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

February 5, 2016
PGA National Spa & Resort
Palm Beach Gardens, FL
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

Biologics for Fusion
Moderator: Wellington K. Hsu, MD

8:15-8:30 a.m. Do we have evidence that allograft is better now than before?
  Alan Dang, MD

8:30-8:45 a.m. Differences in Quality of Allograft
- Processing Techniques
- Quality of Donor/Source
- Growth Factors
  Dan Shimko, PhD, Medtronic

8:45-9:00 a.m. Is DBM still as variable as it has always been?
- Quantity/Quality of Growth Factors
- Importance of Carrier Technology
  Christopher D. Chaput, MD

9:00-9:15 a.m. The Future for Allograft/DBM technologies
  Greg Juda, PhD, Bacterin/Xtant Medical
9:15-9:30 a.m. Discussion

9:30-9:45 a.m. Synthetics
- Indications
- Different Types of Synthetics
  - What makes each product different?
  - Bioactivity
  
  *Brian Kwon, MD (Boston)*

9:45-10:00 a.m. Making Synthetics Bioactive
  *Mark Long, PhD, Stryker*

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

10:30-10:45 a.m. The Role of 3D Printing with Synthetic Carriers
  *Alan Dang, MD*

10:45-11:00 a.m. Using Nanotechnology to Enhance Scaffold Performance
  *Wellington K. Hsu, MD*

11:00-11:15 a.m. Discussion

11:15-11:30 a.m. Growth Factors
  - Current State of BMP
    - Usage
    - Complication Risk
    - Indications
    - Medicolegal Considerations
  
  *Christopher D. Chaput, MD*

11:30-11:45 a.m. Next Generation BMP
  *Howard Seeherman, PhD, Bioventus*

11:45 a.m.-12:00 p.m. New Growth Factors
  *Erik Erbe, PhD, Stability Biologics*

12:00-12:15 p.m. Discussion

12:15-1:15 p.m. Lunch

1:15-1:30 p.m. ACDF Dysphagia: A Literature Review
  *Dennis Bullard, MD, BioD, LLC*

1:30-1:45 p.m. What will the market pay for certain products?
What are hospital systems looking for an approval of new product?
  *Scott D. Daffner, MD*

1:45-2:00 p.m. Regulatory Challenges Ahead
  *Raymond Golish, MD, PhD*

2:00-2:15 p.m. Discussion
Biologics for Degenerative Disc Disease
Moderator: James D. Kang, MD

2:15-2:30 p.m. Introduction
- The Degenerative Cascade for DDD
- Indications for Intervention
- New Imaging Modalities
- Market for a DDD Solution
James D. Kang, MD

2:30-2:45 p.m. Challenges of the DDD Diagnosis
- Placebo Effect versus Clinical Efficacy
- Pain Control versus Radiographic Improvement
Michael Y. Wang, MD

2:45-3:00 p.m. Stem Cells for DDD
- Preclinical Data
- Clinical Trial Data
Brian Kwon, MD Boston

3:00-3:15 p.m. Growth Factors for DDD
- Preclinical data
- Clinical trial data
Scott D. Daffner, MD

3:15-3:30 p.m. Discussion

3:30-4:00 p.m. Networking Break

Biologics for Spinal Cord Injury
Moderator: Brian Kwon, MD (Vancouver)

4:00-4:15 p.m. Introduction
- Challenges for Showing Efficacy in the SCI Population
- Types of Treatment
  - Injectable
  - Pharmacologic/Systemic
  - Surgical
- What are realistic expectations in this population?
- Most promising products
Brian K. Kwon, MD, PhD, FRCSC (Vancouver)

4:15-4:30 p.m. Stem Cells and Pharmacologic/Systemic Intervention
Michael Y. Wang, MD, FACS

4:30-4:45 p.m. Latest Outcomes Data
James D. Guest, MD, PhD, Miami Project

4:45-5:00 p.m. Discussion
Optimizing Outcomes
Moderator: Michael Reed

5:00-5:15 p.m.      Changing the Paradigm of the Biologic Effects of Cigarette Smoke
                    Wellington K. Hsu, MD

5:15-5:30 p.m.      Cost-Effective Rehabilitation
                    Michael L. Reed, DPT, OCS

5:30-5:45 p.m.      Discussion

5:45-6:00 p.m.      Wrap Up Comments
                    Wellington K. Hsu, MD

6:00-7:00 p.m.      VIP Course Reception
                    Palm Terrace Deck

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