

# BioSciConcepts Training Newsletter

**We Excite**

May 2007

## Scientific Training Newsletter Vol. 2, Issue 1

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### 2007 Workshop Schedule

Introduction to  
Molecular Biology  
April 11-13  
Oct 17-19

Introduction to  
Protein Expression  
May 9-11  
Oct 31-Nov 2

**NEW** Introduction  
to Protein  
Expression, 4-Day  
August 14-17

Introduction to PCR  
May 21-23  
Nov 14-16

Introduction to Cell  
Culture 3-Day  
April 18-20  
December 12-14

Introduction to Cell  
Culture, 4-Day  
January 16-19  
June 19-22  
September 25-28

**NEW** Recombinant  
Baculovirus  
Techniques  
December 3-7

**NEW** Advanced  
Cell Culture: Vial to  
Bioreactor and  
Beyond  
July 23-27



## New 5-Day Advanced Cell Culture Workshop: Vial to Bioreactor and Beyond.

This new workshop is being jointly offered by BioSciConcepts and The University of Maryland Baltimore County Center for Advanced Sensor Technology. The dates for this workshop are July 23-27, 2007.

This course will give attendees a complete conceptual education on the important aspects of cell production at the bioreactor level. The course is designed to give all participants significant hands-on practice in both disposable bioreactors and traditional stirred-tank designs.

**To register contact us at 410-752-4224**

### Course Schedule

**Day 1** Cell Culture Overview, Media (concentration on Serum-Free Medium), Viability Measurements, Review Aseptic Techniques (General Techniques), Cell Types and Growth Methods.

**Day 2** Cryopreservation and Cell Banking, Overview of Bioreactor Systems, Sterile Techniques (Restricted to Bioreactor Usage), Mathematical Analysis of Data

**Day 3** On-Line vs. Off-Line Measurements, Measurement of Variables (O<sub>2</sub>, pH, Cell Count), Novel Sensor Technology, Using Bioreactor Variables to Your Advantage

**Day 4** Process Control, Instrumentation Strategy, Scale-Up and Scale-Down, Cell Harvesting, Filtration Technologies

**Day 5** cGMP Documentation, Quality by Design Strategies, Maintenance of Batch Records

**Cost:** \$4995.00 Industry, \$ 3475.00 Academic and Government or 20% discount with early registration, before June 23, 2007.

## Protein Expression Workshop offered as a 3- or 4-Day Course.

In addition to our popular 3-day workshop we now offer a Protein Expression workshop that includes *in vitro* transcription and translation protocols. The date of the 4-day Protein Expression workshop is August 14-17. For workshop content and to register call 410-752-4224 or go to [www.biosciconcepts.com](http://www.biosciconcepts.com).

## 5-Day Baculovirus Workshop, December 2007

This 5-day workshop is great for those wanting to express recombinant protein in the baculovirus expression vector (BEV) system. We will cover the growth of insect cells, plaque assays, titering, amplification of recombinant virus and protein expression strategies. As usual, this class is for those at all levels of expertise, although basic molecular biology and recombinant DNA experience will be helpful. The date of this course will be December 3-7, 2007. For more information about course content go to [www.biosciconcepts.com](http://www.biosciconcepts.com) or phone us at 410-752-4224.

## TiP, Save Conditioned Media from Eukaryotic cells.

Conditioned media is made by inoculating cells at about 20% confluency in their growth media then allowing to grow overnight. The following morning remove the media, centrifuge to remove any cellular debris and store at -20°C or below. A cell type specific conditioned media is useful for several purposes. Use conditioned medium for freezing cells. Combine 46.5% fresh medium and 46.5% conditioned medium and 7% DMSO to make a great cell freezing medium. Conditioned medium is also useful when isolating clones from single cell populations. Often times limited cell numbers are difficult to grow unless conditioned medium is used.

We're on the Web!

[www.biosciconcepts.com](http://www.biosciconcepts.com)

**CAST**  
Center for Advanced Sensor Technology

**UMBC**  
UNIVERSITY OF MARYLAND BALTIMORE COUNTY

## About The BioSciConcepts Instructor

Timothy W. Fawcett, Ph.D., Director of BTI is responsible for the development and instruction of the BioSciConcepts workshops. Many of you know him as your instructor at the BioTechnical Institute of Maryland, Inc. Dr. Fawcett has significant experience delivering outstanding workshops in the U.S. and around the world. Prior to his position at BTI, Dr. Fawcett was a Senior Scientist at a major International biotech company as well as a Senior Staff Fellow at the National Institutes on Aging. Tim's enthusiasm is contagious and his knowledge of the field deep. Students have gotten much out of his courses and find them very valuable and often come back for additional courses. Tim's former students frequently ask follow-up questions about their own projects knowing he makes himself available for post workshop consultation long after the workshop is over.

### Quotes from workshop participants:

"I was extremely satisfied with this (cell culture) workshop, and feel confident now in introducing cell culture work in my laboratory". Evelyn Sattlegger, Ph.D., Massey University, Auckland, New Zealand.

"I just started working in protein expression and this course was very helpful. I learn best by doing and therefore the lecture/lab combination was perfect for me". Marian Zwart, major pharmaceutical company.

## About The BioTechnical Institute of Maryland, Inc.

BTI's mission is to train and place area residents, who are highly motivated high school graduates, in positions as skilled and reliable lab technicians and to provide a critically needed, prepared workforce to support the growth of this economically and scientifically important industry. BTI was established in 1998 and has developed a model to train adults with high school degrees who are often under or unemployed. Graduates of the program realize career opportunities that would not have been previously available to them. In addition to the technical curriculum required for placement in a lab, BTI's training is tuition free and includes, critical employability skills and assistance in addressing social issues, both of which affect retention in class and on the job. More than 175 students have completed the Program. All receive internships as part of the completion requirements. These internships provide hands-on experience in a university or commercial lab or production facility, which is invaluable to the student's transition to professional employment. We are also excited that many of our graduates are eligible for credits at local community college partners bioscience programs. The placement rate of BTI graduates into professional positions in the bioscience industry within three months of completion is over 80%. And these graduates have been hired by more than 30 organizations in Maryland; Johns Hopkins University alone employs about one quarter of the BTI graduates. We are very proud of our graduates. [www.biotechmd.org](http://www.biotechmd.org).

## Exciting news about the BioTechnical Institute of Maryland, Inc. Scientific Workshop Programs .

### Get excited ...take a workshop this year ?

Newsletter

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BioSciConcepts  
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