Course Program
July – December 2010
Life Science is still a growing sector and new methods and technologies are continuously developed. Therefore permanent training and education becomes so important.

With our specific course program we are offering a range of high-quality course modules based on the latest MIQE recommendations, the first quality guidelines for qPCR technology. In cooperation with different companies we try to give a general and independent overview of existing qPCR systems. Our course issues are based on skilled know-how from own research studies and publications. All trainers are experts in the field of qPCR technology, Biostatistics or Bioinformatics with many years of experience.

Also in autumn 2010 BioEPS offers new and interesting in-house course modules with theoretical and practical parts:

Dr. Michael Pfaffl  
CSO BioEPS

Dr. Martina Reiter  
CEO BioEPS
BioEPS is now presenting seminars and scientific talks online via video stream!

With our new **eSeminars** and **eConference** tool a world-wide know-how transfer becomes possible in a fast and simple way.

For more information visit our online shop:

http://eseminars.bioeps.com
Course programm 2010

qPCR

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qPCR Basic Module (3 Days)

Course description:
The introductory course consists of a theoretical part and a practical part.

Day 1:
• qPCR technology: description and applications.
• Primer/Probe Design and assay optimization
• Basic data handling and analysis

Day 2:
• Experimental setup
• Sample Preparation (Extraction of RNA and DNA)
• cDNA synthesis and pre-amplification

Day 3:
• Quantification strategies, uses and limitations
• qPCR efficiency algorithms
• Strategies for normalization of qPCR data

Practical Part:
RT-qPCR experiments using different detection chemistry

Instructors:
Dr. Michael Pfaffl, Dr. Martina Reiter

Dates:
04.-06. Oct
29. Nov - 01. Dec

Prices excl. taxes:
Academic: 880€
Industry: 1120€
Lunches and “Get together” dinner are included in the course fee.
Single cell and qPCR (3 Days)

Course description:

Day 1:
• Introduction to single-cell sorting methods
• Single cell theory and applications
• Sampling and cultivation technologies

Day 2:
• Nucleic acid extraction
• cDNA synthesis
• Pre-amplification
• Optimization of a single-cell RT-qPCR experiment

Day 3:
• Data analysis, Normalization
• Quantification strategies
• Future perspectives

Practical Part:
In the practical part laser micro dissection using the CellEctor system (MMI) will be presented from tissue material. Interested participants are encouraged to bring their personal sample material. Furthermore the AmpliSpeed single-cell RT-PCR system from Advalytix (Beckman Coulter) will be used.

Instructors:
Dr. Martina Reiter, Dr. Michael Pfaffl, Petra Hartmann, Antje Plaschke-Schlüter

Prices exclusive taxes:  
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Lunches and “Get together” dinner are included in the course fee.
microRNA and qPCR (2 Days)

Course description:

Day 1:
• microRNA: theory and applications
• microRNA Quantity and Quality Control
• practical RNA Isolation (totalRNA, microRNA)
• microRNA and qPCR

Day 2:
• Optimization of miRNA experiments
• Data analysis
• qPCR quantification strategies
• Normalization of miRNA data

Practical Part:
miRNA will be analysed in different samples regarding different quantification strategies and detection chemistries (Qiagen, Applied Biosystems)

Instructors:
Dr. Martina Reiter, Dr. Michael Pfaffl

Dates:
08.-09. Nov

Prices exclusive taxes:
Academic: 660€
Industry: 880€
Lunches and “Get together” dinner are included in the course fee.
High Resolution Melt (1 Day)

Course description:
The introductory course consists of a theoretical part and a practical part where participants get to do qPCR experiments by themselves under experienced supervision.

Course issues:
- Introduction to HRM technology
- Experimental setup
- SNP-analysis, Genotyping
- Reagents and instruments
- Applications

Practical Part:
The participants will learn how to use the special HRM software tool by doing a genotyping experiment.

Instructors:
Dr. Martina Reiter, Dr. Michael Pfaffl

Dates:
08. Jul
07. Oct

Prices exclusive taxes:
Academic: 330€
Industry: 450€
Lunches and “Get together” dinner are included in the course fee.
Experiment Setup and qPCR data processing (2 Days)

Course description:

Day 1

• Elementary qPCR data processing
• Descriptive statistics
• Principals of inferential statistics
• Statistical tests

Day 2

• Experiment design
• Cluster analysis methods
• Selection of reference genes
• Gene expression profiling

Practical part:
Participants learn to handle data with the software GenEx, InStat and Kineret.

Instructors:
Dr. Ales Tichopad

Dates:
16.-17. Sep
02.-03. Dec

Prices exclusive taxes:
Academic: 660€
Industry: 880€
Lunches and “Get together” dinner are included in the course fee.
qPC-R - data analysis (2 Days)

Course description:

Day 1:
• Experimental setup in qPCR
• Data analysis in qPCR
• Handling qPCR data
• Introduction in R
• Using R as software for qPCR experiments

Day 2:
• Using qPCR packages of R
• Using qPCR packages of Bioconductor
• Data input and normalization using R
• Fit and statistical analysis using R

Instructors:
Dr. Martina Reiter, Sebastian Kaiser

Dates:
08.-09. Mar
21.-22. June
11.-12. Oct

Prices exclusive taxes:
Academic: 660€
Industry: 880€
Lunches and “Get together” dinner are included in the course fee.
Our course add-ons

**Customer-specific courses**
BioEPS offers courses designed for the interests and needs of the customer.
BioEPS can also assist you in your company trainings which you offer for customers or employees.
These courses can be held in Freising or at any desired place with a variable number of participants.

**Social event:**
For every course a „Get together“ evening is organized in the oldest brewery of the world, „Weihenstephan“.
In a nice atmosphere course issues can be discussed or the participants can simply enjoy the Bavarian kitchen.

**Location:**
BioEPS is located at the IZB in Freising, next to the Munich airport with regular bus or taxi transfer to Freising City. Contingents for the course participants are booked in Hotel Lerner, a family hotel in Freising. The hotel is within ten minutes walking distance to the BioEPS facilities.
The BioEPS Team

PhD, Dr. agr. Michael W. Pfaffl
After his habilitation at the Technical University of Munich in June 2003, Michael Pfaffl became reader in physiology at the Centre of Life and Food Sciences in Freising. In 2006 he founded the company Biosience Events/TATAA Biocenter Germany. Today he has reached the Senior Scientist status at the Institute of Physiology and is one of the leading scientists concerning qPCR technology and relative quantification. Next to his scientific work he is founder and CSO at BioEPS.

PhD, Dr. rer. nat. Martina Reiter
Martina Reiter finished her studies of nutrition science and sports at the Justus-Liebig-University in Giessen. At the Technical University Munich she reached the PhD degree with gene expression studies in the team of Prof. H.H.D. Meyer and Michael Pfaffl. Next to her PhD she worked as freelancer at TATAA Biocenter in Germany and Czech Republic. In 2008 she became CEO and partner of BioEPS and was certified as project manager (IPMA, level D) and QM-auditor (TÜV Süd). Martina Reiter is specialist for qPCR platforms and experimental setup concerning qPCR studies.

MBA, Dipl. Betriebswirtin (FH) Sylvia Pfaffl
Sylvia Pfaffl finished her studies of economics in Munich in the year 1996 after her professional education in a company-travel-agency and long years experience in organizing business travels and conferences. After her studies she worked in the management of several human resources and financial departments. In 2006 she founded BioScience Events together with her husband Michael Pfaffl, a company which was already dealing in Marketing Communication and the performance of Workshops and Symposia in the Life Science field. In 2008 she became founder and CFO of BioEPS.
**PhD, Dr. rer.nat. Ales Tichopad**
Ales Tichopad holds a Ph.D. in life science from the Technical University Munich und is a leading expert in the field of gene-expression data analysis with several highly influential publications with hundreds of citations. His interest is in experimental design and development of statistical software. He collaborates with majority of instrument manufacturers, several European universities and companies providing training courses. Ales Tichopad is an author of several patents in the field of qPCR data analysis.

**PhD cand., Sebastian Kaiser**
Sebastian Kaiser studied statistics at the Ludwigs-Maximilians-University till 2006 and is now teaching and research assistant at the department of statistics in Munich. Next to his PhD he is working as trainer in statistics courses and is author of the R package "biclust".
Main divisions of BioEPS are *event organization* and *joint research*.

Our services within "event organization":

- **hands-on courses**
- **customer specific trainings**

Our services within "joint research":

- **partner for joint research projects including qPCR technology**
- **application notes for industry**
- **experimental design and qPCR analysis,**
- **Data analysis and biostatistics for qPCR experiments**
You are interested in our services?
Contact us:

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Fax: 0049-8161-5336984
www.bioeps.com