

NIBIB Biomedical Entrepreneurial Science Working Group Releases Executive Summary

Government News

By Christine Kelley

The Executive Summary from the Biomedical Entrepreneurial Science Working Group held August 1, 2003, in Bethesda, Md., is now available on the NIBIB Web site.

The goal of this working group was to attain specific recommendations regarding the role of the NIBIB in facilitating the translation of fundamental discoveries and innovative research into biomedical applications for the benefit of public health. Despite efforts to translate scientific knowledge and discoveries into useful medical applications, researchers often encounter barriers to commercializing technology. Participants of this working group identified academic culture,

researchers, funding, technology transfer offices, and government as the major hurdles. To address these barriers and improve technology transfer of important research, it was recommended that the NIBIB empower students and investigators with entrepreneurial training opportunities and incentives, offer opportunities for researchers to establish viable industrial partnerships, and improve the review of technology-driven grant applications.

More information is available in the Executive Summary, which can be accessed at www.nibib.nih.gov/events/BESWG/BESWG_ExecSumm.pdf.

ASTM Task Force Open for Development of Reference Scaffolds for Tissue Engineered Medical Products (TEMPs)

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By John A. Tesk, *Government News*
Contributing Editor

At a workshop held at the National Institute of Standards and Technology (NIST) in July 2000¹, the reference materials most needed for tissue engineering were identified as being three-dimensional reference tissue scaffolds of known porosity, interconnectivity, surface and bulk chemistry, physical and mechanical properties, and cellular reactivity. In response to this workshop, NIST has been pursuing collaborations to accomplish this objective. An ASTM task force was initiated at the November 19, 2003, meeting (Tampa, Fla.) of Committee F04.42 – Biomaterials and Biomolecules, for the development of reference scaffolds for TEMPs. The task force will conduct measurements for characterization of test scaffolds that will be supplied to its members. The development will focus on scaffolds that will consist of a regular array of cubic pores with consistent interconnections. It was decided that two test scaffolds should be characterized, having either 300 μm or 600 μm pore-edge dimensions.

Results from the characterization effort will be used by NIST in the development of reference scaffolds for distribution to researchers and developers of scaffolds for tissue engineering applications. The characterizations of the test specimens will be used to help ensure that the features needed in the reference

scaffolds will be well-defined and that their measurements will produce consistent results for terms such as porosity, interconnectivity and tortuosity, and possibly others (these terms are found in a draft characterization guide that is under development in a related effort headed by Dr. Paul Tomlins of the National Physical Laboratory). The task force is headed by Dr. John Tesk (NIST), and Drs. Michael Yaszemski and Esmail Jabbari (Mayo Clinic). The target schedule is to have measurements of test scaffolds completed in time for the April 2004 meeting of the ASTM, all issues resolved by August 2004, and the start of fabrication of the reference scaffolds by the end of August 2004, after which scaffolds with spherical geometry will be considered for the next development. The task force planned to begin the evaluation of test scaffolds in January 2004. Enquiries as to participation should be made as soon as possible to facilitate planning and coordination of the effort. To join the task force or request further information, contact John Tesk at 301-975-6799 or john.tesk@nist.gov; or Liisa Kuhn (chair of Committee F04.42) at 860-679-3922 or lkuhn@uchc.edu.

1. J., *Appl Biomaterials*, 58, #5, p 463-466, 2001.