an overview of the whole training, followed by six various training tracks maximizing the usage of available facilities and thereby allowing for intensive training by applying instructor to participant ratios of 1:1 to 1:4 depending on the actual technique.

Please refer to the section, "training course" for more details.

Accommodation

Hotel Papenberg (within walking distance from the University Hospital)

Hermann-Rein-Straße 2

37075 Göttingen

Tel: +49 551 30550

Fax: +49 551 3055400

www.papenberg.bestwestern.de

e-mail: info@papenberg.bestwestern.de

Rates for participants at the University Hospitals (incl. breakfast)

Single room € 75.-/night

Double room € 95.-/night

Beckmann Hotel

(Reachable from/to railway station, center, University Hospital by bus line no. 5, 12)

Ulrideshuser Str. 44

37077 Göttingen

Tel: +49 551 21055

Fax +49 551 2090810

www.hotel-beckmann.de

e-mail: mail@hotel-beckmann.de

Rates (incl. breakfast)

Single room € 49.- /night

Double room € 77.-/night

Leinehotel Göttingen

(5 min. walking distance from station, reachable from/to railway station, University Hospital by bus line 8)

Groner Landstraße 55

37081 Göttingen

Tel.: +49 (551) 5051-0

Fax : +49 (551) 5051-170

www.leinehotel-goe.de

e-mail: info@leinehotel-goe.de

Rates for participants at the University Hospital (incl. breakfast)

Single room 49.- /night

Double room 75.-/night

For bookings with this hotel please use the reservation key word **EUGENE**

How to get there

Address:

Unviertätsklinikum Göttingen

Robert-Koch-Straße 40

37075 Göttingen, Germany

<http://www.med.uni-goettingen.de/>

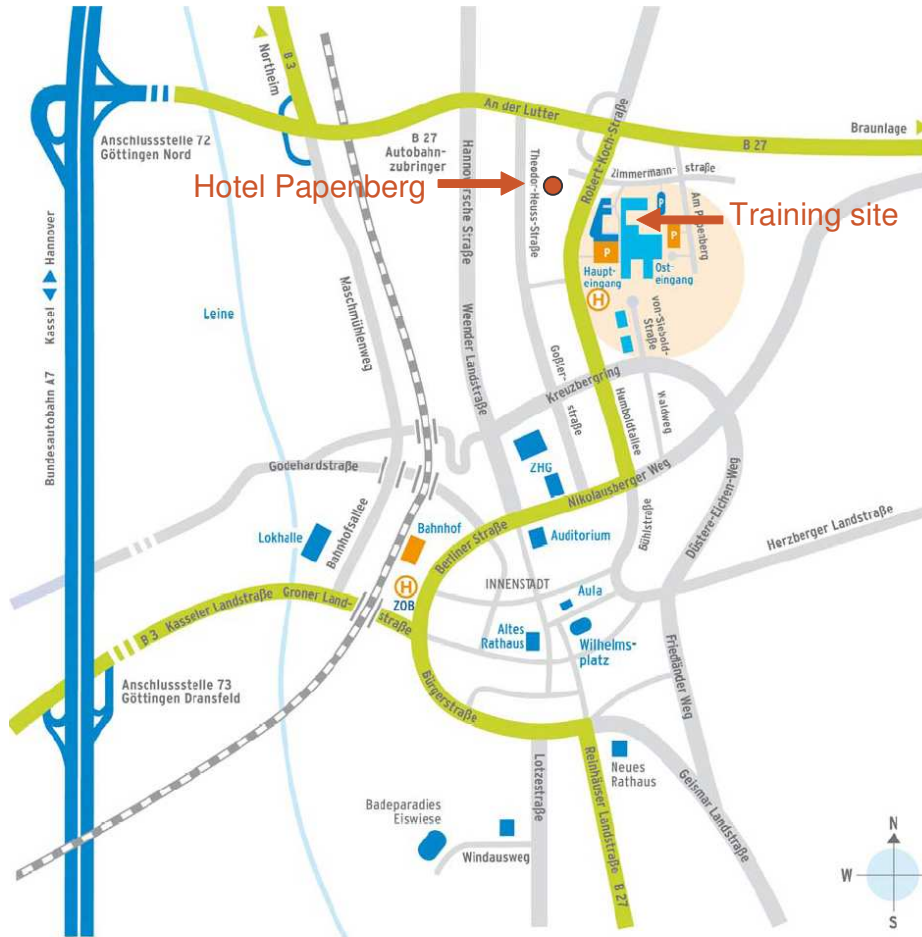
By plane: There are 2 airports in the region:

- Hannover airport is a small and convenient airport, from where an ICE train ride (1h15 minutes) will take you to Göttingen.
- Alternatively, from Frankfurt airport, the ICE train ride takes 2 hours to Göttingen

By Train: The ICE trains stop at Göttingen. It is highly advisable to make seat reservation for ICE trains. From the train station, the training site can be reached by bus number 12 (stop "Klinikum").

By Car: Göttingen is accessible through autobahn A7.

Some relevant locations in Göttingen are highlighted in the map below:



The Leuven site (3)

Introduction of the training site

The Laboratory of Experimental Cardiology at K.U.Leuven, Belgium will host the Leuven training site. The laboratory consists of several collaborating research group with different areas of interest and expertise in the field of cardiology. One of the project tasks for the lab is to characterise the animal models. For the training initiative, this training site offers the trainings for advanced EC coupling analyses and for mouse adult cardiac myocytes isolation for cell physiology assays.

Key personnel contribute to this training package is:
Site manager: Prof. Karin Sipido

Courses offered by the training site

The courses consists of hands-on training for cell isolation (C.3.1). The courses on EC coupling analysis will introduce the topics by a lecture, followed by practical training participating in actual experiments

Course ID: C.3.1
Course title: Mouse adult cardiac myocytes isolation for cell physiology assays

Course ID: B.3.2.1
Course title: Advanced EC coupling analyses -- Patch clamp

Course ID: B.3.2.2 + B.3.2.1
Course title: Advanced EC coupling analyses – Fluorescent probes + Confocal imaging

Accommodation

Participants need to make their own reservations. Prices range form 50Euro (simple rooms, bed and breakfast), to 120Euro in a medium range hotel. Hotels can be viewed at <http://www.leuven.be>. The site can be viewed in English. Please contact the site manager for identifying suitable accommodations.

How to get there

- **By plane:** Leuven can be reached through the Brussels international airport at Zaventem. From the airport there are direct trains to Leuven, departing every half hour; the ride takes 15 minutes; at the train station buses run every 15 minutes to the university campus Gasthuisberg.
- **By car:** Leuven is accessible through the E40 and the E314.
- **By train:** Most trains coming from Germany stop in Leuven on their way to Brussels; all other international trains can connect in Bruxelles-Midi to Leuven

The Maastricht site (4)

Introduction of the training site

The training site is located at Laboratory of Molecular Physiology, Department of Physiology, Faculty of Medicine, Maastricht University. The site manager, Prof. M. Van Bilsen (Marc.vanBilsen@fys.unimaas.nl) is affiliated to the working group Cardiac Failure of the Cardiovascular Research Institute. The group focuses on the role of cardiac muscle cell dysfunction in the development of cardiac hypertrophy and its progression towards cardiac failure. This working group brings together expertise from researchers working on cardiac gene regulation and signal transduction, cardiac energy metabolism and cardiac mechanics. For the EuGeneHeart project, the laboratory performs the analysis of cardiac metabolism in mouse models of the matrix study. It also contributes to the molecular analysis of signalling pathways through which statins and PPAR ligands exert salutatory effect on the hypertrophic and failing heart. Recently, the laboratory contributed to quantitative PCR seminars and hand-on training for BioRad laboratories, a well-known life science company.

Key personnel of this training site is:
Site manager: Dr. Marc Van Bilsen

Courses offered by the training site

Each training course lasts 3 days and is aimed at getting acquainted with a selection of basic skills and theoretical background relevant to the topic/method. To meet this goal, a combination of hands-on training, demonstrations and seminars will be provided (for details see Chapter 'Training courses')

Course ID: B.4.1
Course title: Energetics and metabolism assays

Course ID: C.4.2
Course title: Cell hypertrophy assays *in vitro* and transcription factor activity

Course ID: C.4.3
Course title: RNA isolation and quantitation: Q-PCR

Accommodation

Hotel Randwyck (walking distance from University)

Endepolsdomein 30

6229 EM Maastricht

T: +31 (0)43 / 3616835

F: +31 (0)43 / 3619007

E: info@hotelrandwyck.nl

I: <http://www.hotelrandwyck.nl>

Prices: single room 65,00 EUR, double room 73,50 EUR, breakfast not included

Hip hotel St. Martenslaan (close to the central station)

Sint Maartenslaan 6

6221 AX Maastricht

T : +31 (0)43/3211111

F : +31 (0)43/3282526

E : info@st-martenslane.com

I : www.st-martenslane.com

Prices: single room from 29,- to 99,- EUR; double room from 49,- to 129,- EUR

How to get there

Address

University Maastricht, Department of Physiology

Universiteitssingel 50, 6229 ER Maastricht

T : +31 (0)43/3881200

F : +31 (0)43/3884166

E : secretariaat-fys@fys.unimaas.nl

I : www.unimaas.nl

www.fys.unimaas.nl

By car: highway A2/E25

Take the "MECC, Randwyck, Academisch Ziekenhuis" exit.

Follow the signs for Debyeplein, Universiteitssingel 40 and 50 or Dr.Tanslaan. Car parks are located next to the buildings.

By train: Directions from the railway station "Maastricht Centraal"

Take the train from Maastricht Central Station to Randwyck Station (journey time: 3 minutes). The train leaves four times per hour.

By bus from Central Station Maastricht

lines 1, 4, 9, 14 and 15.

Exit the bus at the AZM (hospital).

By plane: Nearby Airports:

Maastricht-Aachen (20 km), Brussels (90 km), Düsseldorf (120 km)

Map: Randwyck area, Maastricht



The Paris site (5)

Introduction of the training site

The Paris site resides at the “Centre d’Explorations Fonctionnelles Intégré (CEFI)”. The centre is an investigation platform belonging to the Institut Fédératif de Recherche 02 (IFR02) of the Inserm Institute and certified EURO-QUALITY SYSTEM, ISO 9001:2000 since october 2002. For the EuGeneHeart training, the site offers training course of (1) mouse intervention and (2) mouse phenotyping.

Key personnel of this training sites are:

- Site manager: Prof. Jean-Jacques Mercadier (jjmercadier@wanadoo.fr or mercadie@bichat.inserm.fr)
- Training manager: Martine Muffat-Joly (martine.muffat-joly@bichat.inserm.fr)

Courses offered by the training site

The training courses indicated below are a short term training. The training will equip the participants with sufficient know-how to set up their own experiment independently. For each method/technique, basic knowledge will be provided prior and during the demonstration. Appropriate tools will be available for students’ own training. Data analysis will be performed and discussed with trainees.

The training courses offered by the training site are:

Course ID: A.5.1.1

Course title: Mouse intervention -- Minimally-invasive aortic constriction

Course ID: A.5.1.2

Course title: Mouse intervention -- Mouse myocardial infarction

Course ID: A.5.2.1

Course title: Mouse phenotyping -- Non-invasive blood pressure measurement

Course ID: A.5.2.2

Course title: Mouse phenotyping – Echocardiography (*not available for the 2006 session*)

Course ID: A.5.2.3

Course title: Mouse phenotyping -- Catheter-based *in vivo* hemodynamics of murine hearts

Course ID: A.5.2.4

Course title: Mouse phenotyping -- 24-hour ECG Holter monitoring and analysis (*not available for the 2006 session*)

Accommodation

- **FORMULE 1 Porte de Saint-Ouen**
29, rue du Dr Babinski
75018 Paris
http://www.hotelformule1.com/formule1/fichehotel/fr/for/2539/fiche_hotel.shtml
- **ETAP HOTEL Paris Porte de Saint-Ouen**
45, Rue du Dr Babinski, 75018 Paris
http://www.etaphotel.com/etaphotel/fichehotel/fr/etp/2597/fiche_hotel.shtml#

These two hotels are inexpensive (39 and 48 €, respectively), especially if shared by two trainees.

They are located just in front of the XB medical school, just on the other side of Boulevard Périphérique

- **Hotel Campanile Paris-Berthier,**
4, boulevard Berthier
75017 Paris
Tel: 33 (0)1 46 27 10 00;
Reservations: 33 (0)1 46 27 01 77;
e-mail: resaind@campanile-berthier.com;
<http://www.campanile.fr>

This hotel, located at a 10 min. walk West of XB medical school, is a little more expensive. It can be accessed by taking Métro and getting off in "Porte de Clichy"

How to get there

Mailing address :

Inserm IFR02 - CEFI

UFR de Médecine paris 7- Denis Diderot, site Bichat

16 rue Henri Huchard

75870 Paris Cedex 18

Web site: www.bichat.inserm.fr

The CEFI is located in Xavier Bichat medical school building : 2nd floor, IFR02, room 222, in front of side A elevators. The building is located at the North border of Paris, along the "boulevard périphérique" between Metro stations "Porte de Saint-Ouen" (Line 13, direction Saint-Denis) and "Porte de Clignancourt" (Line 4) : main entrance rue Arthur Rank, 75018 Paris

Reference : <http://www.bichat.inserm.fr>. Click on "acces": a map of the site is available

There are two cheap ways to get to Xavier Bichat Medical School from Charles de Gaulle airport:

- To take the RER (Regional train network) to Gare du Nord, then to take the Metro, Line 4, to "Porte de Clignancourt"
- To take the Air France Bus to Porte Maillot and then to take the bus, line PC3, to "faculté Xavier Bichat"

Reference: The web site of Paris public transportations (<http://www.ratp.info/>).

Click on "International passengers" at the top of the screen.

The Utrecht site (6)

Introduction of the training site

The training site is located at the Hubercht Laboratory. Hubercht Laboratory, also known as Netherlands Institute for Developmental Biology (NIOB), is a research institute of the Royal Dutch Academy of Arts and Sciences (KNAW). It is situated in the Uithof area of Utrecht and is a contributing member of the Graduate School of Developmental Biology (OOB). Researchers at the Hubercht Laboratory study a variety of biological processes, mainly concerning the developmental biology of animals. The laboratory, represented by Dr. L. De Windt will establish genome wide screening in cell lines for the EuGeneHeart project. It is also responsible for the tasks of assays for calcineurin activation in cultured cell line.

Key personnel of the training in the training site are:

- Site manager: Prof. L. De Windt (dewindt@niob.knaw.nl)
- Training manager: Dr. P. Martins (p.martins@niob.knaw.nl)

Courses offered by the training site

This training site offers a training package, which aims at transferring its expertise in one run. The training lasts 5 days and allows maximum 12 participants. During the training, the participants will be divided into two groups to carry out all training listed below.

The seminars will be held by experienced scientists and are targeted to give an introduction into the specific issue. Together with the the seminars, practical trainings will offer the possibility to use the knowledge acquired in the seminars and to discuss problems, advantages and disadvantages of the specific technique.

The training courses offered by the training sites are:

Course ID: C.6.1
Course title: Gene chip analysis in cultured cell lines

Course ID: C.6.2
Course title: Generation of recombinant viral vectors

Course ID: C.6.3
Course title: siRNA-based gene silencing

Course ID: A.6.4
Course title: Generating transgenic mice

Accommodation

Please find below a list of accommodations available near the training site.

- **Bed&Breakfast**

1. www.apartment-kanne.nl (€20-€55 p.p.)
Contact: Marcel and Alena Kanne ;
E-mail: info@apartment-kanne.nl;

- Tel1: 0031 30 252 1050
Tel2: 0031 628 766 744
2. www.elsas-home.nl
 3. home.wanadoo.nl/japrachan (€25-€45 p.p.)
 4. www.ruisdael-bandb.nl
Contact: E.M.Mans ; e.m.mans@casema.nl
Tel : 0031 30 889 3307

- **Hotels**

www.hotelclub.net
www.bookings.nl
www.holland-bookings.nl
www.hotelspecials.nl
travel.hotels-and-discounts.nl
www.hotelpronto.nl

How to get there

Please refer to the web site (www.niob.knaw.nl) of the institute for more details.

Training Courses

This section contains practical information about each training course. Specific requirements for some courses are also indicated in this section.

As previously mentioned, the course ID is presented by an English letter, followed by two or three digits. The English letter represents the training modules, which are described in the following subsections. The first digit of the course IDs represents the training site which offers the training course. The second and the third digits are for administration purposes. This naming system can help to cross reference when required.

Course ID: A.1.4

- Course ID:** A.1.4
- Course title:** Mouse intervention and characterisation
- Course organiser(s):** Dr. S. Brokat & Dr. C. Schubert
- Language:** English
- Training site:** Berlin, Germany
- Training duration:** 5 days
- Nr. of Participants:** 6 (min. 3 participants)
- Training period:** 27 November – 01 December 2006
- Deadline of registration:** 30 September 2006
- Notice:** Each method described in this course needs a number of months to acquire. Therefore, practical training for these methods can be no more than a presentation of the methods. For very skilled participants, it can be merely a short practical introduction.
- Each participant needs permission for animal experiments and we need the registration until the end of September for administrative issues.

Course outline:

Day	Program	
	Seminars	Practical training / presentations
Mon	- Introduction into animal models & interventions for cardiac diseases	- Set up and analysis of voluntary cage wheel running system
Tue	- Background of echocardiography - Calculation of functional parameters	- Echocardiography
Wed	- Anesthesia - Ventilation - Use of transgenic mouse models	- Intubation and ventilation

Thu	<ul style="list-style-type: none">- Background / method of myocardial infarction- Problems / hints in collecting functional and morphological data post-MI	<ul style="list-style-type: none">- Myocardial infarction
Fri	<ul style="list-style-type: none">- Background / method of aortic banding	<ul style="list-style-type: none">- Aortic banding

Course ID: A.2.1

Course ID:	A.2.1
Course title:	Mouse intervention - mouse/tissue phenotyping
Course organiser:	Dr. Bernhard Unsöld, Dr. Harald Kögler, Dr. Tim Seidler, Dr. Mark Hünlich, Dr. Stefan Neef, Dr. Axel Kaul
Language:	English
Training site:	Göttingen, Germany
Training duration:	5 days
Nr. of Participants:	6
Training period:	9-14 October 2006
Deadline of registration:	24 September 2006
Course outline	<p>The 5 day course, allowing 6 participants will provide hands-on and demonstration training on not only the techniques applied within the EuGeneHeart project, but also other more sophisticated techniques used for more advanced investigations. The trainings are outlined below.</p>

- Mouse infarction
- Exercise (swimming)
- Echocardiography
- Catheter assisted in vivo investigation of murine hearts
- Standard EC coupling analysis
- Investigation of strips from heart as well as skeletal muscle
- Determination of ex vivo lung function
- Gene transfection in adult cardiac myocytes for cell physiology assays (Adult cardiac myocytes are harvested, plated and subsequently transfected by adenoviral gene transfer)

These trainings are organized into six training tracks, allowing the participants to choose one from the different tracks. These training tracks display a different spectrum of techniques. Please see the next page for detailed schedule. For more details about the trainings please contact the training site.

Detailed schedule of the course Mouse intervention -mouse/tissue phenotyping (ID: A.2.1)

Track	Monday	Tuesday	Wednesday	Thursday	Friday
Morning					
Track 1	Talks until 10:00h	MI A	Adult cardiomyocytes isolation and analysis (part 1)	Adult cardiomyocytes isolation and analysis (part 2)	<i>ex vivo</i> lung function
Track 2	Talks until 10:00h	MI A	Adult cardiomyocytes isolation and analysis (part 1)	Adult cardiomyocytes isolation and analysis (part 2)	<i>ex vivo</i> lung function
Track 3	Talks until 10:00h	MI A	Adult cardiomyocytes isolation and analysis (part 1)	Adult cardiomyocytes isolation and analysis (part 2)	<i>ex vivo</i> lung function
Track 4	Talks until 10:00h	Echo/Swim	Adult cardiomyocytes isolation and analysis (part 1)	Adult cardiomyocytes isolation and analysis (part 2)	<i>ex vivo</i> lung function
Track 5	Talks until 10:00h	Echo/Swim	Catheter B	Catheter B	MI B
Track 6	Talks until 10:00h	Echo/Swim	Catheter B	Catheter B	MI B
Afternoon					
Track 1	Catheter A	MI A	Echo	Cardiac muscle strips	Skeletal muscle strips
Track 2	Catheter A	MI A	Echo	Cardiac muscle strips	Skeletal muscle strips
Track 3	Catheter A	MI A/Swim	EC	Cardiac muscle strips	Skeletal muscle strips
Track 4	Echo	Echo/Swim	Catheter B	Cardiac muscle strips	EC
Track 5	Echo	EC	Catheter B	Catheter B	MI B
Track 6	EC	Echo	Catheter B	Catheter B	MI B

Every participant (No. 1 to 6) follows a different track so customizing the course content is no longer a need.

Track No.	Chronic exercise swimming	Myocardial Infarction (MI)	Hemodynamics Catheter	Adult cardiomyocytes isolation and analysis	Cardiac muscle strips	Skeletal muscle strips	<i>ex vivo</i> lung function	Echocardiography	EC-Coupling analysis
1	x	x	x	x	x	x	x	x	
2	x	x	x	x	x	x	x	x	
3	x	x	x	x	x	x	x		x
4	x		x	x	x		x	x	x
5	x	x	x					x	x
6	x	x	x					x	x

Course ID: A.5.1.1

Course ID:	A.5.1.1
Course title:	Mouse intervention -- Minimally-invasive aortic constriction
Course organiser(s) :	Laurent Vinet
Language:	English
Training site:	Paris, France
Training duration:	2 days
Nr. of Participants:	2
Training period:	27-28 November 2006
Deadline of registration:	15 October 2006
Course outline:	Demonstration and training according to participants needs and abilities

Course ID: A.5.1.2

Course ID:	A.5.1.2
Course title:	Mouse intervention -- Mouse myocardial infarction
Course organiser(s):	Barnabas Gellen
Language:	English
Training site:	Paris, France
Training duration:	2 days
Nr. of Participants:	2
Training period:	19-20 October 2006
Deadline of registration:	30 September
Course outline:	Demonstration and training according to participants needs and abilities

Course ID: A.5.2.1

Course ID:	A.5.2.1
Course title:	Mouse phenotyping -- non-invasive blood pressure measurement
Course organiser(s):	Martine Muffat-Joly
Language:	English
Training site:	Paris, France
Training duration:	4 days
Nr. of Participants:	2
Training period:	5-8 December 2006
Deadline of registration:	15 October 2006
Course outline:	Standard protocol for this method needs several days. An experimental group of mice will be specially prepared, and course will include quick demonstration and direct participation of trainees to experiments and data analysis.

Course ID: A.5.2.2

Course ID: A.5.2.2
Course title: Mouse phenotyping -- Echocardiography
Course organiser(s): Dr. Brigitte Escoubet & Dr. Laurence Mangin
Training site: Paris, France
Training duration: 5 days
Nr. of Participants: 2
Training period: Not available for the 2006 session
Deadline of registration: Not applicable

Course ID: A.5.2.3

Course ID: A.5.2.3

Course title: Mouse phenotyping -- Catheter-based *in vivo* hemodynamics of murine hearts

Course organiser(s): Mylène Pezet & Prof. Jean-Jacques Mercadier

Training site: Paris, France

Training duration: 5 days

Nr. of Participants: 2

Training period: 11-15 December 2006

Deadline of registration: 31 October 2006

Course outline: This course is reserved to students with good experience in delicate surgical procedures. Course will focus on practical training of participants who will be accompanied to run a catheter-based study plus subsequent analysis.

Course ID: A.5.2.4

Course ID:	A.5.2.4
Course title:	Mouse phenotyping -- 24-hour ECG Holter monitoring and analysis
Course organiser(s):	Prof. Jean-Jacques Mercadier, Mylène Pezet, Laurence Mangin
Training site:	Paris, France
Training duration:	5 days
Nr. of Participants:	2
Training period:	Not available for the 2006 session
Deadline of registration:	Not applicable

Course ID: A.6.4

Course ID:	A.6.4 ²
Course title:	Generating transgenic mice
Course organiser(s):	R. van der Nagel
Training site:	Utrecht, the Netherlands
Training duration:	5 days ²
Nr. of Participants:	12 ²
Training period:	04 – 08 December 2006
Deadline of registration:	24 November 2006
Course Outline:	<p>Introduction</p> <ul style="list-style-type: none">• What are transgenic animals (TA)• What types of TA are there• What applications are there for TA <p>Embryonic development and isolation of embryos</p> <ul style="list-style-type: none">• Anatomy of the reproductive system in male and female• Development of the embryo• Hormone housekeeping <p>Transgenesis in mice using Oocyte injection</p> <ul style="list-style-type: none">• Isolating DNA for injection• Super ovulate embryo donors• Isolating embryos• Injecting the embryos with DNA• Implanting the embryos• Selecting the transgenic animals <p>Transgenesis in mice using Blastocyst injection</p> <ul style="list-style-type: none">• Grow and or mutate ES cells• Super ovulate embryo donors• Isolate embryos

² This is a course organised by the Utrecht training site. This training site offers a training package which allows maximum 12 participants. All participants will be divided into two groups and follow all training courses offered by the training site. The total training takes 5 days.

- Inject embryos
- Implant embryos
- Check for chimaeric animals
- Select chimaeric animals that carry on the mutation

Other, related techniques

- Sanitize mice through embryo transplantation
- Cryopreservation of embryos
- Freezing down sperm, IVF (in vitro fertilisation) and ICSI (intra cytoplasmatic sperm injection)

Conclusions and discussion

- Advantages and disadvantages of both techniques

Course ID: B.1.1

Course ID:	B.1.1
Course title:	Immunostaining of tissues and cells by immunofluorescence
Course organiser(s):	Dr. S. Mahmoodzadeh & Dr. E. Becher
Language:	English
Training site:	Berlin, Germany
Training duration:	5 days
Nr. of Participants:	4 (min. 2 participants)
Training period:	09 – 13 October 2006
Deadline of registration:	29 September 2006
Notice	The person who wishes to take part in this course should have basic knowledge and experience on cell culture and histology.

Course outline:

Day	Program	
	tissue embedding	cytostain
Mon	<ul style="list-style-type: none"> - theoretical background (1h) - embedding of the formalin fixed tissue, starting of the embedding automat 	<ul style="list-style-type: none"> - cell culture: sawing of cells (HL-1; HT-1080) in chamber slides over night
Tue	<ul style="list-style-type: none"> - mounting of the paraffin blocks - preparation of semithin sections (5µm) with microtome 	<ul style="list-style-type: none"> - fixation of cells on chamber slides (formalin) - store in PBS, 4°C
Wed	<ul style="list-style-type: none"> - rehydration of the sections, remove paraffin - demasking - immunostain 1. AB o. n. 	<ul style="list-style-type: none"> - immunostain 1st and 2nd AB - mounting in vectashield mounting medium
Thu	<ul style="list-style-type: none"> - immunostain 2. AB - mounting - fluorescence microscope 	<ul style="list-style-type: none"> - fluorescence microscope
Fri	<ul style="list-style-type: none"> - evaluation of data - theoretical background on confocal microscopy - questions, final discussion 	

Course ID: B.3.2.1

Course ID:	B.3.2.1
Course title:	Advanced EC coupling analyses -- Patch clamp
Course organiser(s):	Dr. V. Bito
Language:	English
Training site:	Leuven, Belgium
Training duration:	5 days
Nr. of Participants:	(max.) 2
Training period:	(1) 11-15 December 2006; (2) 18-22 December 2006
Deadline of registration:	1 December 2006
Notice:	Knowledge of cardiac cell physiology is required to take part in this training course

Course ID: B.3.2.1 + B.3.2.2

Course ID:	B.3.2.1 + B.3.2.2
Course title:	Advanced EC coupling analyses – Fluorescent probes (B.3.2.1)+ Confocal imaging (B3.2.2)
Course organiser(s):	Dr. Ozdemir (B.3.2.1) + Dr. K. Sipido ((B.3.2.2)
Language:	English
Training site:	Leuven, Belgium
Training duration:	1 (B.3.2.1) + 3 (B.3.2.2) days
Nr. of Participants:	2 + 2
Training period:	(1) 20-23 November 2006; (2) 27-30 November 2006
Deadline of registration:	10 November 2006
Notice:	Knowledge of cardiac cell physiology is required to initiate this training course

Course ID: B.4.1

Course ID:	B.4.1
Course title:	Energetics and metabolism assays
Course organiser(s):	Dr. A. Gilde
Language:	English
Training site:	Maastricht, the Netherlands
Training duration:	3 days
Nr. of Participants:	4 (min. 2 participants)
Training period:	13 – 15 December 2006
Deadline of registration:	1 November, 2006

Course outline:

Day	Program	
	Seminars / round table discussions	Practical training / demonstrations
Wed	- Introduction into techniques to measure cardiac metabolism	- processing of tissue samples, - enzyme activity assays
Thu	- cardiac metabolism: preclinical and clinical lessons -	- radioactive fatty acid oxidation assays - $^3\text{H}_2\text{O}$ and $^{14}\text{CO}_2$ trapping
Fri		- scintillation counting, - data acquisition and analysis

Course ID: C.1.2

Course ID:	C.1.2
Course title:	Gene expression and protein quantification
Course organiser(s):	Dr. S. Brokat & Dr. C Schubert
Language:	English
Training site:	Berlin, Germany
Training duration:	10 days
Nr. of Participants:	6 (min. 3 participants)
Training period:	23 October – 03 November 2006
Deadline of registration:	13 October 2006

Note: The person who wishes to take part in this course should have basic knowledge and experience on molecular biology and standard lab techniques

Course outline:

Day	Program	
	Gene expression	Protein content
Mon	- RNA extraction from cardiac tissue - Background of PCR (<i>Seminar</i>)	
Tue	- Analysis of RNA quality and quantity	
Wed	- Primer design (<i>Seminar</i>) - Primer-optimization I	
Thu	- Primer-optimization II	- Protein extraction
Fri	- Primer-optimization III	- Quantification of isolated proteins
Mon	- Housekeeping genes (<i>Seminar</i>) - real-time PCR (housekeeping)	- Background of western blotting (<i>Seminar</i>) - Preparing gels
Tue	- real-time PCR (regulated genes)	- Electrophoresis, western blotting (standard curves, probes)
Wed	- Analysis and interpretation of results	- immuno-hybridization & detection

Thu		<ul style="list-style-type: none">- Stripping of membranes- re-immuno-hybridisation & detection
Fri		<ul style="list-style-type: none">- Analysis and interpretation of results

Course ID: C.1.3

Course ID:	C.1.3
Course title:	Analysis of cellular models of hypertrophy and fibrosis
Course organiser(s):	Dr. S. Mahmoodzadeh, Dr. E. Becher & Ti Hang Pham
Language:	English
Training site:	Berlin, Germany
Training duration:	20 days
Nr. of Participants:	4 (min. 2 participants)
Training period:	20 November – 15 December 2006
Deadline of registration:	10 November 2006
Note:	The person who wishes to take part in this course should have basic knowledge and experience on cell culture and molecular biology
Course outline:	<p>This course will present cell culture models of induced cellular hypertrophy and fibrosis for analysis of signal-transduction pathways.</p> <p>Techniques introduced in this course are listed below.</p> <ol style="list-style-type: none"> a. Yeast two-hybrid analysis <ul style="list-style-type: none"> - transformation of cDNA library in yeast - isolating plasmids from yeast - plasmid amplification in E. coli - sequencing of cDNA fragments - database analysis b. Cell culture including sub-cloning of cardiac cell-lines and primary cells, and cell culture models of hypertrophy and fibrosis <ul style="list-style-type: none"> - quantification of classical markers of hypertrophy and fibrosis using western blotting and real time PCR

Course ID: C.3.1

Course ID:	C.3.1
Course title:	Mouse adult cardiac myocytes isolation for cell physiology assays
Course organiser(s):	Dr. Vangheluwe & Dr. V. Bito
Language:	English
Training site:	Leuven, Belgium
Training duration:	1 days
Nr. of Participants:	3
Training period:	8 November
Notice:	Knowledge of basic chemistry for preparing salt solutions and of animal handling is required to initiate the course

Course ID: C.4.2

Course ID: C.4.2

Course title: Cell hypertrophy assay *in vitro* and transcription factor activity assay

Course organiser(s): Dr. P. Smeets & Dr. M. van Bilsen

Language: English

Training site: Maastricht, the Netherlands

Training duration: 3 days

Nr. of Participants: 4 (min. 2 participants)

Training period: 13 – 15 December 2006

Deadline of registration: 1 November, 2006

Course outline:

Day	Program	
	Seminars / round table discussions	Practical training / demonstrations
Wed	- Introduction: primary cell cultures and transfection methods	- neonatal rat cardiomyocyte isolation
Thu		- transient transfection - processing of cells: reporter assays
Fri	- in vitro models of cardiac hypertrophy: pro's and con's	- data analysis and evaluation

Course ID: C.4.3

Course ID: C.4.3

Course title: RNA isolation and quantitation: Q-PCR

Course organiser(s): Ir. P. Willemsen

Language: English

Training site: Maastricht, the Netherlands

Training duration: 3 days

Nr. of Participants: 6 (min. 2 participants)

Training period: 13 – 15 December 2006

Deadline of registration: 1 November, 2006

Course outline:

Day	Program	
	Seminars / round table discussions	Practical training / demonstrations
Wed	- Introduction: RNA quantification: past, present, and future	- RNA isolation from cells and tissues - RNA quality checking
Thu	-	- cDNA synthesis - probe design and quality checking
Fri	- RNA: normalization and analysis	- Quantitative PCR - Data acquisition and analysis

Course ID: C.6.1

Course ID:	C.6.1 ²
Course title:	Gene chip analysis in culture cell line
Course organiser(s):	M. Bourajaj
Language:	English
Training site:	Utrecht, the Netherlands
Training duration:	5 days ²
Nr. of Participants:	12 ²
Training period:	04 December-08 December 2006
Deadline of registration:	24 November 2006
Outline:	<ul style="list-style-type: none">- Theoretical background- RNA extraction- Check quality of RNA with BioAnalyzer (Agilent)- cDNA synthesis- cDNA labeling- Check quality and quantity with Nanodrop (Agilent)- Hybridization- Scan slides- evaluation of data- questions, final discussion

² This is a course organised by the Utrecht training site. This training site offers a training package which allows maximum 12 participants. All participants will be divided into two groups and follow all training courses offered by the training site. The total training takes 5 days.

Course ID: C.6.2

Course ID:	C.6.2 ²
Course title:	Generating recombinant viral vectors
Course organiser(s):	H. el Azzouzi
Language:	English
Training site:	Utrecht, the Netherlands
Training duration:	5 days ²
Nr. of Participants:	12 ²
Training period:	04 December-08 December 2006
Deadline of registration:	24 November 2006
Outline	<ul style="list-style-type: none">- Theoretical background about Adeno-Viral delivery of genes- Outline of designing Ad-viral constructs, using pAD-Track- Up/down regulation of genes using Adeno viruses in cellines- Discussion and evaluation of the (Dis)advantages of this system

² This is a course organised by the Utrecht training site. This training site offers a training package which allows maximum 12 participants. All participants will be divided into two groups and follow all training courses offered by the training site. The total training takes 5 days.

Course ID: C.6.3

Course ID:	C.6.3 ²
Course title:	Si based gene silencing (using synthetic siRNA or H1 driven siRNA plasmid constructs)
Course organiser(s):	H. el Azzouzi & Dr. P. Martins
Language:	English
Training site:	Utrecht, the Netherlands
Training duration:	5 days ²
Nr. of Participants:	12 ²
Training period:	04 December-08 December 2006
Deadline of registration:	24 November 2006
Outline	<ul style="list-style-type: none">- Theoretical background about siRNA mediated silencing- SiRNA design using ambion program- Transfection strategies of siRNA in cellines- Design of adenoviral constructs- SiRNA detection methods- Quantitative PCR to detect siRNA mediated silencing- Avoiding interferon reactions- Discussion and evaluation of the (Dis)advantages of siRNA's

² This is a course organised by the Utrecht training site. This training site offers a training package which allows maximum 12 participants. All participants will be divided into two groups and follow all training courses offered by the training site. The total training takes 5 days.

Course ID: D.1.5

Course ID:	D.1.5
Course title:	Overview on clinical cardiology
Course organiser(s):	Prof. Regitz-Zagrosek
Language:	English
Training site:	Berlin, Germany
Training duration:	2 or 3 days
Nr. of Participants:	6 (min. 3)
Training period:	11 December- 15 December 2006
Deadline of registration:	1 December 2006

Course outline: This course consists of a series of lectures. The target groups are basic researchers, biologists, biochemists, people with bioinformatics degree, veterinarians and pharmacists, who have no formation in clinical medicine but are involved in translational projects. The goal of the training is to give information on cardiovascular disease, on specific pathophysiology in human, on diagnostic procedures, on clinical features of the disease in humans to these people in order to allow them to better plan their translational investigation.

The course will be organised in 4 units. This includes a series of 4 lectures, each of which lasting two hours. Lectures are followed a clinical demonstration (people will go into the cath-lab, into the Echo-lab, into the spiroergometry facility, to the exercise testing facility, to the operating room and get an impression of the procedures in clinical medicine) and a seminar. In the seminar the participants are asked to suggest questions and to discuss the problem of the specific unit. There are four units, each of lecture, clinical demonstration and seminar.

Annex

1. Monthly timetable of the training courses
2. Application form

The timetable of training courses – October 2006

October					
	Monday	Tuesday	Wednesday	Thursday	Friday
week 40	2	3	4	5	6
Berlin (1)					
Göttingen (2)					
Leuven (3)					
Maastricht (4)					
Paris (5)					
Utrecht (6)					
week 41	9	10	11	12	13
Berlin (1)	B.1.1				
Göttingen (2)	A.2.1 + A.2.2 + C.2.3				
Leuven (3)					
Maastricht (4)					
Paris (5)					
Utrecht (6)					
week 42	16	17	18	19	20
Berlin (1)					
Göttingen (2)	A.2.1 + A.2.2 + C.2.3				
Leuven (3)					
Maastricht (4)					
Paris (5)				A.5.1.2	
Utrecht (6)					
week 43	23	24	25	26	27
Berlin (1)	C.1.2				
Göttingen (2)					
Leuven (3)					
Maastricht (4)					
Paris (5)					
Utrecht (6)					
week 44	30	31	1	2	3
Berlin (1)	C.1.2				
Göttingen (2)					
Leuven (3)					
Maastricht (4)					
Paris (5)					
Utrecht (6)					

The symbol “;” connects the courses which proceed in parallel at one training site
 The symbol “+” connects the courses which form a training package of the training site.
 The participants should take all courses connected by “+”.

The timetable of training courses – November 2006

November					
	Monday	Tuesday	Wednesday	Thursday	Friday
week45	6	7	8	9	10
Berlin (1)					
Göttingen (2)					
Leuven (3)					
Maastricht (4)					
Paris (5)					
Utrecht (6)					
week46	13	14	15	16	17
Berlin (1)					
Göttingen (2)					
Leuven (3)					
Maastricht (4)					
Paris (5)					
Utrecht (6)					
week47	20	21	22	23	24
Berlin (1)	C.1.3				
Göttingen (2)					
Leuven (3)	B.3.2.1+ B.3.2.2 (1)				
Maastricht (4)					
Paris (5)					
Utrecht (6)					
week48	27	28	29	30	1
Berlin (1)	A.1.4; C.1.3				
Göttingen (2)					
Leuven (3)	B.3.2.1+ B.3.2.2 (2)				
Maastricht (4)					
Paris (5)	A.5.1.1				
Utrecht (6)					

The symbol “;” connects the courses which proceed in parallel at one training site
 The symbol “+” connects the courses which form a training package of the training site.
 The participants should take all courses connected by “+”.

The timetable of training courses – December 2006

December					
	Monday	Tuesday	Wednesday	Thursday	Friday
week 49	4	5	6	7	8
Berline (1)	C.1.3				
Göttingen (2)					
Leuven (3)					
Maastricht (4)					
Paris (5)	A.5.2.1				
Utrecht (6)	A.6.4 + C.6.1 + C.6.2 + C.6.3				
week 50	11	12	13	14	15
Berline (1)	C.1.3; D.1.5				
Göttingen (2)					
Leuven (3)	B.3.2.1 (1)				
Maastricht (4)	B.4.1; C.4.2; C.4.3				
Paris (5)	A.5.2.3				
Utrecht (6)					
week 51	18	19	20	21	22
Berline (1)					
Göttingen (2)					
Leuven (3)	B.3.2.1 (2)				
Maastricht (4)					
Paris (5)					
Utrecht (6)					
week 52	25	26	27	28	29
Berline (1)					
Göttingen (2)					
Leuven (3)					
Maastricht (4)					
Paris (5)					
Utrecht (6)					

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 The symbol “+” connects the courses which form a training package of the training site.
 The participants should take all courses connected by “+”.

Application Form

First name:				
Family name:				
Mr.	Mrs.	Ms.	Dr.	Prof.
Position:				
Organisation:				
Address of organisation:				
Town/city:				
Postcode:				
Country:				
Tel:				
Fax:				
E-mail:				
Please indicate if you are currently involved in the EuGeneHeart project:				
Please indicate the course you wish to participate:				
Course ID:	Course title:			
Remarks:				

