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accelerates your analysis

Biogazelle course on qPCR experiment design and data-analysis

March 5-6, 2009 - Ghent, Belgium

While the practical performance of a real-time PCR quantification experiment is relatively straightforward, it is clear that many users experience a **genuine need for more in depth training of their experiment design and data-analysis skills**. To accommodate this need, Biogazelle organizes focused courses in which the fundamental and advanced principles of experiment design and data-analysis are covered. These courses consist of a balanced mix between theoretical background and practical hands-on data-analysis, and are targeted towards qPCR users of all experience levels.

Professor Jo Vandesompele and Dr Jan Hellemans, the founders of Biogazelle, have more than 10 years of real-time experience and are authors of one of the most influential papers on real-time PCR normalization and data-analysis (cited more than 1500 times in PubMed). Jo and Jan have been teaching at international courses and workshops on qPCR for several years and are proud to present their own 2-day course organized in collaboration with Ghent University. Theoretical aspects and traditional teaching will be complemented with training on Biogazelle's own qBase*Plus* software and exercises in Excel and GraphPad Prism.
The course will cover the entire workfow of a qPCR experiment, from experiment design over data generation to biostatistical analysis of results. Much attention will go to validation and quality control at each step.
This course will take place in Ghent (Belgium), March 5-6, 2009. **The number of places available is limited so early registration is highly recommended.**

Course content

1. experiment design
   power analysis, experiment layout (sample vs gene maximization), replicates
2. sample preparation
   extraction, pre-amplification, DNase treatment, cDNA synthesis
3. sample quality control
   concentration, RNA integrity values, 5' – 3' ratio, SPUD assay
4. assay design
   RTprimerDB, probes vs SYBR, design guidelines
5. assay quality control
   in silico evaluation (specificity, splice variants, secondary structures, SNPs), empirical validation (melt curve, agarose gel, standard curves)

6. qPCR reactions
   validation, speed and throughput considerations
7. Cq (Ct) values
   amplification plots, melt curves, Cq determination methods, replicates & controls
8. absolute quantification
   standard curves, limitations and concerns
9. relative quantification
   calculation models (delta-delta-Ct, Pfaffl model, qBase model), efficiency correction, selection and validation of reference genes (geNorm), normalization with multiple reference genes, inter-run calibration
10. data quality
    normalization factor histogram, reference (housekeeping) gene stability, inter-run variation
11. bio-statistical analysis
    data distribution, confidence intervals, selection and application of appropriate statistical tests

Practical details

- Location: Vlerick Management School, Reep 1, 9000 Gent, Belgium
- Date: Thursday March 5th (9.30 am) – Friday March 6th (5.00 pm)
- Price: 750 EUR (includes lessons, course booklet, lunch and refreshments)
- Register by sending an e-mail to info@biogazelle.com

You can benefit from a special discount rate at hotel Chamade (5 minutes walking from the train station) if you quote 'Ghent University - Biogazelle course on qPCR' (89 EUR per night).

Participants of this 2-day course on qPCR also benefit a 25 % discount on the purchase price of a full license for the qBase*Plus* software.

Biogazelle can also provide courses in your organization for groups of 8-16 people. Contact Biogazelle (info@biogazelle.com) for further information and reservations.