

Symposium Agenda

Central lecture halls complex in Freising – Weihenstephan, Technical University Munich (TUM), 85354 Freising, Germany

<http://qpcr2005.gene-quantification.info>
qPCR2005@wzw.tum.de
[TATAA Workshop](#)
[qPCR Matrix Workshop](#)
[Industrial Exhibition](#)
[Sponsors](#)

	Lecture hall 14	Lecture hall 15	Foyer & Seminar rooms 1 & 2	Practical room Nr. 2	Practical rooms Nr. 1, 3 and 4
	HS 14	HS 15	Foyer, S1 & S2	P2	P1, P3 & P4
Sun. 4th Sept. 2005			13:00 – 20:00 Built up		
			15:00 – 18:00 Arrival & Registration		
Mon. 5th Sept. 2005	10:00 – 10:20 Welcome & Opening of the Symposium		8:00 – 10:00 Arrival & Registration		
	10:20 – 11:00 Keynote lecture by Russell Higuchi <i>"Pioneer in real-time PCR"</i>		10:00 – 19:00 Industrial Exhibition		
	11:00 – 17:00 Pre-Analytical Steps		17:00 Refreshments in the Industrial Exhibition		17:00 – 18:30 Organization of Matrix Workshop Sessions at Reg. Desk
	18:30 – 20:00 Poster – Session				
	20:00 – 24:00 Poster – Party Salonorchester Karl Edelmann is presenting a variety of international music Poster Party is sponsored by Roche Applied Science & Eppendorf				
Tue. 6th Sept. 2005	8:00 – 10:10 New Applications: Single Cells	8:00 – 10:10 Normalization	8:00 – 18:00 Industrial Exhibition		
	10:40 – 12:30 New Applications: New Methods	10:40 – 12:50 Optimization – part 1			
	13:30 – 16:00 New Applications: Multiplexing	13:50 – 15:20 Optimization – part 2			
	16:30 – 18:30 New Applications: Mixed Session	15:50 – 18:00 Standardization			
	19:00 – 24:00 Symposium Gala Dinner Location: Lindenkeller, Pasta & More, Freising Bavarian Buffet, Mediterranean Buffet, Asian Buffet, Modern Crossover Buffet, Music & Dancing				
Wed. 7th Sept. 2005	8:00 – 12:10 Bioinformatics	8:00 – 12:10 GMO Analytics & Food Hygiene	8:00 – 13:00 Industrial Exhibition		
	12:10 – 12:20 Closing of the Symposium			13:00 – 18:00 TATAA qPCR Application Workshop	13:00 – 18:30 qPCR Matrix Workshop
Thu. 8th Sept. 2005				9:00 - 17:00 TATAA qPCR Application Workshop	8:30 – 18:30 qPCR Matrix Workshop
Fri. 9th Sept. 2005				9:00 - 17:00 TATAA qPCR Application Workshop	8:30 – 16:00 qPCR Matrix Workshop

Sunday 4th September 2005

- 13:00 – 18:00 Built-up for Industrial Exhibition
15:00 – 18:00 Arrival & Registration

Monday 5th September 2005

Welcome & Opening of the Symposium Lecture hall HS 14

- 08:00 – 10:00 Built-up for Industrial Exhibition
08:00 – 10:00 Arrival & Registration
09:00 – 10:00 **Welcome Coffee & Tea**
10:00 **Welcome & Opening of the Symposium.**
Michael W. Pfaffl & Neven Zoric
Scientific coordination of the qPCR 2005 Symposium & TATAA Application Workshop
10:10 **Welcome at the Center of Food & Life Science in Freising Weihenstephan.**
Prof. Dr. Dr. h.c. mult. Wolfgang A. Herrmann, President TUM, Germany
10:20 **Keynote lecture:**
Real-time PCR, a personal perspective.
Russell Higuchi, "Pioneer in real-time PCR"
Associate Director of the Human Genetics Department, Roche Molecular Systems, Alameda, CA, USA

Session: Pre-Analytical Steps

Chair: V. Benes

Lecture hall HS 14

- 11:00 Session introduction by V. Benes
11:10 **mRNA quantification from archival cancer samples.**
Stephen A Bustin, Rebecca Hands, Sina Dorudi, Institute of Cell and Molecular Science, Queen Mary's School of Medicine and Dentistry, University of London
11:40 **Nucleic acid isolation for diagnostic testing using Bayer's magnetic particles.**
Guido Hennig, Bayer HealthCare AG, Diagnostics Research Germany, Leverkusen
12:10 **Robust molecular profiling from RNA derived of archival tissue.**
Janine Antonov, Departement of Clinical Research, University of Bern, Switzerland.
12:40 – 13:40 **Lunch in the student cafeteria**
13:40 **Nucleic Acid Stabilization in Cultured Cell and Tissue Lysates for QPCR Gene Expression Analysis.**
L. Scott Basehore, Sr. Research Associate, Stratagene Research & Development Department
14:10 **Standardization of RNA Quality Assessment using the RNA Integrity Number (RIN) and the 2100 bioanalyzer.**
Marc Valer, Agilent Technologies, Waldbronn, Germany
LIVE presentation of Bioanalyzer 2100
15:00 – 15:30 **Coffee break**
15:30 **Influence of RNA matrix effect on qRT-PCR results – an overview.**
Michael W. Pfaffl, Simone Fleige, Physiology, Center of Life Science, Weihenstephan, Technical University of Munich, Germany

- 16:00 **Use of standardized mixtures of internal standards in RT-PCR to generate validated biomarkers and to develop standardized transcript abundance reference databases.**
James Willey¹, Elizabeth Peters², Charles Knight¹, Erin Crawford¹, Bradley Austermler¹, Terry Osborn²; 1: Medical University of Ohio, Toledo, Ohio, United States. 2: Gene Express, Inc., Toledo, Ohio, United States.
16:30 **Optimization of reverse transcription for two-step QRT-PCR: A comparison of RT priming methods and the addition of a new enhancer for efficient removal of double-stranded DNA contamination.**
Ian Kavanagh¹, Stephanie Noel¹, Chatu Rajapakshe¹, Gerwyn Jones¹, Nicky Quispe¹, Simon Baker^{1, 2}, Meg Martel¹; 1: ABgene, Epsom, United Kingdom. 2: Birkbeck, University of London, United Kingdom.

17:00 – 18:30 **Refreshments in the Industrial Exhibition**
Get-together with the Companies

18:30 – 20:00 **Poster - Session**

20:00 – 24:00 **Poster – Party**
welcome by Prof. Heinrich H.D. Meyer
[Salonorchester Karl Edelmann](#) is presenting a variety of international music

Poster Party is sponsored by



Tuesday 6th September 2005

Session: New Application – part 1: single cells

Chair: M. Kubista

Lecture hall HS 14

- 08:00 Session introduction by M. Kubista
08:10 **Gene expression profiling in single cells.**
Anders Ståhlberg (1), Martin Bengtsson (1,2), Patrik Rorsman(2,3) and Mikael Kubista (1)
1: Department of Chemistry & Bioscience / Molecular Biotechnology, Chalmers University of Technology and TATAA Biocenter, Sweden. 2: Department of Experimental Medical Science, Lund University, Sweden. 3: The Oxford Centre for Diabetes, Endocrinology and Metabolism, The Churchill Hospital, Oxford, England.
08:40 **Quantitative single-cell RT-PCR and calcium imaging in acute brain slices.**
Robert Blum, Guylaine M. Durand, Nima Marandi, Simone D. Herberger, Arthur Konnerth, Ludwig-Maximilians-Universität, Germany.
09:10 **Amplification based assays in nanoliter volume range.**
Andreas Dahl¹, Marc Sultan¹, Regine Schwartz¹, Matthias Lange¹, Alexander Jung², Michael Steinwand², Kenneth Livak², Hans Lehrach¹ and Lajos Nyarsik¹, (1) Max Planck Institute for Human Genetics, Deutschland (2) Applied Biosystems.
09:40 **Forensic and single-molecule assays of mitochondrial DNA using LATE-PCR.**
Arthur Reis, Lawrence J. Wangh, Brandeis University, Boston, MA, USA
10:10 – 10:40 **Coffee break**

Session: New Application - part 2: new methods

Chair: R. Higuchi

Lecture hall HS 14

- 10:40 **Rapid Development of RT-PCR Assays for RNAi Experiments Using Pre-designed LNA-probe Libraries.**
Michael Boutros, Boveri-Group Signaling and Functional Genomics, DKFZ, Heidelberg, Germany.
- 11:10 **A Multiplex Branched DNA Assay for Parallel Quantitative Gene Expression Profiling.**
Michael Flagella*, Son Bui*, Zhi Zheng, Cung Tuong Nguyen, Aiguo Zhang, Larry Pastor, Yunqing Ma, Wen Yang, Kim Crawford, Gary K. McMaster, Frank Witney and Yuling Luo, Genospectra Inc., United States.
- 11:40 **TripleHYB: A novel detection format for real-time PCR.**
Anne-Katrin Rost¹, Natalia Malchowa², Awad A. Osman¹, Thomas Köhler¹, 1: AJ Roboscreen GmbH, Delitzscher Strasse 135, D-04129 Leipzig, Germany. 2: Department of Microbiology, Faculty of Biotechnology, Jagiellonian University, Gronostajowa 7, 30-387 Cracow, Poland.
- 12:00 **Correlation of microarray and quantitative real-time PCR results.**
Elisa Wurmbach, Mount Sinai School of Medicine, United States.
- 12:30 – 13:30 **Lunch in the student cafeteria**

Session: New Application - part 3: multiplexing

Chair: S. Bustin

Lecture hall HS 14

- 13:30 **The best of both worlds - New dyes for qPCR for use in combination with probes.**
Neven Zoric, Coordinator of the TATAA Biocenter, Göteborg, Sweden.
- 14:00 **qPCR pitfalls - primer and probe design / fluorophore quencher combinations.**
Clémence Beslin, Eurogentec, Belgium.
- 14:30 **Going MULTI – how to easily achieve high multiplexing in real-time PCR.**
Andreas Missel, Associate Director R&D, QIAGEN GmbH, Hilden
- 15:00 **Plexor™ Real-Time Quantitative PCR Systems: Multiplexed assays made easy.**
Kyle Hooper, Promega Corporation, Woods Hollow Road, Madison, WI, USA
- 15:30 **Two-color multiplex assay for the identification of Orthopoxes viruses with Real-Time LUX PCR.**
Mohamed Aitichou¹, Sandrine Javorschi-Miller², Sofi Ibrahim¹, Mark Andersen², 1: Virology Division, United States Army Medical Research Institute of Infectious Diseases, United States. 2: Invitrogen, United States.

16:00 – 16:30 **Coffee break**

Session: New Application - part 4: mixed session

Chair: T. Bar

Lecture hall HS 14

- 16:30 **ChIP studies on a HOX gene regulated by Polycomb group and trithorax group proteins.**
Bernadett Papp, EMBL, Germany.
- 17:00 **The Ups and Downs of Gene Regulation: Validating siRNA Gene Expression Disruption with RT-qPCR.**
Hilary Katherine Srere, Bio-Rad Laboratories, United States.
- 17:30 **Real-time immuno-PCR for quantification of proteins.**
Kristina Lind, Mikael Kubista; Department of Chemistry and Bioscience, Chalmers University,

- 18:00 **microRNA expression profiles from Real-time PCR classify ES and differentiated cells**
Simone Guenther¹, Adam Broomer², Dana Ridzon², Kai Lao², Karl Guegler², William Strauss³; 1: Applied Biosystems, Darmstadt, Germany. 2: Applied Biosystems, Foster City, USA. 3: University of Colorado, Boulder, USA.

19:00 – 24:00

Symposium Gala Dinner

Location: [Lindenkeller, Pasta & More, Freising](#)

- Bavarian Buffet
- Mediterranean Buffet
- Asian Buffet
- Modern Crossover Buffet
- Music and Dancing

Tuesday 6th September 2005

Session: Normalization

Chair: N. Zoric

Lecture hall HS 15

- 08:00 **Session introduction by N. Zoric**
- 08:10 **Normalization of gene expression: state of the art and preview on a new strategy using expressed Alu repeats.**
Jo Vandesompele, Center for Medical Genetics Ghent, Ghent University Hospital, Ghent, Belgium
- 08:40 **Normalisation of mRNA levels against total DNA content.**
Shu-Rui Li¹, Doug Storts², Becky Hands¹, Benjamin Krenke², Ethan Strauss², William Ogunkolade¹, Stephen Andrew Bustin¹, 1: Queen Mary University of London, United Kingdom. 2: Promega Corporation, USA, Institute of Cell and Molecular Science, Queen Mary's School of Medicine and Dentistry, University of London
- 09:10 **Normalization genes for heart failure myocardium in mice, rats and humans.**
Trond Brattelid (2,3), Lisbeth Winer (1), Ole M. Sejersted (1,3) and Kristin B. Andersson (1,3)
1: Institute for Experimental Medical Research, Ullevaal University Hospital, University of Oslo. 2: Department of Pharmacology, University of Oslo. 3: Center for Heart Failure Research, Faculty of Medicine, University of Oslo.
- 09:40 **Early mouse development and mammalian embryonic stem cells: a qRT-PCR story.**
Erik Willems¹, Caroline Kemp¹, Ileana Mateizel², Karen Sermon² and Luc Leys¹, 1: Lab for Cell Genetics, Vrije Universiteit Brussel, Brussels, Belgium. 2: Research Centre for Reproduction and Genetics, Vrije Universiteit Brussel, Brussels, Belgium.
- 10:10 – 10:40 **Coffee break**

Session: Optimization – part 1

Chair: B. Rutledge

Lecture hall HS 15

- 10:40 **Session introduction by b. Rutledge**
- 10:50 **Design and optimization of Taqman and SYBR Green I real-time qPCR assays.**
Greg Shipley, Director, Quantitative Genomics Core, Laboratory, The University of Texas Health Science Centre-Houston, USA
- 11:20 **Comparison of MMP gene expression analysis by capillary and "realplex" real-time PCR.**
Raimund Kinne, Experimentelle Rheumatologie, Klinikum der Friedrich-Schiller-Universität Jena, Germany

- 11:50 Finding the needle in the haystack - LNA bases enhance SNP detection dramatically.
Olfert Landt, TIB MOLBIOL Syntheselabor GmbH
Eresburgstraße, Berlin, Germany
- 12:20 Infectious disease diagnostic research in Africa; the role of real time PCR.
Jim Huggett, Centre for Infectious Diseases & International Health, University College London, UK

12:50 – 13:50 **Lunch in the student cafeteria**

Session: Optimization – part 2

Chair: H.H.D. Meyer

Lecture hall HS 15

- 13:50 Relative real time PCR for gene expression measurement in breast cancer biopsies.
A.Larionov¹, S.White¹, D.B.Evans², A.Krause², M.J.Dixon¹, W.R.Miller¹; 1: Breast Research Group, Western General Hospital, Edinburgh, UK. 2: Novartis Pharma AG, Basel, Switzerland.
- 14:20 The fitness of a football team: High Resolution Melts for the determination of genotypes.
Valin Reja¹, Brant Bassam¹ and Thomas Kaiser²; 1: Corbett Research, Mortlake, NSW, Australia. 2: Corbett Research UK Limited, Cambridge Science Park, Milton, Cambridge, UK.
- 14:50 Validation of fast PCR protocols with the Eppendorf Mastercycler ep realplex.
Cynthia Potter, Eppendorf UK Limited, Vision Park, Chivers Way, Histon, Cambridge, UK

15:20 – 15:50 **Coffee break**

Session: Standardization

Chair: G. Shipley

Lecture hall HS 15

- 15:50 Session introduction by G. Shipley
- 16:00 A Comparison of Real-Time RT-PCR Technique, Chemistries and Instrumentation in Laboratories Utilizing the Same Assay.
Pamela Scott Adams, Director, Molecular Biology Core Facility, Trudeau Institute, Saranac Lake, NY, USA
- 16:30 Accurate Gene Expression Analysis with High Flexibility: Concepts and Developments.
Oliver Geulen, Roche Applied Science, Mannheim, Germany
- 17:00 The Data Comparability Challenge - Standards and Best Practices.
Morten T. Andersen, Bio-Molecular Innovation, LGC, Teddington, Middlesex, UK
- 17:30 Putting the "quantity" into quantitative PCR: A simplified approach to the establishment and application of quantitative scale.
Bob Rutledge, Natural Resources Canada, Canadian Forest Service, Laurentian Forestry Centre, Sainte-Foy, Quebec, Canada
- 18:00 Assay standardisation using universal internal controls and lyophilized reagent beads.
Andreas Eckelt, Cepheid SA, Deutschland.

19:00 – 24:00

Symposium Gala Dinner

Location: [Lindenkeller, Pasta & More, Freising](#)

- Bavarian Buffet
- Mediterranean Buffet
- Asian Buffet
- Modern Crossover Buffet
- Music and Dancing

Wednesday 7th September 2005

Session: Bioinformatics

Chair: M. W. Pfaffl

Lecture hall HS 14

- 08:00 Session introduction by M. W. Pfaffl
- 08:10 From Sequences to Synthesis: Optimal Amplification through Careful Oligonucleotide Selection.
Ben Sowers, Research Associate, Biosearch Technologies
- 08:40 Estimation of sample specific efficiency – methods and applications.
Tzachi Bar, Department of Chemistry and Biosciences Chalmers University of Technology, Göteborg, Sweden; Ales Tichopad, LabonNet, Kirchheim Munich, Germany
- 09:10 Amplification efficiency dynamics and its implications: Developing a kinetic-based approach for quantitative analysis.
Bob Rutledge, Natural Resources Canada, Canadian Forest Service, Laurentian Forestry Centre, Sainte-Foy, Quebec, Canada
- 09:40 qBase: relative quantification software for management and automated analysis.
Jan Hellemans, Center for Medical Genetics Ghent, Ghent University Hospital, Ghent, Belgium

10:10 – 10:40 **Coffee break**

- 10:40 Early Phase Fluorescence Fitting of real-time PCR reaction.
Hervé Rhinn, Laboratoire de Pharmacologie Chimique et Génétique, France.
- 11:10 Classification of real-time PCR data.
Mikael Kubista, Professor of Biotechnology, MultiD Analyses AB, Göteborg, Sweden
- 11:40 The real-time PCR primer and probe database RTPrimerDB: a major update.
Filip Pattyn, Piet Robbrecht, Jelle Verspurten, Anne De Paepe, Frank Speleman, Jo Vandesompele, Center for Medical Genetics Ghent (CMGG), Ghent University Hospital, Ghent, Belgium.
- 12:10 Closing of the Symposium in HS 14
Michael W. Pfaffl

Wednesday 7th September 2005

Session: GMO Analytics & Food Hygiene

Chair: C. Albrecht

Lecture hall HS 15

- 08:00 Session introduction by C. Albrecht
- 08:10 **Keynote lecture:**
Uncertainties and certainties in GMO analytics using qPCR.
Philipp Hübner, Kantonales Laboratorium Basel-Stadt, Abteilungsleiter Lebensmittel, Basel, Switzerland.
- 08:50 Accurate GMO quantification in food samples.
Dörte Wulff, Research and Development, Eurofins Genescan / GeneScan Analytics GmbH, Freiburg, Germany
- 09:20 The USDA/GIPSA Proficiency Program: A Summary of Participants Capabilities for Detecting and Quantifying Transgenic Events in Corn and Soybeans.
Ron Jenkins, USDA/GIPSA, USA

09:50 - 10:30 **Coffee break**

- 10:30 Application of synthetic DNA-standards for the quantitative screening of different genetically modified rapeseed lines via real-time PCR.
Francisco Moreano, Bayerisches Landesamt für Gesundheit und Lebensmittelsicherheit (LGL), Infektologie / Molekularbiologie, German
- 11:00 Cloned plasmid DNA molecules as a tool for GMO analysis.
Isabel Taverniers, Marc De Loose
Department of Plant Genetics and Breeding, DvP-CLO, Melle, Belgium.
- 11:30 Detection of Food Pathogens using the Smart Cycler II.
Martina Fricker, Dep. of Bioscience, Technical University of Munich, Freising, Germany

Closing of the Symposium
Lecture hall HS 14

12:10 – 12:20 Closing of the Symposium.
Michael W. Pfaffl

12:20 – 13:00 Lunch in the student cafeteria

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qPCR Application Workshop by TATAA Biocenter

Freising 7-9th September 2005

Practical Room P2 – [Plan of P2](#)

This workshop is aimed at giving participants a deep and objective understanding of real-time quantitative PCR and its applications. The courses are intended for persons considering working with qPCR or scientists currently working with qPCR seeking a deeper understanding.

The course covers all aspects in qPCR, from sample preparation to data analysis and is held during 3 days. The course is approximately 50% hands-on as is **limited to 20 participants**, resulting in very interactive teaching and everybody given the opportunity to try the instrumentation.

Examples of topics covered in the workshop:

- Basic Principles of PCR and qPCR
- Comparison of different detection technologies
- Applications of qPCR
- Probe and Primer design
- Data Analysis
- Relative Quantification-considerations and limitations
- Experimental Design
- Reverse Transcription
- Extraction methods
- Multiplex considerations

After the course participants will be able to plan and perform qPCR experiments themselves, as well as interpret and analyze data.

Preliminary Schedule for TATAA Biocenter qPCR workshop
Freising 7-9th September 2005

The course is focused on practical issues for qPCR and are partly hands-on, performed by the course participants in the lab ([marked in blue](#)). Preliminary agenda for download [TATAA-qPCR-WS.pdf](#)
Lunch, coffee and snacks are included in the course fee.

Day 1 - Wed. 7th Sept. - Basic qPCR

13.00 - 14.00	Basic PCR and qPCR theory and applications <ul style="list-style-type: none">• Amplification and detection• Detection chemistries• Selected applications
14.00-15.00	qPCR experiment by participants <ul style="list-style-type: none">• Display of various instrument platforms• Demonstration of qPCR software• Practical considerations when preparing PCR reactions• Programming qPCR machines
15.00-15.15	Coffee Break
15.15-16.00	Primer and probe design and considerations <ul style="list-style-type: none">• What does primer design affect?• What are primer dimers?• How do we minimize formation of primer dimers?• Design of Molecular Beacons and TaqMan probes
16.00-17.00	Data analysis <ul style="list-style-type: none">• How does qPCR software process the data?• How are standard curves used and created?• How are melt curves used?• Principle of quantification using standard curves• Principle of relative quantification
17.00-17.30	Analysis of performed qPCR experiments
17.30-18.00	Discussion and Q&A
18.00	End of qPCR workshop day 1

Day 2 - Thu. 8th Sept. - Advanced qPCR. Quantification, Normalization and experimental design

09.00-09.50	qPCR quantification strategies <ul style="list-style-type: none">• standard curves• relative quantification• how to compensate for inhibition in biological samples
09.50-10.15	Normalization of qPCR data <ul style="list-style-type: none">• What levels of normalization can be used?• How to choose a good reference gene?
10.15-10.30	Coffee Break
10.30-11.45	Experiment comparing different quantification strategies <ul style="list-style-type: none">• relative and standard curve quantification• different efficiency calculations/assumptions
11.45-12.45	Lunch
12.45-13.30	Optimization of qPCR protocols <ul style="list-style-type: none">• What parameters can/should be optimized?• An optimization strategy
13.30-15.00	Quantification calculation examples <ul style="list-style-type: none">• what effect will efficiency have on quantification• quantification methods, and equations
15.00-15.15	Coffee Break
15.15-16.45	Analysis of experimental data <ul style="list-style-type: none">• differences in quantifications strategies• effect of efficiency estimations on results• calculations of relative abundance of genes• pros and cons of different methods
16.45-17.00	Discussion and Q&A
17.00	End of qPCR workshop day 2

Day 3 - Fri. 9th Sept. - Advanced qPCR: Sample Preparation and reverse transcription

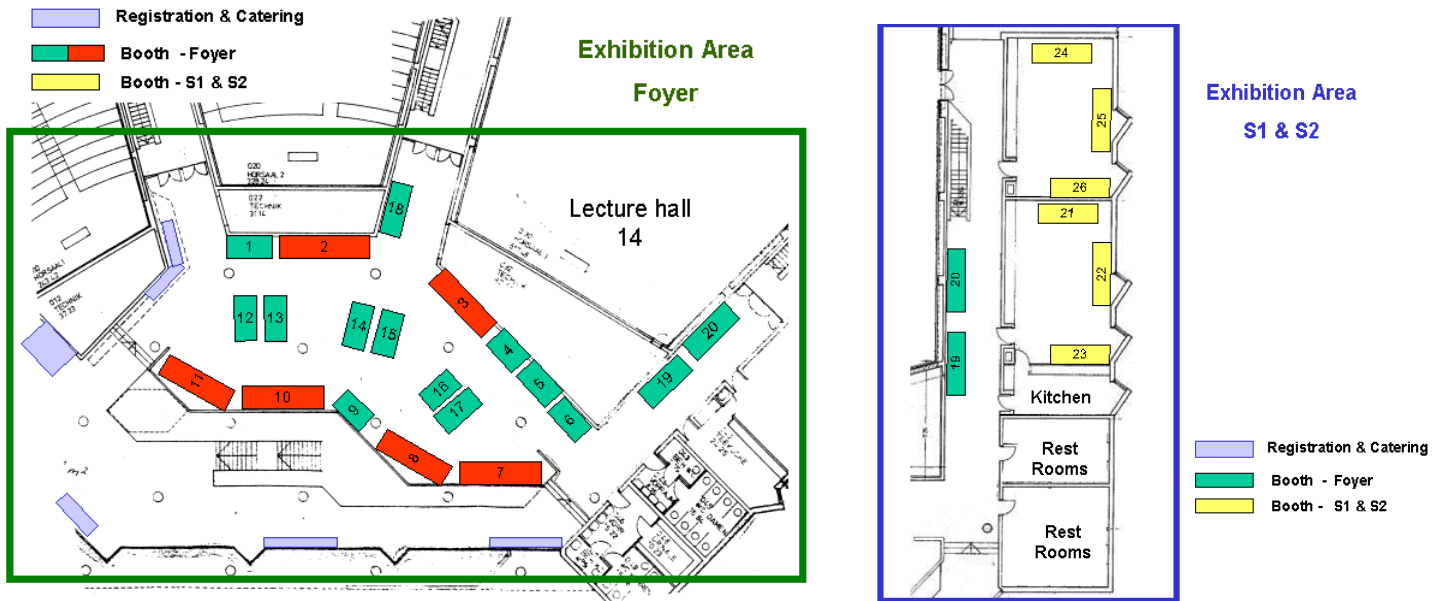
09.00-10.00	Principle of RT and different RT priming strategies <ul style="list-style-type: none">• Pros and cons of different methods
10.00-10.45	Principle of RNA and DNA extraction <ul style="list-style-type: none">• How it works• Available methods and products suitable for qPCR• Practical considerations
10.45-11.00	Coffee Break
11.00-11.45	Reverse transcription experiment using different priming methods <ul style="list-style-type: none">• Oligo(dt)• Random Hexamers• Gene specific primers
11.45-12.45	Lunch
12.45-13.30	qPCR experiment evaluating RT using the generated cDNA <ul style="list-style-type: none">• Is there a best RT priming method?
13.40-14.30	Quality Control in qPCR using Kinetic Outlier Detection <ul style="list-style-type: none">• How to detect samples with significant inhibition
14.30-14.45	Coffee Break
14.45-15.30	SNP detection. Multiplexing possibilities and problems <ul style="list-style-type: none">• qPCR for SNP/mutation detection. What alternatives are there?• Multiplex optimization
15.30-16.15	Analysis of experimental data <ul style="list-style-type: none">• Which priming method for RT is best?• How should experiments be planned to take RT priming into consideration?
16.15-16.30	Probes and Dyes <ul style="list-style-type: none">• What dyes/quenchers are typically used in qPCR• How to measure the maximum fluorescence available in a dual-labelled probe
16.30-16.45	Discussion and Q&A
16.45	End of qPCR workshop day 3

TATAA qPCR Application Workshop is supported by the following companies:



Industrial Exhibition

An industrial exhibition will be held during the qPCR Symposium from **5 – 7th September** in the foyer of the central lecture hall complex (green frame) and in two seminar rooms S1 and S2 (blue frame).



Booth numbers:

 Gesellschaft für angewandte Biotechnologie mbH Nr 1: Metabion	 Nr 2: Roche Applied Science	 Nr 3: Eppendorf	 EGT GROUP Nr 4: Eurogentec
 Nr 5: Bioline	 Nr 6: Operon Biotechnologies	 Nr 7: Applied Biosystems	 Nr 8: Stratagene
 Nr 9: MWG Biotech AG	 Nr 10: Bio-Rad	 Nr 11: LTF Labortechnik / Corbett Research	
 Nr 12: Abgene	 Nr 13: Cepheid	 Nr 14: Qiagen	 Nr 15: New England Biolabs
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 Nr 20: Biossearch Technologies	 Nr 21: Agilent Technologies	 Nr 22: Chimera Biotec	 Gesellschaft für molekulare Biotechnologie mbH Nr 23: RoboScreen
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