



Biologic Interventions for Spinal Pathologies: Stem Cells, Growth Factors, and Novel Therapeutics

Wednesday, July 26, 2017

Sheraton San Diego Hotel & Marina

Room: Bel Aire Ballroom

San Diego, CA

Chair: Wellington K. Hsu, MD

The field of spinal biologics is rapidly evolving as patients, researchers, and clinicians are recognizing its potential to treat challenging painful conditions. While the roles of both nonoperative and surgical treatment are relatively well-defined in the algorithm of spine care, the indications, risks, and concerns regarding biologics for a variety of spinal conditions have not been agreed upon. Because of the differences in regulatory pathways for many of these products, the availability of data is variable making administrative decision-making difficult. This meeting will bring together exciting minds from academia and industry to discuss the pertinent technologies and relevant issues in biologics use for spinal conditions.

7:30 a.m. Registration and Breakfast

8:00-8:15 a.m. Welcome and Introduction

- Current State of Affairs of Biologics in Spinal Conditions
 - Cost
 - Efficacy
 - Regulation
 - R&D
- Classification of Products
- Introduction of Sponsors

Wellington K. Hsu, MD

*Henry Tung, MD, Senior Vice President and President, Surgical Orthobiologics,
Bioventus Surgical, Principal Sponsor*

Allograft/Autograft

8:15-8:30 a.m. When Does Local Autograft Work for Bony Spinal Fusion?

- Volume dependence
- Value of bone trap, burr shavings
- Placement
- Need for extender

Raymond J. Hah, MD

8:30-8:45 a.m. DBM Fibers vs. Particles: Are All Formulations the Same?
Medtronic
Alan Dang, MD

8:45-9:00 a.m. How Technological Advances in Processing have Improved Allograft/DBM

- DBM processing
- Allograft processing
- Growth factor retention
- Handling properties
- Fresh frozen vs. freeze-dried

Xtant Medical
Gregory Juda, PhD

9:00-9:15 a.m. Current Surgical Choices for Fusion Using Biologically Active Allograft
John G. Finkenberg, MD

Cellular-based matrices

9:15-9:30 a.m. Mechanisms of Cellular-based Matrices

- Is it the cells?
- Is it the microenvironment?
- Cell survival?

Carl A. Gregory, PhD

9:30-9:45 a.m. How are CBMs Different from Each Other?

- Cell counts
- Types of cells
- Accompanying matrices

Harvey E. Smith, MD

9:45-10:00 a.m. Stem Cells for DDD

- Degenerative cascade for DDD
- New imaging modalities
- Preclinical data
- Clinical data

W. Mark Erwin, DC, PhD

10:00-10:30 a.m. Break

Synthetics

10:30-10:40 a.m. How are Synthetics Bioactive?

- Silicated substitution
- Bioglass

Zorica Buser, PhD

10:40-10:50 a.m. Implanting Bone Peptides – A New Category of Biologic?
Cerapedics
Jeffrey G. Marx, PhD

10:45-11:00 a.m. The Clinical Evidence of Synthetic Carriers in Spine Fusion
Stryker
Bianca Sirbu, PhD

Growth factors

11:00-11:15 a.m. Are There Still Complication Concerns with BMP?
R. Todd Allen, MD, PhD

Innovation

11:15-11:35 a.m. Innovation in Orthobiologics
Bioventus, Principal Sponsor
Samson Tom, PhD, MBA, PMP, Vice President, R&D, Bioventus Surgical

11:35-11:45 a.m. Discussion

Case Debates

11:45 a.m.-12:00 p.m. 2-level ACDF
○ Allograft
Jason W. Savage, MD
○ PEEK with DBM/synthetic/CBM
R. Todd Allen, MD, PhD
○ P15
Cerapedics
Jeffrey G. Marx, PhD

12:00-12:20 p.m. 1-level TLIF
○ Allograft/DBM
Jason W. Savage, MD
○ Synthetics
Scott D. Daffner, MD
○ CBM
Harvey E. Smith, MD
○ BMP
Raymond J. Hah, MD

12:30-1:30 p.m. Lunch

Interbody cage surface technologies

1:30-1:45 p.m. PEEK – Porous
Vertera
Kenneth A. Gall, PhD

1:45-2:00 p.m. Titanium
Wellington K. Hsu, MD

2:00-2:15 p.m. Silicon Nitride/Ceramic
Scott D. Daffner, MD

Case Debates

- 2:15-2:30 p.m. 1-level ALIF
- PEEK
- Alan Dang, MD*
- Titanium
- Wellington K. Hsu, MD*

On the Horizon

- 2:30-2:45 p.m. How 3D printing is shaping spine surgery
- Wellington K. Hsu, MD*
- 2:45-3:00 p.m. Scaffolds for fibrous musculoskeletal tissues
- Harvey E. Smith, MD*
- 3:00-3:15 p.m. Potential impact of infection-control from biologic products
- Clinton J. Devin, MD*
- 3:15-3:30 p.m. Regulatory Challenges in Biologics
- Raymond Golish, MD, PhD*
- 3:30-3:45 p.m. Discussion