



Practical Bioreactor Training Courses

**TWO UNIQUE COURSES TO DRAMATICALLY
BOOST YOUR BIOREACTOR PRODUCTIVITY**

———— **LEVEL 1** ————

INTRODUCTION TO STIRRED TANK REACTORS

11th-12th May & 12th-13th October 2010, XCellR8, Manchester

———— **LEVEL 2** ————

FROM T FLASK TO BIOREACTOR

21st-22nd April 2010, York University



PLACES ARE VERY LIMITED, EARLY BOOKING IS RECOMMENDED

LEVEL 1: INTRODUCTION TO STIRRED TANK REACTORS

XCellR8, Manchester, 11th-12th May & 12th-13th October 2010

Led by industry expert Annette England,
supported by Applikon and Millipore

Course Content

- Why use a bioreactor / fermenter?
- Microbial vs mammalian
- Preparing and using a stirred tank reactor
- Comparison with disposable reactors
- Adapting cells to suspension culture
- Preparing and running a stirred tank bioreactor – cleaning, calibration, inoculation, sampling, harvesting, decontamination
- Process control – temperature, pH, dissolved oxygen and biomass
- Introduction to SCADA (Supervisory Control And Data Acquisition)
- Primary product recovery

This course is perfect for the scientist currently working in T Flasks / shake flasks / roller bottles. It demonstrates how to adapt cells to suspension culture, choose starting conditions and control the process in a stirred tank reactor.

You will leave with the practical skills required to prepare and run a STR, from media and reagent choice, through to inoculation, sampling and product recovery.

£970 + VAT (accommodation not included, 10% discount for early registration and payment)

CLICK HERE TO REGISTER

www.x-cellr8.com/bioreactortraining.aspx



XCellR8 works globally with industrial and academic scientists, providing a range of technical support services in cell culture technology.

The company aims to maximise the productivity of cell culture research, by offering independent technical support and troubleshooting advice through a panel of experts - saving time, money and project delays.

Training courses on a range of topics from basic techniques to complex systems equip scientists with the know-how they need to get the best from their research.



LEVEL 2: FROM T FLASK TO BIOREACTOR

York Technology Facility, 21st-22nd April 2010

Led by University Lecturer Jared Cartwright,
with industrial trainer – Ronan O’Kennedy

Course Content

- Choosing a scale-up technology – disposable, reusable
- Design of Experiments
- Media optimisation and feeding strategies – fed batch / perfusion
- Preparing and running stirred tank and disposable rocking bioreactor
- Online biomass monitoring by the capacitance method
- Process optimisation and gassing strategies
- SCADA – configuration, data analysis, recipes
- Primary separation & cell wash by hollow fibre cross flow filtration

This course is perfect for those who already run bioreactors and wish to improve reproducibility, efficiency and / or productivity.

You will leave with the ability to rapidly optimise your process with fewer exploratory runs. The understanding of scale-up, cGMP manufacture and downstream processing provided will efficiently focus your process development work. Level 1 is not a pre-requisite for attendance on level 2.

£1,250, 10% discount for early registration and payment (£1,100)

2 university places available at £600. No VAT is chargeable.

The prices above include all meals during the course, but do not include accommodation. Two nights ensuite accommodation is available on site at a total cost of £100 including breakfast.

CLICK HERE TO REGISTER www.applikon-bio.com



THE UNIVERSITY *of York*

The Technology Facility is a state-of-the-art facility that provides access to a wide range of key technologies and expertise that underpin much of current bioscience research.

With £9m spent on equipment since 2002 and employing 20 expert staff members, The Technology Facility is organised into six specialist laboratories, each led by an experienced technologist with trained technical support.

The York Technology Facility has been providing practical training courses for 6 years, for more information see www.york.ac.uk/depts/biol/tf

These two day courses will leave you with essential knowledge and skills, **personalised for the specific challenges** you experience in your work place. The ratio of 1 trainer to every 3 trainees will enable us to provide **dedicated and flexible training** and the high practical content means you will spend much of your time practising and perfecting your new techniques.

Course organisers



Sharon Brownlow, Applikon Biotechnology

PhD in Biochemistry, post doctoral research in protein crystallography, PhD supervisor in design of experimentation and 14 years in Biotechnology sales & technical support.



Carol Barker, XCellR8

PhD in Cell Biology, postdoctoral research in tissue engineering of human skin, industrial experience in drug discovery and development, and in the development of human primary cell culture systems. Currently Managing Director of XCellR8 Ltd.



Jared Cartwright, York University

PhD in Biochemistry, with 6 years experience as post doctoral researcher in protein chemistry and recombinant protein expression. Currently, Head of Protein Production at the Technology Facility, University of York.



Ronan O'Kennedy, Bioprocessing consultant

PhD in Microbiology, Postdoctoral Research in Biochemical Engineering, 8 years of industrial experience in biopharmaceutical process development and process scale up of mammalian cell culture, yeast and microbial fermentation. Research interests in production physiology, bioreactor control systems, process data management and informatics. Currently, Lecturer in Biopharmaceutical Development at Newcastle University.



Annette England, BioMax Scientific Consultancy

MSc in Biochemical Engineering followed by 23 years fermentation experience - 14 years in process development and protein supply, 2 years in fermenter sales and technical support and 7 years as owner of BioMax Scientific Consultancy.

Applikon UK also provide tailored training courses on Microbial/Yeast Fermentation.

Examples of funding bodies for this training include:

www.esactuk.org.uk; www.semta.org.uk; www.yorkshire-forward.com; www.erbi.co.uk/. Please check your own regional network.

