

Register Early and Save!

Final Agenda

Cambridge Healthtech Institute's
Ninth Annual

PEP TALK

The Definitive Protein-Focused Event

Conferences: January 11-15, 2010

Exhibits: January 11-15, 2010

Hotel Del Coronado • San Diego, California

Pipeline 1 **Formulating Biologics**
Meeting the Challenges



Second Annual **Optimizing Biologics Formulation Development**

Second Annual **Protein Aggregation**

Third Annual **Lyophilization & Spray Drying 2010**

Pipeline 2 **Bioprocessing**
Streamlining Complexity



Second Annual **Protein Purification & Recovery**

Inaugural **Membrane Proteins**

Third Annual **Protein Production**

Pipeline 3 **Engineering Protein & Peptide Therapeutics**



Sixth Annual **Antibodies**

Sixth Annual **Recombinant Proteins**

Inaugural **Peptides**

Pipeline 4 **Higher-Throughput Protein Expression**



Thirteenth Annual **Enhancing Host Expression**

Thirteenth Annual **Characterization, Purification & Screening**

Inaugural **Vectors & Clones**

Receive a \$50 Hotel Del Coronado Resort Credit!

Explore the beauty of the Hotel Del Coronado and enjoy the wide variety of unique stores and boutiques at Shops at the Del!

Details inside



chi-PepTalk.com

Organized by:

Cambridge Healthtech Institute
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





TheScientist

Sponsoring Organization:

ProteinSociety.org

PEPTALK-AT-A-GLANCE

SUNDAY, JANUARY 10				
1:00 pm – 2:00 pm				
Short Course Registration				
2:00 pm - 5:00 pm				
Concurrent Short Courses SC1 -SC4 (separate registration required)				
MONDAY, JANUARY 11	PIPELINE 1	PIPELINE 2	PIPELINE 3	PIPELINE 4
7:30 am -6:00 pm				
Registration				
	Optimizing Biologics Formulation	Protein Purification & Recovery	Antibodies	Enhancing Host Expression
8:45 am - 12:15 pm				
Scientific Morning Sessions / Coffee Break (10:20 am - 10:45 am)				
12:30 pm - 2:00 pm	Luncheon Presentation or Lunch on Own	Luncheon Presentation or Lunch on Own	Luncheon Presentation or Lunch on Own	Luncheon Presentation sponsored by 
2:00 pm - 5:45 pm				
Scientific Afternoon Sessions / Networking Refreshment Break (3:50 pm - 4:15 pm)				
5:45 pm - 7:00 pm				
Welcoming Reception in the Exhibit Hall				
TUESDAY, JANUARY 12	Optimizing Biologics Formulation	Protein Purification & Recovery	Antibodies	Enhancing Host Expression
7:00 am - 6:00 pm				
Registration				
7:30 am - 8:15 am	Breakfast Presentation or Morning Coffee	Breakfast Presentation or Morning Coffee	Breakfast Presentation or Morning Coffee	Breakfast Presentation sponsored by 
8:15 am - 12:15 pm				
Scientific Morning Sessions				
10:05 am - 10:45 am				
Networking Coffee Break in the Exhibit Hall				
12:30 pm - 2:00 pm	Luncheon Presentation or Lunch on Own	Luncheon Presentation or Lunch on Own	Luncheon Presentation or Lunch on Own	Luncheon Presentation sponsored by 
2:00 pm - 2:45 pm				
 A (See page 3 for details)				
2:45 pm - 3:30 pm				
Networking Refreshment Break and Poster Awards in the Exhibit Hall				
3:30 pm - 4:15 pm				
 B (See page 3 for details)				
4:30 pm - 7:30 pm				
Concurrent Short Courses SC5 -SC8 (separate registration required)				
WEDNESDAY, JANUARY 13	Protein Aggregation	Membrane Proteins	Recombinant Proteins	Characterization, Purification & Screening
7:00 am - 5:30 pm				
Registration				
7:30 am - 8:15 am	Breakfast Presentation or Morning Coffee	Breakfast Presentation or Morning Coffee	Breakfast Presentation or Morning Coffee	Breakfast Presentation or Morning Coffee
8:15 am - 12:15 pm				
Scientific Morning Sessions				
10:00 am - 10:45 am				
Networking Coffee Break in the Exhibit Hall				
12:30 pm - 2:00 pm	Luncheon Presentations or Lunch on Own	Luncheon Presentations or Lunch on Own	Luncheon Presentations or Lunch on Own	Luncheon Presentations or Lunch on Own
2:00 pm - 5:30 pm				
Scientific Afternoon Sessions / Networking Refreshment Break (3:50 pm - 4:30 pm)				
5:30 pm - 6:30 pm				
Reception in the Exhibit Hall				
THURSDAY, JANUARY 14	Protein Aggregation	Membrane Proteins	Recombinant Proteins	Characterization, Purification & Screening
7:30 am - 8:15 am				
7:30 am - 8:15 am	Breakfast Presentation or Morning Coffee	Breakfast Presentation or Morning Coffee	Breakfast Presentation or Morning Coffee	Breakfast Presentation or Morning Coffee
8:15 am - 12:15 pm				
Scientific Morning Sessions				
10:05 am - 10:45 am				
Networking Coffee Break in the Exhibit Hall				
12:30 pm - 1:45 pm	Luncheon Presentations or Lunch on Own	Luncheon Presentations or Lunch on Own	Luncheon Presentations or Lunch on Own	Luncheon Presentations or Lunch on Own
	Lyophilization & Spray Drying	Protein Production	Peptides	Vectors & Clones
1:45 pm - 6:00 pm				
Scientific Afternoon Sessions				
3:35 pm - 4:30 pm				
Networking Refreshment Break in the Exhibit Hall				
FRIDAY, JANUARY 15	Lyophilization & Spray Drying	Protein Production	Peptides	Vectors & Clones
7:30 am - 8:15 am				
7:30 am - 8:15 am	Breakfast Presentation or Morning Coffee	Breakfast Presentation or Morning Coffee	Breakfast Presentation or Morning Coffee	Breakfast Presentation or Morning Coffee
8:15 am - 12:30 pm				
Scientific Morning Sessions				
10:05 am - 11:00 am				
Networking Coffee Break and Poster Awards in the Exhibit Hall				
12:45 pm - 2:00 pm	Luncheon Presentations or Lunch on Own	Luncheon Presentations or Lunch on Own	Luncheon Presentations or Lunch on Own	Luncheon Presentations or Lunch on Own
2:00 pm - 4:05 pm				
Scientific Afternoon Sessions				

HOTEL AND TRAVEL INFORMATION

VENUE AND HOST HOTEL

Hotel Del Coronado
1500 Orange Avenue
Coronado, CA 92118
www.hoteldel.com
Phone: 619-435-6611
Fax: 619-522-8238
Discounted Room Rate: \$255 s/d
\$18 resort fee per room per night
Reduced Room Rate Cut-Off: Dec 21, 2009

A classic historic hotel, The Del was built in 1888 and designated a National Historic Landmark in 1977. Today, The Del offers travelers contemporary luxury in an enchanting Victorian atmosphere. Add to this, the resort's beachfront location, and it's no wonder USA Today calls The Del "one of the top ten resorts in the world."



TRAVEL INFORMATION:

For additional Travel Information, visit the hotel and travel page of the conference website:
<http://www.chi-peptalk.com>



WHAT TO DO IN CORONADO AND NEARBY SAN DIEGO

After a day of meetings you may want to take in some of what the area has to offer.

CORONADO

- Explore Ferry Landing Marketplace at the foot of First Street with its shops, restaurants and stunning views of downtown San Diego.
- Coronado is home to North Island Naval Air Station and the Naval Amphibious Base. Since Sept. 11, 2001 neither base is open to the public. However, OldTownTrolleyTours offers a 2-hour plus guided tour that takes you past some of the military installations in the San Diego area. Photo I.D. required. The Visitor Center can provide more information.
- Coronado City Beach was named one of Southern California's best beaches in 2002 by the Travel Channel.

SAN DIEGO

- World Famous San Diego Zoo
- San Diego Wild Animal Park
- Sea World (home of Shamu)
- Take a leisurely stroll through Balboa Park, a collection of fine museums, and botanical gardens as well as the Spreckels Organ Pavilion. Balboa Park is one of the nation's largest urban cultural complexes.
- Embark on a diverse shopping and dining excursion in one of the famous districts San Diego has to offer: OldTown State Historic Park

These are just some of the many diverse attractions Coronado and San Diego has to offer.

Please enjoy your stay!

For more information on Coronado, go to www.coronadovisitorcenter.com

For more information on San Diego, go to www.sandiego.org

Details (from front page promo)

- The First 25 people to register for the PepTalk Premium Package and reserve their stay at the Hotel Del Coronado will receive a \$50 resort credit good for dining, shopping or spa!
- Any cancellation will make entry invalid
- All conference registration fees must be paid in full
- Resort credit will be distributed on-site at the PepTalk registration desk in January

Maximize your experience onsite at PepTalk 2010!



The Intro-Net offers you the opportunity to set up meetings with selected attendees before, during and after this conference, allowing you to connect to the key people you want to meet. This online system was designed with your privacy in mind and is only available to registered session attendees of this event.

Registered conference attendees will receive more information on accessing the Intro-Net in the weeks leading up to the event!

Buzz-sessions

Tuesday, January 12
2:00 & 3:30 pm

Buzz Sessions are facilitated small-group discussions. Interactive participation leads to problem solving, solutions, and future collaborations.

If you have a topic idea or would like to moderate a table, please contact:

Mary Ann Brown, Executive Conference Director
Phone: 781-972-5497 • E-mail: mabrown@healthtech.com



SPONSORSHIP OPPORTUNITIES

Customized sponsorship packages are designed to help your company obtain its marketing and lead generation objectives. Whether your goal is to showcase a new product in our exhibit hall, or to present your latest technology or solution during a conference session, your sponsorship package will strategically place you in front of qualified end-users.

Agenda Presentations

Present your technology or solutions within a conference program of your choice. Showcase how your company provides novel solutions in this highly competitive industry.

Breakfast & Luncheon Workshop

Invite conference session attendees to enjoy breakfast or lunch on behalf of your company, while you give a presentation on your latest innovations.

Invitation-Only VIP Functions

Invite a select group of your top prospects to a night out at a premier local venue. Establish lasting relationships and generate new business leads in a casual, relaxed atmosphere. Limited Availability!

Exhibit Hall Reception

Create an immediate buzz for your company by hosting the Grand Opening Exhibit Hall Reception! Greet delegates as they enter the reception, direct traffic to your booth, and enjoy facilitated networking. Bar and hors d'oeuvres services will be offered on behalf of your company.

Refreshment Breaks

Over ten breaks are available to sponsor throughout the conference. Break sponsorship is an ideal way to gain additional exposure, especially when you tie it in with one of our targeted conference sessions. Your coffee break will be promoted in the conference session, and will include a variety of teas, coffees, and other assorted refreshments.

For Sponsorship or Exhibit information, please contact:

Suzanne Carroll

Manager, Business Development
Cambridge Healthtech Institute
Telephone: 781-972-5452
Email: scarroll@healthtech.com

List of Current Exhibitors as of 9/15:

Accelrys	Crown Bioscience	ICx Nomadics	LI-COR	PolyPeptide Group
Ajinomoto	deltaDOT	ID Innovative	Millrock Technology	Precision Antibody
Aktiv-Dry	DNA 2.0	Directions	Nanosight	Promega
Applied Photophysics	Eden Biodesign	IMA Edwards	New England Biolabs	QIAGEN
Aragen Bioscience	Forte Bio	Integrated DNA	Novozymes	Rapp Polymere
Blue Sky Biotech	GE Healthcare	Technologies	Pall Life Sciences	Selexis
Caliper	Hudson Control	Invitrogen	Paragon Bioservices	Sloning Biotech
Constant Systems	Group	Lab901		

Poster Awards

Give a corporate introduction to the Poster Awards, and announce the winners of this highly attended PepTalk event! Sponsors will enjoy added visibility on-site, and benefit from additional on-site branding.

Focus Groups

CHI helps you organize and execute a focus group onsite at PepTalk. This exclusive gathering can be useful to conduct market research, gain feedback on a new product idea, and gather marketing intelligence from industry experts on a specific topic. Please inquire for more details.

User Group Meeting

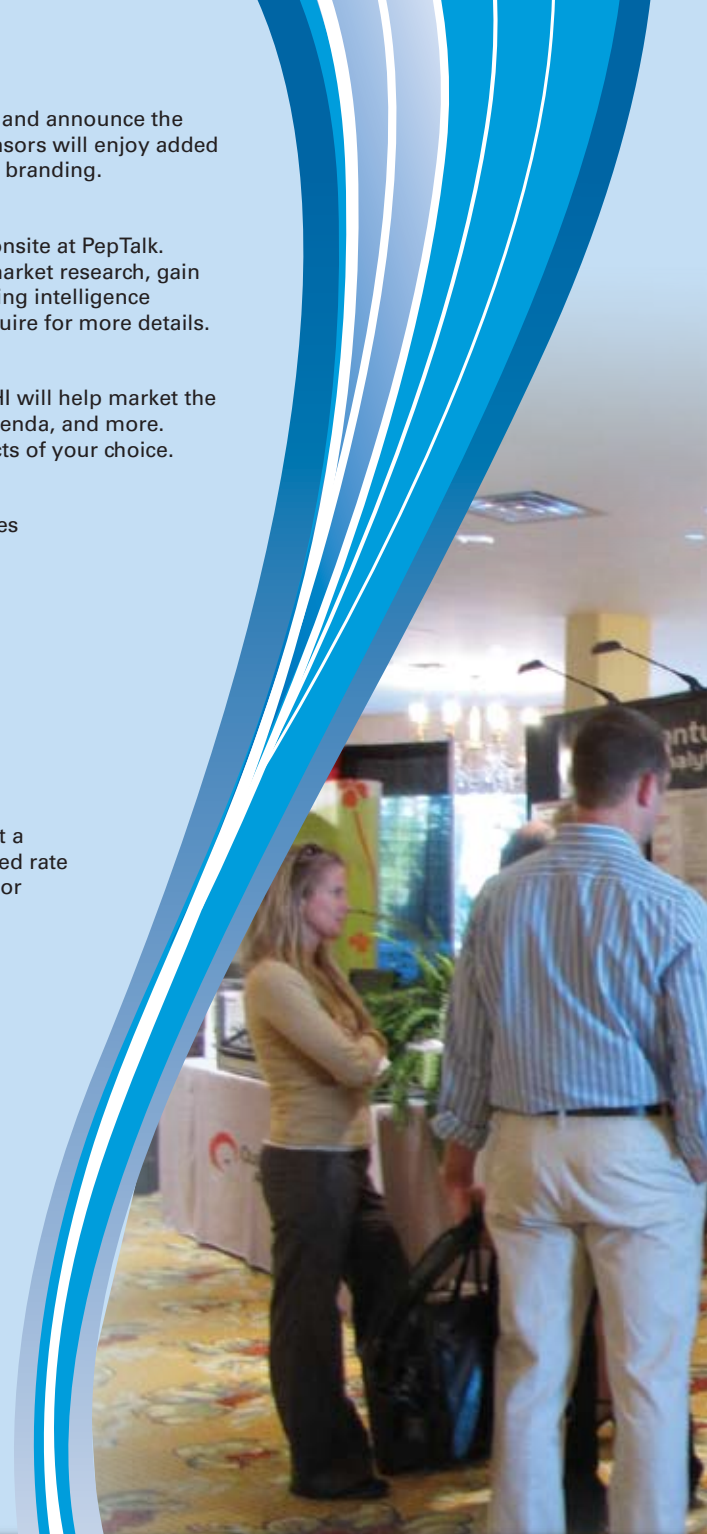
Co-locate your user group meeting with PepTalk. CHI will help market the event, manage logistical operations, develop the agenda, and more. CHI can handle the entirety of the meeting, or aspects of your choice.

Other Promotional Opportunities:

- Conference tote bags, distributed to all delegates
- Badge lanyards, distributed to all delegates
- Tote bag inserts of company literature
- Padfolios, distributed to all delegates
- Keynote chair drop of company literature
- Session room chair drop of company literature
- Program guide sponsor
- Poster abstract book sponsor

CHI's Co-Operative Marketing Program

CHI is pleased to help market to your prospect list at a shared cost. We will offer your prospects a discounted rate to attend the conference on your behalf via mailing or email. CHI's Marketing Manager will customize a specific message to your target audience.



Conference Short Courses*

Sunday, January 10 • 2:00pm - 5:00pm

(SC1) Immunogenicity Assessment: Preclinical, Clinical and Post-Marketing

Accurate immunogenicity assessment is essential for the successful development of therapeutic proteins. This workshop will review basic aspects of immune responses and discuss methodologies and advances in immunogenicity detection. Experts and those new to this field will benefit from presentations by the workshop leaders and interactive sections.

WHAT YOU WILL LEARN IN THIS COURSE

- Overview of immunogenicity, screening assays and Nab assays
- Assay selection, design and validation
- Addressing challenges associated with immunogenicity detection and interpretation
- Recent trends and advances in immunogenicity detection assays

Instructors:

Maria Barbosa, Ph.D., Principal, CA Consultants

Shalini Gupta, Ph.D., Director, Clinical Immunology, Amgen

Eric Wakshull, Ph.D., Senior Scientist/Group Leader, Bioanalytical Research & Development, Genentech, Inc.

(SC4) Specialized Protein Expression Systems – An Overview

What is the best host platform for a particular cell line? What is the best system to use to express a particular protein? Learn what non-mammalian expression systems have to offer and the benefits of various 'specialized' systems.

WHAT YOU WILL LEARN IN THIS COURSE

- An overview of non-mammalian expression systems
- An in-depth exploration of some of the leading host platforms
- Why an alternative system may be the best choice for expressing your protein

Instructors:

John R. Gasdaska, Ph.D., Director, Protein Sciences, Biotech Therapeutics

Peter Heifetz, Ph.D., President & CTO, OrPro Therapeutics, Inc.

C. Peter Romaine, Ph.D., Professor of Plant Pathology and Swayne Chair in Spawm Science, Mushroom Biotechnology/Virology, Pennsylvania State University; Co-Founder & Chief Scientific Officer, Agarigen

Tuesday, January 12 • 4:30pm - 7:30pm

(SC5) Characterization and Analysis of Particulates: Methods and Tools

Particulate analysis in Protein Therapeutics has recently received an increasing focus due to the correlation of aggregates and particles in the therapeutic area with immunogenicity. New techniques suitable for testing and characterizing protein particles continue to emerge. This workshop addresses technologies currently available for characterizing sub-visible particulates in therapeutic formulations.

WHAT YOU WILL LEARN IN THIS COURSE

- What are the methods available for analysis of sub-visible particles in protein therapeutics?
- Comparison of size ranges, sensitivity limits and capabilities of the various methods
- Equipment available for performing these tests
- Characterization of sub-micron particulates using light scattering techniques

Instructor:

Nanda Subbarao, Ph.D., Senior Consultant, Analytical-CMC, Biologics Consulting Group

Kevin Mattison Ph.D., Senior Bioanalytical Scientist, Malvern Instruments

(SC7) From Protein and Peptide Characterization to Quantitation: Advancing Mass Spec Beyond Protein Discovery

Mass spectrometry has emerged as the preferred method for the characterization and quantitation of peptides and proteins. However, the acronyms are as endless as the applications. Learn from seasoned experts as they share their insights and strategies to obtain results for your research applications. This short course is specifically designed to help you optimize your time and get information that is most relevant to your particular area of research.

WHAT YOU WILL LEARN IN THIS COURSE

As related to your research for protein expression, scale-up, therapeutics, or formulation:

- Protein and peptide fractionation
- Protein identification and characterization
- Protein quantitation

Instructor:

Christie L. Hunter, Ph.D., Director of Applications, Mass

Spectrometry Systems, Applied Biosystems

Keyang Xu, Ph.D., Scientist, Genentech, Inc.

(SC8) Phage Display for Antibody and Peptide – Technical Tips & Guidelines

Phage Display has proven to be a robust and convenient technology for the selection of high-quality antibodies and peptides. This course will be taught by three veterans in the field. You will get a solid foundation, technical tips, and laboratory guidelines to aid your own research.

WHAT YOU WILL LEARN IN THIS COURSE

- How to construct protein or peptide libraries
- How to express on the surface of phage
- How to select from a library
- Compare with alternative display systems

Instructors:

Gregg Silverman, M.D., Professor of Medicine, Director, Laboratory of

B cell Immunobiology, University of California San Diego School of Medicine

Robert Mabry, Ph.D., Senior Scientist, ZymoGenetics Inc.

Kristin Rookey, Principal Scientist, Selection, Screening & Molecular Biology Group Head, Discovery Research, Dyax Corp.

*Separate Registration Required



Online: www.Chi-PepTalk.com



Email: reg@healthtech.com



Fax: 781-972-5425



Pipeline 1 Formulating Biologics Meeting the Challenges

Second Annual

Optimizing Biologics Formulation Development

MONDAY, JANUARY 11

7:30 am - 8:45 am Registration and Morning Coffee

PREFORMULATION AND EARLY CHARACTERIZATION

9:00 KEYNOTE PRESENTATION

Development Interfaces: Feedback Loops to Improve Formulation, Optimize Process, and Reduce Timelines

Palani Palaniappan, Ph.D., Senior Director, Analytical & Formulation Sciences, Millennium Pharmaceuticals, Inc., the Takeda Oncology Company

9:50 Rotavax™, an Oral Rotavirus Vaccine Product Development Case Study: Science, Marketing, and Business Development Considerations

Satoshi Ohtake, Ph.D., Scientist, Research and Development, Aridis Pharmaceuticals

10:20 Networking Coffee Break

10:45 Strategies for Early Pre-Formulation Research of Therapeutic Proteins

Nick Guzewicz, Ph.D., Principal Research Associate, BioFormulations Development, Genzyme Corporation

PREDICTIVE TOOLS FOR FORMULATION DEVELOPMENT

11:15 The Relevance of Predictive Tools and Stress Models in Protein Drug Development

Roland Schmidt, Ph.D., Principal Pharmaceutical Scientist, Manufacturing Science, Abbott Laboratories

11:45 Utilizing Design of Experiments for Subcutaneous Formulation Development

Phuong Nguyen, Ph.D., Scientist, Parenteral Formulation Sciences, Millennium Pharmaceuticals, Inc., the Takeda Oncology Company

12:15 pm Close of Morning Session

12:30 Luncheon Presentation (Sponsorship Opportunity) or Lunch on Your Own

2:05 Proximity Energies: A Framework for Understanding High Concentration Fluids

Thomas M. Laue, Ph.D., Professor, Biochemistry and Molecular Biology; Director, Biomolecular Interaction Technologies Center (BITC), University of New Hampshire

2:35 High Frequency Rheology: A Novel Tool to Understand the Behavior of High Concentration Protein Solutions

Dvendra (Davy) S. Kalonia, Ph.D., Professor of Pharmaceutics, University of Connecticut

FORMULATION COMPOSITION SCREENING AND OPTIMIZATION

3:05 Dimers and Aggregates and Particles, Oh My! New Tools and Techniques for Studying Protein Aggregation

Alan C. Herman, VP of Product Development and Chief Scientific Officer, Althea Technologies Inc.



3:35 Sponsored Presentation (Sponsorship Opportunity Available)

3:50 Networking Refreshment Break

4:15 High-Throughput Stability/Formulation Screening: Correlation between Thermostability and Shelf Life at Accelerated Conditions

Matthias Thóroflsson, Ph.D., Research Scientist, Protein Structure and Biophysics, Novo Nordisk A/S

4:45 Measuring and Increasing Protein Stability

C. Nick Pace, Ph.D., Professor, Medical Biochemistry and Genetics and of Biochemistry and Biophysics, Texas A&M

5:15 Biophysical Characterization of High Concentration Protein Formulations

Sonoko Kanai, Ph.D., Scientist, Pharmaceutical and Analytical R&D, F. Hoffmann-La Roche AG

5:45 Welcoming Reception in the Exhibit Hall

7:00 Close of Day

TUESDAY, JANUARY 12

7:00 am Registration

7:30 Breakfast Presentation (Sponsorship Opportunity Available) or Coffee

PROCESS, PRODUCTION, AND DELIVERY CHALLENGES FOR PROTEIN THERAPEUTICS

8:15 Opening Chairperson's Remarks

Walter Pebley, Vice President, Business & Technical Development, Oregon Freeze Dry, Inc.

8:20 Improving Biotherapeutic Convenience and Compliance through Delivery Technologies

Christopher A. Rhodes, Ph.D., Executive Director, Pharmaceutical Sciences, Amylin Pharmaceuticals, Inc.

8:50 Challenges with Developing High Concentration Protein Formulations for Intrathecal Administration

Zahra Shahrokh, Ph.D., Senior Director, Pharmaceutical & Analytical Development, Shire Human Genetic Therapies

9:20 Optimizing Delivery of Novel Immune Potentiators for Vaccine Application

Manmohan Singh, Ph.D., Head, U.S. Vaccine Delivery and Formulation Research, Novartis Vaccines

9:50 Dry Powder Biologic Formulations as a Means of Providing Ultra-Rapid Drug Delivery

Andrea Leone Bay, Ph.D., VP Pharmaceutical R&D, Mannkind Corporation

10:05 Networking Coffee Break in the Exhibit Hall

10:45 Packaging and Drug Delivery Devices for Biologics

Michael Ruberto, Ph.D., President, Material Needs Consulting

11:15 Liquid-Liquid Phase Separation of Monoclonal Antibodies

Jifeng Zhang, Ph.D., Principal Scientist, Department of Analytical and Formulation Sciences, Amgen, Inc.

11:45 Multifunctional Formulation Development Approaches to Reduce Immunogenicity of Therapeutic Proteins

Sathy Balu-Iyer, Ph.D., Associate Professor, Pharmaceutical Sciences, SUNY - University at Buffalo

12:15 Close of Session

12:30 Luncheon Presentation (Sponsorship Opportunity) or Lunch on Your Own

2:00 **BUZZ** ^{SESSIONS} A (see page 3 for details)

2:45 Networking Refreshment Break in the Exhibit Hall

3:15 Poster Awards in the Exhibit Hall

3:30 **BUZZ** ^{SESSIONS} B (see page 3 for details)

4:15 Close of Optimizing Biologics Formulation Development

4:30 - 7:30 Concurrent Short Courses (SC 5 - SC 8)

Separate Registration Required. Details on Page 5.

Second Annual

Protein Aggregation

WEDNESDAY, JANUARY 13

7:00 am Registration for Protein Aggregation

7:30 Breakfast Presentation (Sponsorship Opportunity Available) or Coffee

AGGREGATION IN FORMULATION AND PROCESSING

8:20 KEYNOTE PRESENTATION

Understanding and Controlling Protein Aggregation: Experimental Approach and Lessons Learned from Various Protein Formulation Case Studies

Wolfgang Fraunhofer, Ph.D., Group Leader, Associate Research Fellow, Global Pharmaceutical and Analytical Development, Abbott Bioresearch Center

9:00 Protein Aggregation: A Case Study of Process Understanding

Carol F. Kirchhoff, Ph.D., Senior Principal Scientist, Pharmaceutical R&D, Global Biologics, Pfizer, Inc.

9:30 Determination of Reversible Self-Association at High Protein Concentration and its Impact on Viscosity

Steven J. Shire, Ph.D., Staff Scientist and Group Leader, Process R&D, Genentech, Inc.

10:00 Networking Coffee Break in the Exhibit Hall

AGGREGATION AT SURFACES AND DURING COLD/CRYO STORAGE

10:45 Stabilization of Protein against Surface Adsorption-Induced Aggregation

Li Shi, Ph.D., Senior Director, Technology Development, Genzyme, Inc.

11:15 Understanding Cryoconcentration Effects during Freeze/Thaw Processing of Bulk Protein and Possible Consequences on Protein Aggregation

Parag Kolhe, Ph.D., Principal Scientist, Global Research and Development, Global Biologics, Pfizer, Inc.

11:45 Characterizing Aggregates Formed During Cold Storage

Jamie Moore, Ph.D., Scientist and Group Leader, Early Stage Pharmaceutical Development, Genentech, Inc.

12:15 pm Close of Morning Session

12:30 Luncheon Presentation (Sponsorship Opportunity) or Lunch on Your Own

ANALYTICAL TECHNIQUES FOR AGGREGATES, PARTICLES, AND EXTRACTABLES

2:05 Enabling Analytical Methods for Extractables and Leachables Testing for Biologics

Nanda Subbarao, Ph.D., Senior Consultant, Analytical-CMC, Biologics Consulting Group

2:35 Subvisible and Visible Particle Analysis by Light Obscuration and Flow Imaging Techniques

Quanmin Chen, Ph.D., Scientist, Process Biochemistry & Formulation Sciences, MedImmune, Inc.

3:05 Field-Flow Fractionation as a Possible Tool for Analyzing Protein Aggregates

Tsumoto Kouhei, Ph.D., Associate Professor, Division of Frontier Biosciences, University of Tokyo

3:35 Sponsored Presentation (Sponsorship Opportunity Available)

3:50 Networking Refreshment Break

Third Annual Lyophilization & Spray Drying 2010

MECHANISMS OF PROTEIN INSTABILITY, AGGREGATION, AND IMMUNOGENICITY

4:30 Antibody-Drug-Conjugate: Why is the Drug Falling off?
Hung-Wei Chih, Ph.D., Early Stage Pharmaceutical Development, Genentech

5:00 Predicting Protein Aggregation Prone Regions: Implications for the Design of Therapeutic Proteins with Enhanced Stability

Naresh Chennamsetty, Ph.D., Post-Doctoral Associate, Chemical Engineering, Massachusetts Institute of Technology

Co-developed with Bernhardt Trout, Ph.D., Director, Novartis-MIT Center for Continuous Manufacturing; Professor, Department of Chemical Engineering, Massachusetts Institute of Technology

5:30 Reception in the Exhibit Hall

6:30 Close of Day

THURSDAY, JANUARY 14

7:00 am Registration

7:30 Breakfast Presentation (Sponsorship Opportunity Available) or Coffee

MECHANISMS OF PROTEIN INSTABILITY, AGGREGATION, AND IMMUNOGENICITY (CONT.)

8:20 Controlling Aggregation Pathways and Kinetics via Protein Interactions and Rational Design

Christopher Roberts, Ph.D., Associate Professor, Department of Chemical Engineering, University of Delaware

8:50 Novel Pathways of Oxidative and Photolytic Peptide and Protein Disulfide Degradation Leading to Covalent Cross-Links

Christian Schöneich, Ph.D., Professor and Chair, Department of Pharmaceutical Chemistry, University of Kansas

9:20 Predicting Stability of Concentrated Protein Formulations From Dilute Solution Properties

Ulf Nobbmann Ph.D., Sales Specialist, Malvern Instruments
Kevin Mattison Ph.D., Senior Bioanalytical Scientist, Malvern Instruments



9:50 High Pressure Refolding of Protein Aggregates: Applications for Reduced Immunogenicity and Protein Production

Matthew Seefeldt, Ph.D., VP of Research, BaroFold Inc.



10:05 Networking Coffee Break in the Exhibit Hall

NEW TECHNOLOGIES APPLIED TO PROTEIN STABILITY, AGGREGATION, AND FORMULATION

10:45 High-Throughput Measurements of Protein Self-Association as a Guide to Engineering and Formulating Aggregation-Resistant Antibodies

Pete Tessier, Ph.D., Assistant Professor, Chemical & Biological Engineering, Rennselaer Polytechnic Institute

11:15 Speaker to Be Announced

11:30 Detecting and Quantifying Protein Aggregation Using Simple Fluorescence Microplate-Based Instrumentation.

Wayne F. Patton, Chief Scientific Officer, Enzo Life Sciences



11:45 A Novel High-Throughput Technology for Formulation Optimization
Larry DeLucas, Ph.D., Professor, Director, Center for Biophysical Sciences and Engineering, University of Alabama at Birmingham

12:15 pm Close of Morning Session

12:30 Luncheon Presentation (Sponsorship Opportunity) or Lunch on Your Own
1:30 Close of Protein Aggregation

THURSDAY, JANUARY 14

1:15 Registration for Lyophilization & Spray Drying 2010

PROCESS CONTROL CHALLENGES AND SOLUTIONS

1:50 KEYNOTE PRESENTATION

Recent Advances in the Science and Technology of Freeze Drying: Bio-Stabilization, Process Optimization, and Quality by Design

Michael J. Pikal, Ph.D., Pfizer Distinguished Endowed Chair in Pharmaceutical Technology & Professor of Pharmaceuticals, University of Connecticut

2:20 Rapid Freeze-Drying of Amorphous Protein Formulations in the Micro-Colapsed State

Robert Johnson, Ph.D., Principal Scientist, Global Biologics, Pfizer Global R&D

2:50 Combined Two-Dimensional FT-IR and Freeze-Drying Microscopy for *in situ* Investigation of Protein Stability during Lyophilization

Heiko Schiffter, Ph.D., Brasenose Research Fellow in Biomedical Engineering, Engineering Science, University of Oxford

3:20 A Practical Approach to Resolving the Nucleation Problem in Lyophilization

Robert Sever, Ph.D., Manager, BioPharma Research & Development, Praxair



3:35 Networking Refreshment Break in the Exhibit Hall

4:30 Residual Water in Freeze-Dried Materials: Why and How to Control it and at What Levels

Evgeniy Shalaev, Ph.D., Associate Research Fellow, Parenteral Center of Emphasis, Pfizer, Inc.

5:00 Case Study: Transferring a Bulk Freeze Drying Process from a Glass Container to a Tray

Patrick Boylan, Senior Scientist, GlaxoSmithKline Biologicals

5:30 Utilization of Modeling to Optimize Freeze Drying Processes

Venkat R. Koganti, Ph.D., Senior Scientist, Parenteral Center of Emphasis, Pfizer, Inc.

6:00 Close of Day

FRIDAY, JANUARY 15

7:00 am Registration

7:30 Breakfast Presentation (Sponsorship Opportunity Available) or Coffee

KEY CONSIDERATIONS AND STRATEGIES FOR DESIGN AND SCALE-UP

8:20 Lyophilization: Considerations for Formulation Design and Process Scale-Up
Wei Chen, Ph.D., Senior Research Scientist, Pharmaceutical Sciences Research and Development, Eli Lilly and Company

8:50 Use of TDLAS as a Scale-up Tool: Dryer Sublimation Characterization

Lisa Hardwick, Research Scientist I, Baxter BioPharma Solutions

9:20 Development Approaches and Objectives in Preparation for Manufacturing Lyophilized Clinical Materials

Edward H. Trappier, President, Lyophilization Technology Inc.



9:50 Lyoph Cycle Tech Transfer
Walter Pebley, PE, Vice President Business & Technical Development, Oregon Freeze Dry, Inc.



10:05 Networking Coffee Break in the Exhibit Hall

10:45 Poster Awards in the Exhibit Hall

IMPROVING THE STABILITY OF VACCINES: ARE THERE ALTERNATIVES TO FREEZE DRYING?

11:00 Stable Dry Powder Vaccine Produced by Spray Drying
Satoshi Ohtake, Ph.D., Scientist, Research and Development, Aridis Pharmaceuticals

11:30 Case Study: Stabilization of a Live Attenuated Respiratory Syncytial Virus Vaccine by Lyophilization and Spray Drying

Yi Ao, Ph.D., Scientist II, Formulation Development, MedImmune, Inc.

12:00 pm Case Study: Developing a Stable Vaccine via Foam Drying

Russell Martin, Research Associate II, Research & Development, Aridis Pharmaceuticals

12:30 Improving Freeze Drying and Spray Drying Processes Through Spatially Resolving Product Attributes

Andrew P. Parker, Ph.D., Associate Director, Molecular Profiles,



12:45 Luncheon Presentation (Sponsorship Opportunity) or Lunch on Your Own

FREEZE DRYING AND SPRAY DRYING OF PEPTIDES FOR THERAPY

2:05 Examining Spray Drying Scale-Up Challenges with Peptide and Proteins Formulations

Herman E. Snyder, Ph.D., PARSEC Solutions LLC; former Senior Research Fellow, Nektar Therapeutics

2:35 Particle Engineering of a GLP-1 Receptor Peptide Agonist by Spray Drying and Lyophilization, for Subcutaneous and Pulmonary Drug Delivery

Feng Qian, Ph.D., Senior Research Investigator, Portfolio Enabling Technology, Biopharmaceuticals R&D, Bristol-Myers Squibb, Co.

3:05 Effects of Lyophilization on Thiol-disulfide Exchange

Elizabeth Topp, Ph.D., Dane O. Kildsig Professor and Department Head, Industrial Pharmacy and Pharmaceutics, Purdue University

3:35 Lyophilization of Long-Acting, Biocompatible and Biodegradable, Nanomolecular Human Glucagon-like Peptide-1-[7-36] Amide Drug

Israel (Rudi) Rubinstein, M.D., Professor of Medicine and Biopharmaceutical Sciences Director, Respiratory Therapy, University of Illinois at Chicago

4:05 Close of PepTalk



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Pipeline 2 Bioprocessing Streamlining Complexity

Second Annual Protein Purification & Recovery

MONDAY, JANUARY 11

7:30 am - 8:45 am Registration and Morning Coffee

PROTEIN INTEGRITY

9:00 OPENING KEYNOTE PRESENTATION

Case Study: Evaluating a Series of Novel Conformases/Foldases for Their Ability to Enhance Heterologous Gene Expression in *E. coli*

Andrew Fosberry, Ph.D., Research Investigator, Biological Reagents & Assay Development, GlaxoSmithKline

9:50 Refolding, Purification, and Characterization of the Ectodomain Complex of the CGRP Receptor

Norzehan Abdul-Manan, Ph.D., Structural Biology, Vertex Pharmaceuticals, Inc.

10:20 Networking Coffee Break

USING SPECIALIZED EXPRESSION SYSTEMS

10:45 Expression and Purification of Human TRPV1 in Baculovirus-Infected Insect Cells for Structural Studies

Alla Korepanova, Ph.D., Senior Researcher, Department of Structural Biology, GPRD, Abbott Laboratories

11:15 Purification of Baculovirus Produced Proteins for Vaccine Application

Indresh Srivastava, Ph.D., Associate Director, Vaccines Research, Protein Biochemistry, Novartis Vaccines & Diagnostics, Inc.

11:45 Purification of Recombinant Protein from Transgenic Tobacco - Development of Non-Chromatographic Based Processes

Chenming (Mike) Zhang, Ph.D., Associate Professor, Biological Systems Engineering, Virginia Polytechnic Institute & State University

12:15 pm Close of Morning Session

12:30 Luncheon Presentation (Sponsorship Opportunity) or Lunch on Your Own

HIGHER THROUGHPUT

2:05 Model Assisted Scale-Up of Industrial Purification Processes

Jörg Thömmes, Ph.D., Director, Purification Development, Biogen Idec

2:35 Development of a "Chromatography-Array" System for High-Throughput Screening and Optimization of Affinity Ligands

Masa Iwakura, Ph.D., Principal Researcher, Institute for Biological Resources and Functions, National Institute of Advanced Industrial Science and Technology (AIST)

3:05 Parallel Micro-Scale Purification for Lead ID and Process Development/Optimization

William Gillette, Ph.D., Senior Scientist, Protein Expression Lab, SAIC- Frederick, NCI

3:35 Sponsored Presentation (Sponsorship Opportunity Available)

4:15 Multiple Routes for Production and Purification of Fab Fragments in Biopharmaceutical Discovery Research

Yonghong Zhao, Ph.D., Research Scientist, MDT, Centocor R&D, Inc.

4:45 Strategies for Streamlining the Development of Downstream Process for Enzyme Therapeutics

Elsie DiBella, Ph.D., Associate Director, Purification Process Development, Shire Human Genetic Therapies

5:15 High Throughput Protein A Wellplate Purification Method for Monoclonal Antibodies

Judy Chou, Ph.D., Senior Group Leader, Oceanside PR&D, Genentech, Inc.

5:45 Welcoming Reception in the Exhibit Hall

7:00 Close of Day

TUESDAY, JANUARY 12

7:30 am Breakfast Presentation (Sponsorship Opportunity Available) or Coffee

TOOLS & TECHNOLOGIES

8:20 Recent Advances in Protease Assay Technology with "GFP-on-a-String"

William W. Ward, Ph.D., Associate Professor, Director, CREBB, Biochemistry Cook College, Rutgers University

8:50 Purification of Pegylated Proteins Using Ultrafiltration

Andrew Zydny, Ph.D., Head, Chemical Engineering, College of Engineering, Pennsylvania State University

9:20 Endo- and Exo-Proteolytic Removal of Affinity Tags

David S. Waugh, Ph.D., Chief, Protein Engineering Section, Macromolecular Crystallography Laboratory, National Cancer Institute, National Institutes of Health (NIH)

9:50 CaptureSelect® Affinity Ligands; A Purification Platform for Biotherapeutic Proteins, Fusions, and Antibody Constructs

Pim Hermans, Director of Ligand Discovery, BAC b.v.

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10:05 Networking Coffee Break in the Exhibit Hall

TAG TECHNOLOGIES

10:45 Epitope Affinity Purification of Polyclonal Antibodies to GST-Tagged Recombinant Proteins--One and Done

Dan L. Crimmins, Ph.D., Senior Scientist, Department of Pathology and Immunology, Division of Laboratory and Genomic Medicine, Washington University School of Medicine

11:15 In vivo Biotinylation Tags for Detection of Transient Protein Complexes and Posttranslational Modifications

Peter Kaiser, Ph.D., Associate Professor, Department of Biological Chemistry, University of California, Irvine

11:45 Expression and Purification of Virulence Factors - A Novel Approach for Identifying Drug Targets for Autoimmune and Inflammatory Diseases

David Bienvenue, Ph.D., Senior Principal Scientist, VLST Corporation

12:15 Close of Session

12:30 Luncheon Presentation (Sponsorship Opportunity) or Lunch on Your Own

2:00 **BITZ Sessions A** (see page 3 for details)

2:45 Networking Refreshment Break in the Exhibit Hall

3:15 Poster Awards in the Exhibit Hall

3:30 **BITZ Sessions B** (see page 3 for details)

4:15 End of Protein Purification & Recovery

4:15 Registration for Short Courses

4:30 - 7:30 Concurrent Short Courses (SC 5 - SC 8)

Separate Registration Required. Details on Page 5.

Inaugural Membrane Proteins

Wednesday, January 13

7:00 am Registration for Membrane Proteins

7:30 Breakfast Presentation (Sponsorship Opportunity Available) or Coffee

OVERCOMING CHALLENGES

8:20 OPENING KEYNOTE PRESENTATION

Addressing Challenges of Membrane Protein Expression, Purification and Stabilization

Lawrence DeLucas, Ph.D., Center for Biophysical Sciences and Engineering, University of Alabama at Birmingham

9:00 Developing Methods to Study Chemokine Receptors in Solution: Expression, Purification, and Functional Reconstitution of CCR1

Samantha Allen, Ph.D., Senior Research Biochemist, Structural Biology, Merck & Co., Inc.

9:30 Light Scattering Coupled to Refractive Index and UV Absorption Measurements in Studies of Membrane Proteins Homo- and Hetero Associations

Ewa Folta-Stogniew, Ph.D., Director of Biophysics Resource, Molecular Biophysics and Biochemistry, Yale University, Keck Lab

10:00 Networking Coffee Break in the Exhibit Hall

G-PROTEIN COUPLED RECEPTORS (GPCRS)

10:45 De novo Synthesis of a Functional GPCR Supported in a Nanolipoprotein Disc

Matthew A. Coleman, Ph.D., Senior Scientist, Biosciences, Lawrence Livermore National Laboratory

11:15 G-Protein Coupled Receptor Expression: Engineering Protein Expression by Understanding Biological Interactions

Anne Robinson, Ph.D., Professor, Chemical Engineering, University of Delaware

11:45 Expression and Stabilization of Peripheral Cannabinoid Receptor CB2 for NMR Structural Studies

Alexei Yeliseev, Ph.D., Staff Scientist & Head, GPCR Expression and Analysis Group, National Institute on Alcoholism and Alcohol Abuse, National Institutes of Health (NIH)

12:15 pm Close of Morning Session

12:30 Luncheon Presentation (Sponsorship Opportunity) or Lunch on Your Own

ENHANCING EXPRESSION

2:05 E. Coli Mutants Selected for Improved Protein Expression

James U. Bowie, Ph.D., Professor, University of California, Los Angeles

2:35 Membrane Protein Expression: Where Quality and Quantity Meet

Jian Payandeh, Ph.D., Department of Pharmacology, University of Washington

3:05 Protocol Development for the Preparative Scale Cell-Free Production of High Quality Membrane Proteins

Frank Bernhard, Ph.D., Lab Leader, Institute of Biophysical Chemistry, Goethe-University Frankfurt

3:35 Combining Wheat Germ Cell-free Expression with HaloTag 7: A Powerful Tool for Purification of Membrane Proteins

Sponsored by

Rachel Friedman Ohana, Ph.D., Senior Research Scientist, Promega



3:50 Networking Refreshment Break

Extraction, Expression & Purification

PURIFICATION

4:30 Purified Membrane Proteins in Drug Discovery

Arjan Snijder, Ph.D., Associate Principle Scientist, Cell Proteins and Structural Sciences, AstraZeneca

5:00 Ligand Binding Properties and Stability in Solution after Purification of the Human Hedgehog Receptors Patched (PTC) and Smoothed (SMO) Expressed in Yeast

Isabelle Mus-Veteau, Ph.D., Senior Scientist and Group Leader, Laboratoire de Physiologie Cellulaire et Moléculaire, LBPSI, Université de Nice – Sophia Antipolis, CNRS

5:30 Reception in the Exhibit Hall

6:30 Close of Day

THURSDAY, JANUARY 14

7:00 am Registration

7:30 Breakfast Presentation (Sponsorship Opportunity Available) or Coffee

ENHANCING PROTEIN PROPERTIES

8:20 The Old Man and the Membrane

H. Ronald Kaback, Ph.D., Professor, Structural Studies & Biophysics, Physiology, University of California, Los Angeles

8:50 Facilitating G Protein-Coupled Receptor Crystallization Studies Through Stability and Biophysical Characterization

Michael Hanson, Ph.D., Scientist, Receptos, Inc.

9:20 Spectroscopic Studies of Anchoring Aromatic Residues in Membrane Proteins and Peptides: Applications to Protein Folding and Vesicle Disruption

Judy E. Kim, Ph.D., Assistant Professor, Department of Chemistry and Biochemistry, University of California, San Diego

9:50 Strategies for Membrane Protein Expression and Analysis

Frank Schäfer, Ph.D., Head of Protein Sciences, QIAGEN

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10:05 Networking Coffee Break in the Exhibit Hall

ANALYTICAL APPROACHES TO SUPPORT MEMBRANE PROTEIN SCIENCE

10:45 Expression, Refolding, and Structure Determination of β -Barrel Membrane Proteins of Potential Therapeutic Interest

Lukas K. Tamm, Ph.D., Professor, Molecular Physiology & Biological Physics, The University of Virginia

11:15 Labyrinths and Barrels: Inside Membrane Proteins

William A. Cramer, Ph.D., Distinguished Professor, Biological Sciences, Purdue University

11:45 Green Light for Membrane Proteins

Jan-Willem de Gier, Ph.D., Associate Professor & Group Leader, Center for Biomembrane Research, Stockholm University; Chief Technical Officer, Xbrane bioscience AB

12:15 pm Close of Morning Session

12:30 Luncheon Presentation (Sponsorship Opportunity) or Lunch on Your Own

1:30 End of Membrane Proteins

Third Annual

Protein Production Scale-Up & Manufacturing

THURSDAY, JANUARY 14

1:15 Registration for Protein Production

OPTIMIZING PROCESSES TO SUPPORT PRODUCTION

1:50 OPENING KEYNOTE PRESENTATION

Balancing Process and Engineering Solutions for Launching New Products in an Existing Commercial Facility

Shishir Gadam, Ph.D., Director, Manufacturing Science and Technical Services, Vacaville Operations, Genentech

2:20 Process Characterization: A Case Study Involving Problematic HCP's and Unique Product-Related Impurities

Robert L. Dufield, Principal Scientist, Analytical R&D: Protein Impurity Characterization, Pfizer, Inc.

2:50 High-Throughput Automated Parallel Production of Spatially Addressed Antibody Combinatorial Libraries for Drug Discovery

Cory Bentley, Ph.D., Scientist, Fabrus Functional Antibodies

3:20 Sponsored Presentation (Sponsorship Opportunity Available)

3:35 Networking Refreshment Break in the Exhibit Hall

4:30 Zera-Fusions and Storpro Organelles Enable Novel Protein Products and Processes

Stefan Schmidt, Ph.D., Vice President, Technology, ERA Biotech

5:00 Implementation Strategy for Disposables – Downstream Purification Case Study

Adam Goldstein, Ph.D., Senior Manager, Clinical Operations, Genentech, Inc.

5:30 Interactive Panel Discussion Sponsored by PACIFICGMP

Implementing and Optimizing Single-Use/Disposable Technology

Moderator:

Adam Goldstein, Ph.D., Senior Manager, Clinical Operations, Genentech, Inc.

Panelists:

Leigh Pierce, President & CSO, PacificGMP

Kim Nelson, Ph.D., Director, Strategic Consulting, CRB Consulting Engineers

James Rebbear, Ph.D., Manager, Process Sciences, Process Development & Technology, Talecris Biotherapeutics

William Whitford, Senior Manager, Bioprocessing, Thermo Fisher Scientific Inc.

6:00 Close of Day

FRIDAY, JANUARY 15

7:00 am Registration

7:30 Breakfast Presentation (Sponsorship Opportunity Available) or Coffee

QUALITY BY DESIGN TO ACHIEVE SCALE

8:20 Implementation of Quality by Design for Biologics

Vassia Tegoulia, Ph.D., Scientist, Regulatory CMC, Genentech, Inc.

8:50 Applying Quality by Design to Late Stage Product Development: Risk Assessments, Control Strategy, and Science of Scale

Carol Kirchhoff, Ph.D., Senior Principal Scientist, Global Biologics Pharma R&D, Pfizer, Inc.

9:20 Process Design for Phase II: Improvement of an Inclusion Body Based Protein Production for Large-Scale Supply

Peter Sondermann, Ph.D., Chief Scientific Officer, SuppreMol GmbH

9:50 Sponsored Presentation (Sponsorship Opportunity Available)

10:05 Networking Coffee Break in the Exhibit Hall

10:45 Poster Awards in the Exhibit Hall

SCALE-UP TO MANUFACTURING

11:00 Development and Implementation of a Shaking Culture System for Recombinant Protein Production by Animal Cells

Chao-Min Liu, Ph.D., Distinguished Research Leader, F. Hoffmann-La Roche, Inc.

11:30 Manufacturing of CCL2-LPM Clinical Grade Material for a Phase Ib Study in IgA Nephropathy

Hongsheng Su, Ph.D., Director, Process Development, Osprey Pharmaceuticals Limited

12:00 pm A Modified Manufacturing Process of Alpha-1 Proteinase Inhibitor Leading to Improved Product Purity: A Risk-Based Approach to Process Transfer from Bench Scale to Commercial Production

James Rebbear, Ph.D., Manager, Process Sciences, Process Development & Technology, Talecris Biotherapeutics

12:30 Close of Morning Session

12:45 Luncheon Presentation (Sponsorship Opportunity) or Lunch on Your Own

CONNECTING THE DOTS FROM CLONE TO SCALE-UP: ELIMINATING SILOS AND EXPEDITING HANDOFFS

2:00 Chairperson's Remarks

Boro Dropulic, Ph.D., Founder, President & CSO, Lentigen Corp.

2:05 Predictive Technologies for Cell Line Development Enable Enhanced Manufacturability

Susan Dana Jones, Ph.D., Vice President and Senior Consultant, BioProcess Technology Consultants, Inc.

2:35 Development of Stable *E. coli* Cell Lines for Production of Biopharmaceuticals

Annette Hillebrand, Ph.D., Senior Scientist, CMC Technologies, Dynavax Technologies

3:05 Speaker to be Announced

3:35 Interactive Panel Discussion—Connecting the Dots from Clone to Scale-Up

Moderator:

Boro Dropulic, Ph.D., Founder, President & Chief Scientific Officer, Lentigen Corp.

Panelists:

Annette Hillebrand, Ph.D., Senior Scientist, CMC Technologies, Dynavax Technologies

Susan Dana Jones, Ph.D., Vice President and Senior Consultant, BioProcess Technology Consultants, Inc.

Carol Kirchhoff, Ph.D., Senior Principal Scientist, Global Biologics Pharma R&D, Pfizer, Inc.

4:05 Close of PepTalk





Pipeline 3 Engineering Protein & Peptide Therapeutics

Sixth Annual Antibodies For the 21st Century

MONDAY, JANUARY 11

7:30 am - 8:45 am Registration and Morning Coffee

ESSENTIAL TOOLS & TECHNOLOGIES

9:00 OPENING KEYNOTE PRESENTATION

Development, Maintenance and Life Cycle Management of Critical Reagents for Ligand Binding Assays

Denise M. O'Hara, Ph.D., Associate Director, PDM, Pfizer (formerly Wyeth)

9:50 **Challenges of Using Ligand Binding Assays to Support Therapeutic Antibody Development**

Joseph C. Marini, Ph.D., Associate Director of Pharmacokinetic Bioanalysis, Biologics Clinical Pharmacology, Centocor Research and Development, Inc., A Johnson and Johnson Company

10:20 **Networking Coffee Break**

TARGETING CANCER

10:45 **Engineered Antibody Domains Against Cancer and Viruses**

Dimitar Dimitrov, Ph.D., Senior Investigator, Protein Interaction Group, NCI, NIH

11:15 **Targeting T Cells or Stem Cells with Chemically Heteroconjugated Bispecific Antibodies**

Lawrence G. Lum, M.D., D.Sc., Professor of Medicine; Professor of Immunology and Microbiology; Scientific Director of Immunotherapy and BMT, Barbara Ann Karmanos Cancer Institute

11:45 **Building a Diverse Portfolio of Immunotoxins for the Therapeutic Treatment of Solid Tumors**

Jeannick Cizeau, Ph.D., Director, Research, Viventia Biotechnologies

12:15 **P200 ScreenTap®: A Complete Automated At-Line Analysis System, Ideally Suited to MAbs and Protein Production**

Adam Inche, Ph.D., Application Scientist, Lab901 Ltd.

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12:30 **Luncheon Presentation (Sponsorship Opportunity) or Lunch on Your Own**

UNDERSTANDING AND ENHANCING ANTIBODY PROPERTIES

2:05 **Why Bad Things Happen to Good Antibodies: Fc Gamma Receptors on Effector Cells Promote Concerted Removal of Monoclonal Antibody-Antigen Complexes from Targeted Cells**

Ronald P. Taylor, Ph.D., Professor, Biochemistry and Molecular Genetics, The University of Virginia School of Medicine

2:35 **Fab' PEGylation Strategies**

David P. Humphreys, Ph.D., Senior Group Leader, Antibodies, UCB Celltech

3:05 **Human IgG1-Fc Rational Design Leads to an Increase in Anti-TLR4 Monoclonal Antibody Potency: Unexpected Help from the Mouse Repertoire**

François Rousseau, Ph.D., Head of Antibody Engineering Unit, NovImmune SA

3:35 **Modeling the 3-Dimensional Structures of Antibody and their Interaction Interface to Antigen**

Shikha Varma-O'Brien, Ph.D., Director, Life Sciences, Accelrys

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3:50 **Networking Refreshment Break**

4:15 **Improving Antibody Properties by Semi-Rational in silico Engineering, A Realistic Perspective**

Philippe Alard, Ph.D., Head of Bioinformatics, Algonomics N.V., a Lonza company

4:45 **Phage-Displayed scFv Libraries Stabilized with Interdomain Disulfide Bond**

An-Suei Yang, Ph.D., Deputy Director & Associated Research Fellow, Genomics Research Center, Academia Sinica, Taiwan

5:15 **Dual Variable Domain (DVD)-Ig Technology: Next Generation Biologics for Targeting Two Disease Mechanisms Simultaneously**

Tariq Ghayur, Ph.D., Senior Principal Scientist & Research Fellow, Biologics, Abbott Bioresearch Center

5:45 **Welcoming Reception in the Exhibit Hall**

7:00 **Close of Day**

TUESDAY, JANUARY 12

7:30 am **Breakfast Presentation (Sponsorship Opportunity Available) or Coffee**

NEW TECHNOLOGIES FOR HUMAN ANTIBODY DISCOVERY AND OPTIMIZATION

8:20 **Re-Engineering Recombinant Proteins as IgG Fusion Proteins for Blood-Brain Barrier Delivery**

William M. Partridge, M.D., Professor, Medical Endocrinology, University of California, Los Angeles; Chief Scientific Officer, ArmaGen Technologies, Inc.

8:50 **Harnessing Somatic Hypermutation for Human Antibody Discovery and Optimization**

David King, Ph.D., Vice President, Research, AnaptysBio, Inc.

9:20 **Antibody Human Adaptation, Specificity Determining Residues and Mutational Hotspots**

Gopalan Raghunathan, Ph.D., Research Fellow, Antibody Design, Centocor Discovery Research

9:50 **Sponsored Presentation (Sponsorship Opportunity Available)**

10:05 **Networking Coffee Break in the Exhibit Hall**

10:45 **Identification and Affinity Maturation of Angiogenesis Target Specific Antibodies from a Human Germline Library**

Helen Mao, Ph.D., Chief Scientific Officer, Fabrus LLC

11:15 **Developing a Novel Platform Technology for Generating Therapeutic Human mAbs**

Rachel H. Kravitz, Ph.D., Director of Research, NeoClone Biotechnology

11:45 **In-Line Radiolabeling: A Novel Continuous Flow System for Unlimited Protein Labeling**

Missag Parseghian, Ph.D., Senior Director, R&D, Peregrine Pharmaceuticals, Inc.

12:15 **Use of Disposable Label-Free Real-Time**

Biosensors in Screening Crude Antibodies

Yasmina Noubia Abdiche, Ph.D., Senior Principal Scientist, Rinat Laboratories-Pfizer Inc.

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12:40 **Luncheon Presentation (Sponsorship Opportunity) or Lunch on Your Own**

2:00 **BUZZ SESSIONS A** (see page 3 for details)

2:45 **Networking Refreshment Break in the Exhibit Hall**

3:15 **Poster Awards in the Exhibit Hall**

3:30 **BUZZ SESSIONS B** (see page 3 for details)

4:15 **End of Antibodies For the 21st Century**

4:15 **Registration for Short Courses**

4:30 - 7:30 **Concurrent Short Courses (SC 5 - SC 8)**

Separate Registration Required. Details on Page 5.

Sixth Annual

Recombinant Proteins

WEDNESDAY, JANUARY 13

7:00 am **Registration for Recombinant Proteins**

7:30 **Breakfast Presentation (Sponsorship Opportunity Available) or Coffee**

ENGINEERING FOR SUCCESS

8:15 **Chairperson's Opening Remarks**

Rose Lance, Business Development Manager, Novozymes

8:20 **OPENING KEYNOTE PRESENTATION**

Multi-Specific Adnectins: Realizing the Promise of a Novel Class of Targeted Biologics

Eric Furfine, Ph.D., Senior Vice President, Research & Preclinical Development, Adnexus-a Bristol Myers Squibb R&D Company

9:00 **Engineering TPR Repeat Proteins for *in vivo* and *in vitro* Applications**

Lynne Regan, Ph.D., Professor, Molecular Biophysics & Biochemistry and Chemistry, Yale University

9:30 **Computational Redesign of Receptor-Specific Ligands**

John Karanicolas, Ph.D., Assistant Professor, Department of Molecular Biosciences, and Center for Bioinformatics, University of Kansas

10:00 **Networking Coffee Break in the Exhibit Hall**

EXTENDING HALF-LIFE & MITIGATING IMMUNOGENICITY

10:45 **Protein Therapeutics with Long *in vivo* Half-Life and Low Immunogenicity by XTEN Fusion**

Nathan Geething, Ph.D., Scientist, Process Development, Amunix, Inc.

11:15 **Albumin Fusion—An Excellent Method to Extend the Half-Life of Coagulation Factors**

Stefan Schulte, Ph.D., Head, R&D, CSL Behring Marburg GmbH

11:45 **Affibody Albumin Binding Technology: A Tool for Half-Life Extension of Biopharmaceuticals**

Joachim Feldwisch, Ph.D., Project Manager, Affibody AB

12:15 pm **Close of Morning Session**

12:30 **Luncheon Presentation (Sponsorship Opportunity) or Lunch on Your Own**

TARGETING DISEASE

2:05 **Recombinant Crystallins for Treatment of Multiple Sclerosis, Atherosclerosis, and Neurodegeneration**

Lawrence Steinman, M.D., Professor, Neurology, Stanford University

2:35 **Erythrocyte-Targeted scFv-Fibrinolytic Fusions: Preclinical Studies of Prophylactic Thrombolysis**

Vladimir Muzykantov, Ph.D., Associate Professor, Pharmacology, University of Pennsylvania

3:05 **Latest Advances in Dual-Affinity Retargeting for Oncology and Autoimmunity**

Syd Johnson, Ph.D., Vice President, Antibody Engineering, MacroGenics, Inc.

3:35 **Sponsored Presentation (Sponsorship Opportunity Available)**

3:50 **Networking Refreshment Break**

Fusion Proteins & Beyond

4:30 Altering the Tumor Microenvironment with Antibody Fusion Proteins for the Immunotherapy of Cancer

Alan L. Epstein, M.D., Ph.D., Professor, Pathology, Keck School of Medicine, University of Southern California

5:00 Recombinant Immunotoxins for the Treatment of Hematologic Malignancies

Robert J. Kreitman, M.D., Principal Investigator, Clinical Immunotherapy Section, National Cancer Institute (NCI), National Institutes of Health (NIH)

5:30 Reception in the Exhibit Hall

6:30 Close of Day

THURSDAY, JANUARY 14

7:00 am Registration

7:30 Breakfast Presentation (Sponsorship Opportunity Available) or Coffee

MANIPULATING PROTEIN PROPERTIES

8:20 Effect of Spacer Insertion on the Production, Biological Activity, and Pharmacokinetics of Recombinant Bifunctional Fusion Proteins

Wei-Chiang Shen, Ph.D., John A. Biles Professor, Pharmacology & Pharmaceutical Sciences, School of Pharmacy, University of Southern California

8:50 8:50 Trans Signal Converter Proteins (TSCP) for the Treatment of Autoimmune Diseases and Cancer

Noam Shani, Ph.D., Chief Executive Officer, KAHR Medical Ltd.

9:20 Determining the Role of Solubility Tags in Protein Expression for Fusion Proteins

Noelene Quinsey, Ph.D., Manager, Biochemistry and Molecular Biology, Monash University

9:50 Human In Vitro Translation Systems for Rapid, High Fidelity Protein Production

Peter A. Bell, Sr. Director Proteomics R&D, Thermo Fisher Scientific

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10:05 Networking Coffee Break in the Exhibit Hall

10:45 FIND (Fragment Induced Diversity)—Optimization of Proteins for Drug Development

Erika Gustafsson, Ph.D., Scientist & Project Manager, Alligator Bioscience AB

11:15 Multivalent and Bispecific Antibodies Generated by the Dock-and-Lock Method

David M. Goldenberg, M.D., Center for Molecular Medicine and Immunology, Garden State Cancer Center

11:45 Monomeric Fc Fusion Molecules with Improved Pharmacokinetics

Jennifer Dumont, Ph.D., Senior Director, Research & Development, Syntonix Pharmaceuticals, a subsidiary of Biogen Idec

12:15 pm Close of Morning Session

12:30 Luncheon Presentation (Sponsorship Opportunity) or Lunch on Your Own

1:30 Close of Recombinant Proteins

Inaugural Peptides Fulfilling the Promise

THURSDAY, JANUARY 14

1:15 pm Registration for Peptides

ENGINEERING SUCCESS

1:50 Peptidic Tumor Targeting Agents: On the Road from Phage Display Peptide Selections to Clinical Reagents

Kathlynn C. Brown, Ph.D., Assistant Professor, Internal Medicine, Division of Translational Research & The Simmons Comprehensive Cancer Center, University of Texas Southwestern Medical School

2:20 Phylomer Libraries as a Rich Source of Potent Peptides in Phenotypic and Target-Directed Screens

Paul M. Watt, Ph.D., Chief Scientific Officer & Vice President, Corporate Development, Phylogica Ltd.

2:50 Immunotherapy Using Li-Key Modified Peptides for Increased, Antigen-Specific T Helper Cell Activation

Eric von Hofe, Ph.D., President, Research and Development, Antigen Express

3:20 Sponsored Presentation (Sponsorship Opportunity Available)

3:35 Networking Refreshment Break in the Exhibit Hall

4:30 Stapled Peptides: A New Class of Targeted Therapeutics

Vincent Guerlavais, Ph.D., Principal Scientist, Research, Aileron Therapeutics, Inc.

5:00 De novo Identification of Binding Sequences for Antibody Replacement Molecules

Stephen Quirk, Ph.D., Director, Enabling Technologies, Corporate Research & Engineering, Kimberly Clark

5:30 De novo Sequencing of Nonribosomal Peptides

Nuno Bandeira, Ph.D., Executive Director, Center for Computational Mass Spectrometry, University of California, San Diego

6:00 Close of Day

FRIDAY, JANUARY 15

7:00 am Registration

7:30 Breakfast Presentation (Sponsorship Opportunity Available) or Coffee

ENHANCING DELIVERY

8:20 KEYNOTE PRESENTATION

Peptide Transduction Domain Delivery of Macromolecules: Tackling the siRNA Delivery Problem

Steven F. Dowdy, Ph.D., Professor, Cellular & Molecular Medicine, Howard Hughes Medical Institute, University of California, San Diego

8:50 Opening the Intracellular Target Universe to Peptide Therapeutics

Patrick S. Stayton, Ph.D., Professor, Department of Bioengineering, Washington Research Foundation, Washington University

9:20 CIS Display: An in vitro Display Technology for the Selection of Therapeutic Peptides and Proteins

Chris Ullman, Ph.D., Chief Scientific Officer, Isogenica Ltd.

9:50 Sponsored Presentation (Sponsorship Opportunity Available)

10:05 Networking Coffee Break in the Exhibit Hall

10:45 Poster Awards in the Exhibit Hall

11:00 Development of a Cyclized Conotoxin as an Orally Active Peptide Lead for the Treatment of Pain

David Craik, Ph.D., Professor, Institute for Molecular Bioscience, The University of Queensland

11:30 Drug Delivery Technologies and Product Life-Cycle Management

Bill Lambert, Ph.D., Senior Vice President, Pharmaceutical Development, Pacira Pharmaceuticals, Inc.

12:00 pm Non-Invasive Systemic Delivery of Peptides with High Bioavailability

Edward Maggio, Ph.D., President & CEO, Aegis Therapeutics LLC

12:20 Hitting the Nail on the Head: Engineering Novel Cyclic Antimicrobial Peptide Therapeutics for Onychomycosis

Deborah O'Neil, Ph.D., Founder & Chief Executive Officer, NovaBiotics Ltd.

12:40 Close of Morning Session

12:45 Luncheon Presentation (Sponsorship Opportunity) or Lunch on Your Own

FREEZE DRYING AND SPRAY DRYING OF PEPTIDES FOR THERAPY

2:05 Examining Spray Drying Scale-Up Challenges with Peptide and Proteins Formulations

Herman E. Snyder, Ph.D., PARSEC Solutions LLC; former Senior Research Fellow, Nektar Therapeutics

2:35 Particle Engineering of a GLP-1 Receptor Peptide Agonist by Spray Drying and Lyophilization, for Subcutaneous and Pulmonary Drug Delivery

Feng Qian, Ph.D., Senior Research Investigator II, Portfolio Enabling Technology, Biopharmaceutics R&D, Bristol-Myers Squibb, Co.

3:05 Effects of Lyophilization on Thiol-disulfide Exchange

Elizabeth Topp, Ph.D., Dane O. Kildsig Professor & Department Head, Industrial Pharmacy & Pharmaceutics, Purdue University

3:35 Lyophilization of Long-Acting, Biocompatible and Biodegradable, Nanomicellar Human Glucagon-like Peptide-1-[7-36] Amide Drug

Israel (Rudi) Rubinstein, M.D., Professor of Medicine and Biopharmaceutical Sciences Director, Respiratory Therapy, University of Illinois at Chicago

4:05 Close of PepTalk

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Pipeline 4 Higher-Throughput Protein Expression

Thirteenth Annual Enhancing Host Expression

MONDAY, JANUARY 11

7:30 am - 8:45 am Registration and Morning Coffee

IMPROVING EXPRESSION FROM THE BEGINNING

9:00 KEYNOTE PRESENTATION

A Review of High Throughput Protein Production in Drug Discovery: Lessons Learned
Ian Hunt, Ph.D., Protein Structure Unit, Centre for Proteomic Chemistry, Novartis Institutes for BioMedical Research

9:50 General and Adaptable High-Throughput Approaches for the Optimization of Protein Expression

Ian Fotheringham, Ph.D., President, Ingenza Ltd.

10:20 Networking Coffee Break

10:45 Auditioning of CHO Host Cell Lines Using the Artificial Chromosome Expression (ACE) Technology

Malcolm L. Kennard, Ph.D., Kennard Biologic Consultants

11:15 Anti-Apoptotic Factors Improve Productivity of Monoclonal Antibodies from CHO Cells

Mark Levenstein, Ph.D., Scientific Director, Biochemistry, CDI Bioscience

11:45 Using the *Pichia pastoris* Genome(s) to Optimize Secreted Heterologous Protein Expression

Thomas Chappell, Ph.D., Founder and Principal Scientist, BioGrammatics, Inc.

12:15 pm Close of Morning Session

12:30 Luncheon Presentation I
Focus on Your Freedom to Innovate: How Blue Sky's BioProducts & Collaborative Product Development Alliances Can Help You

Scott Gridley, Ph.D., Head of Product Development, Blue Sky Biotech



1:15 Luncheon Presentation II
Advanced Method of Cell Line Generation Using UCOE® Technology

Speaker Name and Affiliation: Kim Mann, Sr. Research Scientist, Millipore; Joe Orlando, Sr. Research Scientist, Millipore; Anjali Verma, Research Scientist, Millipore



EXPRESSION SYSTEM ENGINEERING

2:05 TBA

2:35 High-Throughput Protein Expression Using Cell-Free Systems

Deb K. Chatterjee, Ph.D., Protein Expression Laboratory, SAIC-Frederick, Inc., National Cancer Institute

3:05 Hijacking the Regulated Secretory Pathway of *Tetrahymena* for High-Level Expression of Recombinant Proteins

Theodore Clark, Ph.D., Associate Professor, Microbiology and Immunology, Cornell University

3:35 Pfenex Expression Technology™: The New Standard for Protein Expression

Diane Retallack, Ph.D., Director of Molecular Biology, Pfenex Inc.



3:50 Networking Refreshment Break

4:15 A Cell-Free Translation System for Producing Complex Disulfide Bonded Proteins at the Multiliter Scale

Christopher Murray, Ph.D., Senior Director, Research, Sutro Biopharma

4:45 Harnessing Proteomics to Engineer a Better Protein Expression System

Stephen P. Chambers, Ph.D., Vice President, Protein Production, AbPro

5:15 Micro-Algae as a Platform for the Production of Therapeutic Proteins

Steve P. Mayfield, Ph.D., Associate Dean, Department of Cell Biology, The Skaggs Institute for

Chemical Biology, The Scripps Research Institute

5:45 Welcoming Reception in the Exhibit Hall

7:00 Close of Day

TUESDAY, JANUARY 12

7:30 am Breakfast Presentation
Advancing Synthetic Gene Design

Mark Welch, Ph.D., Senior Scientist, DNA 2.0

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CASE STUDIES

8:15 Chairperson's Opening Remarks

Jill M. Carton, Ph.D., Antibody Drug Discovery, Centocor, Inc

8:20 Utilizing Multiple Expression Systems to Generate Proteins to Support Antibody Drug Discovery

Michael Naso, Ph.D., Principal Research Scientist, Discovery Research, Centocor, R&D, Inc.

8:50 Construction and Characterization of a Fully Active PXR/SRC-1 Tethered Protein with Increased Stability

Wenyan Yang, Ph.D., Principal Scientist, Structural Chemistry, Schering-Plough Research Institute

9:20 Red/ET Recombination: Efficient Genetic Engineering of *E. coli* Hosts and Plasmids

Stephan Noll, Ph.D., Senior Scientist, Gene Bridges GmbH

9:50 Albumin Fusions: A Simple, Broad Platform for the Production of Proteins with Extended Circulatory Half-Life
Leslie Evans, Ph.D., Science Manager, R&D, Novozymes Biopharma

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10:05 Networking Coffee Break in the Exhibit Hall

10:45 Expression and Characterization of Recombinant Human Secretory Leukocyte Protease Inhibitor (SLPI) Protein from *Pichia pastoris*

Geoffrey P. Lin-Cereghino, Ph.D., Associate Professor, Department of Chemistry, University of the Pacific, Stockton

11:15 High-Level Protein Expression in Scalable CHO Transient Transfection

Jianxin Ye, Ph.D., Bioprocess Research & Development Merck & Co., Inc.

11:45 New Ways of Establishing Production Cell lines for Structural Biology

Konrad Büssov, Ph.D., Project leader, Structural Biology, Helmholtz Centre for Infection Research

12:15 Close of Session

12:30 Luncheon Presentation I
Enhancing BL21(DE3) for Membrane Protein Expression and for the Isolation of Other Difficult Proteins

James C. Samuelson, Ph.D., Staff Scientist, New England Biolabs, Inc.

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1:00 Luncheon Presentation II (Sponsorship Opportunity)

2:00 BUZZ Sessions A (see page 3 for details)

2:45 Networking Refreshment Break in the Exhibit Hall

3:15 Poster Awards in the Exhibit Hall

3:30 BUZZ Sessions B (see page 3 for details)

4:15 End of Enhancing Host Expression

4:15 Registration for Short Courses

Thirteenth Annual Characterization,

4:30 – 7:30 Concurrent Short Courses (SC 5 – SC 8)

Separate Registration Required. Details on Page 5.

WEDNESDAY, JANUARY 13

7:00 am Registration for Characterization, Purification & Screening

7:30 Breakfast Presentation (Sponsorship Opportunity Available) or Coffee

CHARACTERIZATION

8:20 KEYNOTE PRESENTATION

Ambient Electrospray-Assisted Laser Desorption Ionization (ELDI) Mass Spectrometry for Biomolecule Characterization

Joseph A. Loo, Ph.D., Professor, Department of Chemistry and Biochemistry, University of California, Los Angeles

9:00 De novo Synthesis of Functional GPCRs Supported in a Nanolipoprotein Disc

Matthew Coleman, Ph.D., Associate Professor, Radiation Oncology, University of California, Davis

9:30 Achieving the Crystal Structure of Cholesteryl Ester Transfer Protein

Jeff Culp, Associate Research Fellow, Primary Pharmacology Group, Pfizer Global Research & Development

10:00 Networking Coffee Break in the Exhibit Hall

10:45 Selecting Optimum Eukaryotic Integral Membrane Proteins for Structure Determination by Rapid Expression and Solubilization Screening

Franklin A. Hays, Ph.D., Department of Biochemistry and Molecular Biology, University of Oklahoma Health Sciences Center

11:15 The Use of Blue Native PAGE in the Evaluation of Membrane Protein Aggregation States for Crystallization

Jichun Ma, Ph.D., Laboratory of Cell Biology, National Cancer Institute, National Institutes of Health

11:45 Production of Pure, Homogeneous and Stable Membrane Protein with Minimized Detergent

Larry Miercke, Ph.D., Specialist, Biochemistry, University of California, San Francisco

12:15 pm Close of Morning Session

12:30 Luncheon Presentation (Sponsorship Opportunity) or Lunch on Your Own

PURIFICATION

2:05 Expression and Purification of Human G-Protein Coupled Receptors
Mulugeta Mamo, Ph.D., Department of Structural Biology, Abbott Laboratories

2:35 A Reversible Immunocapture Method for Comprehensive SPR Analysis of Antibody-Antigen Interactions

John Kulman, Ph.D., Assistant Member, Puget Sound Blood Center

3:05 Size-Exclusion Chromatography Can Identify Faster-Associating Protein Complexes and Evaluate Design Strategies

Benjamin J. McFarland, Ph.D., Department of Chemistry and Biochemistry, Seattle Pacific University

3:35 Elucidating the Mechanism of Action of Therapeutic Antibodies using Surface Plasmon Resonance
Marina Roell, Ph.D., Associate Director of the Molecular Interactions & Biophysics Group, Xoma

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Purification & Screening

3:50 Networking Refreshment Break

4:30 Amphiphiles and Ligands for Structural Investigation of Membrane Proteins

Qinghai Zhang, Ph.D., Assistant Professor, Molecular Biology, Scripps Institute

5:00 GPCRs in Non-Native Environments

Peter Nollert, Ph.D., Director, Emerald BioSystems

5:30 Reception in the Exhibit Hall

6:30 Close of Day

THURSDAY, JANUARY 14

7:00 am Registration

7:30 Breakfast Presentation (Sponsorship Opportunity Available) or Coffee

SCREENING

8:20 Protein Characterization by Size Exclusion Chromatography Coupled to Static Light Scattering

Giuliano Sciara, Ph.D., Post Doctoral Researcher, Department of Physiology and Cellular Biophysics, Columbia University

8:50 Application of Medium Scale Robotics for Eukaryotic Cell Expression, Purification, and Analysis to Challenges in Protein Structural Biology and HTS Screening

Mark Knuth, Ph.D., Joint Center for Structural Genomics, Bioinformatics Core, Burnham Institute for Medical Research

9:20 Fast Screening for Expression Levels, Biophysical Properties and Affinities of Large Number of Proteins

Jianbing Zhang, Ph.D., Institute for Biological Sciences, National Research Council of Canada

9:50 Sponsored Presentation (Sponsorship Opportunity Available)

10:05 Networking Coffee Break in the Exhibit Hall

10:45 Ratiocinative Screen of Eukaryotic Integral Membrane Protein Expression and Solubilization for Structure Determination

Franz Gruswitz, Ph.D., Department of Biochemistry and Biophysics, University of California, San Francisco

11:15 An Efficient Platform for Screening Expression and Crystallization of Glycoproteins Produced in Human Cells

Joao M. Dias, Ph.D., Research Associate, Ollmann Sapphire Lab, Scripps Research Institute

11:45 Continuous Gradient Injection for the Kinetic Analysis of Biomolecular Interactions by Surface Plasmon Resonance

John Quinn, Ph.D., Chief Science Officer, Bioinstrumentation, ICx Technologies

12:15 pm A Paradigm Shift in Protein Expression Enabling the Selection of Lead Compounds from Libraries of Protein Variants Concomitant with the Isolation of Production Cell Line

Pierre-Alain Girod, Ph.D., Chief Scientific Officer, Selexis S.A.

Andrew F. Sandford, B.Sc., Vice President, Selexis, Inc.

12:45 Luncheon Presentation (Sponsorship Opportunity) or Lunch on Your Own

1:30 End of Characterization, Purification & Screening

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SELEXIS

Inaugural

Engineering Vectors & Designing Clone Constructs

THURSDAY, JANUARY 14

1:15 pm Registration for Engineering Vectors & Designing Clone Constructs

ENGINEERING VECTORS

1:50 Highly Efficient Production of Diverse Protein Targets from Cell Substrates Engineered with Lentiviral Vectors

Boro Dropulic, Ph.D., Founder, President & Chief Scientific Officer, Lentigen Corp.

2:20 Improved Physical Delivery in Immune Therapy & Vaccine Models

Kate E. Broderick, Ph.D., Manager, Product Development, Inovio Biomedical Corporation

2:50 Purification and Characterization of a Yeast Endocytic Protein Using the Yeast Expression Plasmid pEG(KT)

B. Daniel Pierce, B.S., Department of Biology, Johns Hopkins University

3:20 Sponsored Presentation (Sponsorship Opportunity Available)

3:35 Networking Refreshment Break in the Exhibit Hall

4:30 Harnessing The Proteome: The Center for Personalized Diagnostics at Arizona State

Jason Steel, B.S., Research Scientist, Center for Personalized Diagnostics, The Biodesign Institute, Arizona State University

5:00 Vector-Based Strategies for Enhanced Protein Expression in the Food Grade Bacterium *Lactococcus lactis*

David Mills, Ph.D., Professor, Viticulture & Enology, University of California Davis

5:30 Options for Manufacturing Technologies and a New Approach to Expressing Therapeutic Proteins in Mammalian Cells

Speaker to be announced

6:00 Close of Day

FRIDAY, JANUARY 15

7:00 am Registration

7:30 Breakfast Presentation (Sponsorship Opportunity Available) or Coffee

ENHANCING CLONE CONSTRUCTS

8:20 Genetic Stability Studies of Recombinant Cell Lines

Emiliano Toso, Ph.D., Head, Molecular Biology Laboratory, RBM Merck Serono (tentative)

8:50 High-Level Protein Expression in *E. coli* and a Variety of Other Gram-Negative Host Organisms

Svein Valla, Professor, Molecular Biology & Microbiology, Norwegian University of Science & Technology

9:20 Novel Platforms for the Expression of Membrane Proteins and Jump-In Targeted Integration Technology for Simplified Generation of Isogenic Cell Lines

W. Antoni Kudlicki, Ph.D., Research Fellow, Cloning and Protein Expression R&D, Life Technologies

9:50 Sponsored Presentation (Sponsorship Opportunity Available)

10:05 Networking Coffee Break in the Exhibit Hall

10:45 Poster Awards in the Exhibit Hall

11:00 Protein Expression with an Expanded Genetic Repertoire in *E. coli* and *P. Pastoris*

Travis Young, B.S., Graduate Student, Peter G. Schultz Lab, Department of Chemistry, The Scripps Institute

11:30 Optimization of Protein Expression in Transiently Transfected Mammalian Cell Lines

Dominic Esposito, Ph.D., Principal Scientist, Protein Expression Laboratory, SAIC-Frederick, Inc.

12:00 pm Generating Therapeutic Candidate and Discovery Reagent Antibody Molecules

Jill Carton, Ph.D., Associate Director, Molecular and Protein Biosciences, Centocor R&D

12:30 Close of Morning Session

12:45 Luncheon Presentation (Sponsorship Opportunity) or Lunch on Your Own

CONNECTING THE DOTS FROM CLONE TO SCALE-UP: ELIMINATING SILOS AND EXPEDITING HANDOFFS

2:00 Chairperson's Remarks

Boro Dropulic, Ph.D., Founder, President & CSO, Lentigen Corp.

2:05 Predictive Technologies for Cell Line Development Enable Enhanced Manufacturability

Susan Dana Jones, Ph.D., Vice President and Senior Consultant, BioProcess Technology Consultants, Inc.

2:35 Development of Stable *E. coli* Cell Lines for Production of Biopharmaceuticals

Annette Hillebrand, Ph.D., Senior Scientist, CMC Technologies, Dynavax Technologies

3:05 Speaker to be Announced

3:35 Interactive Panel Discussion—Connecting the Dots from Clone to Scale-Up

Moderator:

Boro Dropulic, Ph.D., Founder, President & Chief Scientific Officer, Lentigen Corp.

Panelists:

Annette Hillebrand, Ph.D., Senior Scientist, CMC Technologies, Dynavax Technologies

Susan Dana Jones, Ph.D., Vice President and Senior Consultant, BioProcess Technology Consultants, Inc.

Carol Kirchoff, Ph.D., Senior Principal Scientist, Global Biologics Pharma R&D, Pfi zer, Inc.

4:05 Close of PepTalk



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WEDNESDAY, JANUARY 13- THURSDAY, JANUARY 14)

Lyophilization & Spray Drying

(THURSDAY, JANUARY 14- FRIDAY, JANUARY 15)

Pipeline 2: Bioprocessing: Streamlining Complexity

Protein Purification & Recovery

(MONDAY, JANUARY 11- TUESDAY, JANUARY 12)

Membrane Proteins

(WEDNESDAY, JANUARY 13- THURSDAY, JANUARY 14)

Protein Production

(THURSDAY, JANUARY 14- FRIDAY, JANUARY 15)

Pipeline 3: Engineering Protein & Peptide Therapeutics

Antibodies

(MONDAY, JANUARY 11- TUESDAY, JANUARY 12)

Recombinant Proteins

(WEDNESDAY, JANUARY 13- THURSDAY, JANUARY 14)

Peptides

(THURSDAY, JANUARY 14- FRIDAY, JANUARY 15)

Pipeline 4: Higher-Throughput Protein Expression

Enhancing Host Expression

(MONDAY, JANUARY 11- TUESDAY, JANUARY 12)

Characterization, Purification & Screening

(WEDNESDAY, JANUARY 13- THURSDAY, JANUARY 14)

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