LGC *Setting standards in analytical science*

SIGMA Life Science

Accuracy in Molecular Measurement Training Course

Gene Expression Analysis

2-3 November 2011

LGC, Queens Road, Teddington
Middlesex TW11 0LY, UK

Learn how to perform reliable gene expression analysis and about the strategies that can be adopted for ensuring that you are generating robust and accurate results.

Over the last thirty years advances in molecular biology technologies have transformed nucleic acid measurement. Crude qualitative assays have been replaced by approaches with much higher accuracy, that are capable of very sensitive, precise and quantitative measurements over large dynamic ranges. 'Accuracy in Molecular Measurement' is a series of workshops and courses that focus on training scientists in the latest aspects of specific molecular biology applications.

On 2-3 November 2011 LGC, in collaboration with Sigma-Aldrich, will be providing training in gene expression analyses. This will focus on the latest approaches to molecular analyses of RNA expression, including next generation sequencing, and discuss the essential considerations needed to ensure confidence in RNA quantification. The course will include an overview of the MIQE Guidelines (Minimum Information for Publication of Quantitative Real-Time PCR Experiments), published in 2009, which aim to establish a clear and robust framework for the conduct of reverse transcription real-time quantitative PCR (RT-qPCR) experiments.

The course will be delivered by a team of trainers with extensive expertise in molecular measurements, including:

- Professor Stephen Bustin (Barts and the London School of Medicine and Dentistry, Queen Mary University of London)
- Dr Vladimir Benes (EMBL Heidelberg)
- Dr Tania Nolan (Sigma-Aldrich)
- Dr Jim Huggett (LGC).

What are the benefits?

The course will help you:

- Understand how to design a RT-qPCR experiment to ensure accurate and real findings
- Approach data analysis effectively and understand how to select reference genes
- Ensure the reliability of your findings including how to avoid artefacts.

Key topics:

- Experimental design
- Experimental setup
- Different approaches to performing RT-qPCR
- Latest technologies and what is currently possible when using RT-qPCR
- How the MIQE guidelines can assist your research
- The role of next generation sequencing in gene expression analysis.

• safety • quality • training • analysis • research • measurement • innovation •



Who should attend?

The course will be of value to anyone who has an interest in using molecular methods to measure gene expression. It is applicable to individuals from academia or industry, working in research, clinical, diagnostic, forensic, food and environmental fields. The course will also be relevant to those who are interested in the potential of the latest technologies and approaches for ensuring confidence in the measurements they are making.

The number of delegates will be limited in order to facilitate close interaction with the trainers and provide ample opportunity to network, share experiences and discuss specific issues.

Course venue

The course will be held at LGC's headquarters in Teddington, South West London. The venue is conveniently located for travel by car (easily accessible from the M3, M4 and M25), rail (30 minutes direct from London Waterloo) or air (30 minutes by taxi from Heathrow airport).

Registration details

The course fee is £750 + VAT. The fee includes lunches and refreshments, evening meal on 2 November and an extensive delegate pack.

To register your interest in this course, or for further information, please contact:

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About LGC

LGC is an international science-based company and market leader in analytical, forensic and diagnostic services, and reference standards. As the UK's designated National Measurement Institute for chemical and bioanalytical measurement, we deliver world-class science and have extensive knowledge of the development and validation of analytical measurements, and the production and certification of reference materials.

Since 1997 we have delivered a programme of training courses on analytical quality which support organisations in making valid and reliable chemical and bioanalytical measurements. For further information about LGC's analytical quality training programme, please visit www.lgcgroup.com/training.

About Sigma-Aldrich

Sigma-Aldrich is a leading life science and high technology company. Its biochemical and organic chemical products and kits are used in scientific and genomic research, biotechnology, pharmaceutical development, the diagnosis of disease and as key components in pharmaceutical and other high technology manufacturing. The company has customers in life science companies, university and government institutions, hospitals, and in industry. Over one million scientists and technologists use its products. Sigma-Aldrich operates in 36 countries and has 7,900 employees providing excellent service worldwide. Sigma-Aldrich is committed to accelerating customer success through leadership in life science, high technology and service. For more information about Sigma-Aldrich, please visit its award-winning website at www.sigma-aldrich.com.

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