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Webinar

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Webinar will be available on demand after the event for viewing anytime.

Tuesday
April 28, 2009
12 noon Eastern;
9 am Pacific;
4 pm GMT

Participating Experts:
Dr. Lori Conlan
Director of Postdoc Services,
Office of Intramural Training and Education
National Institutes of Health

Pearl Freier
President
Cambridge BioPartners

Dr. Marion Müller
Director, DFG Office North America
Deutsche Forschungsgemeinschaft
(German Research Foundation)

Richard Weibl
Director, Center for Careers in
Science and Technology
American Association for the
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Figure 1. Immunocytochemistry (ICC) analysis 48 hours post-Doxycycline (DOX) induction. Nanog-GFP/rtTA mouse embryonic fibroblasts (MEFs) were transduced with each of four lentiviruses. The Nanog-GFP/rtTA MEFs contain the GFP gene knocked in at the Nanog locus as well as a reverse tetracycline transcriptional activator (rtTA) expression cassette, required for DOX inducible expression. Far left panel (−DOX) is a representative negative control for expression of the four transcription factors without DOX induction. Correctly expressed transcription factors were confirmed by corresponding antibodies (shown in red) stained with DAPI to visualize nuclei.

Figure 2. Analysis of iPS colonies generated. Nanog-GFP/rtTA MEFs were transduced with four viruses carrying Oct2, Sox2, Klf4, and c-Myc cDNA. Expression of the four transcription factors was induced by adding DOX to initiate the reprogramming process. GFP expression reflects the endogenous Nanog expression level, monitoring pluripotency. Emergent colonies were manually isolated and passaged for further characterization.

[A] Phase contrast microscopy and alkaline phosphatase (AP) staining of an induced pluripotent stem (iPS) cell colony.

[B] Pluripotency marker analysis: Left panel – phase contrast overlay with GFP reprogramming reporter expression. Middle panel – ICC staining for pluripotency markers (Nanog, Oct4, and SSEA1.) Right panel – DAPI staining to visualize nuclei.

Our Mission
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Dry Blotting System
The iBlot Dry Blotting System for protein immunoblotting offers complete protein transfer in 7 minutes or less. It offers reduced variability in blot preparation and running and high-quality transfer without bubbles or distortions. It features the convenience of a self-contained unit, with no need for added buffers or an external power supply.

Protein Detection Kits
The Kodak X-Sight Western Kits offer an analytical technique to detect proteins. The kits are built on X-Sight Nanosphere Conjugates, which are available in four distinct wavelengths, including three in the near-infrared range. The kits are offered in several different wavelength combinations that include up to three conjugates, making them suitable for multiplex applications. Each kit includes membranes and buffers to achieve high signal-to-noise ratios.

Microwave Peptide Cleavage System
The Accent Cleavage System is a microwave peptide cleavage system that enables chemists to perform a full peptide cleavage in less than 30 minutes and microcleavages in as little as 2 minutes. The rapid microcleavage enables chemists to get a liquid chromatography/mass spectrometry analysis of their peptide in as little as 15 minutes, so they can quickly determine how their synthesis is progressing. The system is fast, improves peptide purities and yields, and enables chemists to use less noisome reagents than other cleavage systems. The system accepts 4-ml, 25-ml, and 35-ml vessels and a cleavage scale of microcleavage to 0.25 mmol.

Protein Interaction System
The DUALhunter System is a flexible assay system designed to find novel protein interaction partners for transcriptionally active and self-activating proteins. The system quickly screens full-length soluble nuclear proteins in vivo and can also be used to screen protein domains or fragments for novel protein interactions. It also permits easy subcloning of full-length complementary DNA (cDNA) inserts; the protein of interest is screened against a cDNA library of choice, which can be very large, and cell-type specific interactions can be detected. The system detects protein interactions based on the split-ubiquitin system, giving researchers the ability to screen classes of proteins such as transcription factors or strongly acid proteins that cannot be screened using classic yeast two-hybrid systems.

IgG Antibody Purification
BioVyon Protein A microplates and columns offer a simple and rapid method for antibody purification. The new products give a consistent recovery of immunoglobulin G (IgG) antibody that is independent of the flow rate during loading. Unlike existing bead-based technologies, there are no time-consuming slurries to equilibrate and pour into columns. BioVyon Protein A Mini Columns and Micro Columns give consistent recoveries of purified IgG. The high purity is consistent in multiple extractions using the same column or from column to column. The columns can be reused several times. The minicolumns have a capacity of 2.5 mg IgG, and the microcolumns have a 10 µg capacity.

Protein Extraction Buffers
The Mammalian Protein Extraction Buffer and Yeast Protein Extraction Buffer Kit are mild, nondenaturing buffer compositions that deliver high-quality protein lysate compatible with most downstream applications without the need for mechanical cell lysis. Both products give highly reproducible, consistent results that maintain biological activity. The mammalian buffer is designed for use in cultured cells, and can be used for both cell suspensions and adherent cells. The yeast kit is suitable for preparation of approximately 10 ml of yeast cell pellet suspension and eliminates the need for glass beads. The buffers are compatible with downstream applications such as chromatography, enzyme assays, and electrophoresis.
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