

# OCPM

## RESEARCH UPDATE

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Fall 2009

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### **EPIFLO WOUND HEALING STUDY UNDERWAY**

Patients with diabetic foot ulcers are currently being screened at the Cleveland Foot and Ankle Institute's Midtown and Huron clinics for participation in the EpiFlo wound healing study. The purpose of this study is to compare the safety and effectiveness of EpiFlo Transdermal Continuous Delivery Oxygen plus standard of care versus standard of care alone in the treatment of patients with diabetic foot ulcers. Patients who are diabetic, between 20 and 90 years of age, and have a diabetic foot ulcer that has not healed for 30 days or more are eligible to participate in this study. Eligible volunteers must agree to come to the clinic every week for up to a total of 12 weeks or until the foot ulcer is healed. Patients who are enrolled in the study will receive either an active EpiFlo device or a non-working sham device. Neither the patient nor the investigators will know which device is given to the patient. As a volunteer in this study, enrolled subjects will be reimbursed for travel expenses. Dr. Caldwell serves as the Principal Investigator on this study, while Dr. Carroll is the Study Coordinator. The full-time clinical faculty members are all participating as Sub-Investigators.

### **DR. CARROLL RECEIVES FUNDING TO TEST CERAMENT™ BONE VOID FILLER AS A SUBSTITUTE FOR ALLOGRAFTS IN THE EVANS PROCEDURE**

Dr. Carroll has received funding from BONESUPPORT to conduct mechanical testing of fresh-frozen cadaveric feet in which the Evans calcaneal osteotomy procedure has been performed using either the standard tri-cortical cancellous allograft or Cerament™ bone void filler. Testing will be conducted to compare the maximum load that Cerament™ can withstand under static loading to that of an allograft. Testing will also be conducted to evaluate the behavior of Cerament™ versus allograft under cyclic loads. Although allografts are used often in surgical procedures, these materials can harbor pathogens and pose at least some risk for transmission of infectious diseases to recipients. While transmission of disease is infrequent, it can in some cases lead to considerable morbidity or death. If it is demonstrated that Cerament™ performs as well as allografts, Cerament™ could provide a safer alternative to allografts. Testing will begin once all of the necessary paperwork required for obtaining fresh-frozen cadaveric specimens is approved.

**DR. YAVUZ RESUBMITS REVISED SBIR GRANT APPLICATION TO NIH**

Dr. Yavuz and investigators at Infoscitex, Inc. have revised and resubmitted their NIH Small Business Innovation Research (SBIR) grant application. The project aims at developing an artificial intelligence model that will predict distribution of plantar shear stresses in healthy individuals. The ultimate goal of the project is to design smart footwear that can monitor stress levels and temperature under the feet of diabetic patients and alert them when hazardous thresholds are reached. Both temperature increase and plantar stresses have been associated with the pathology of diabetic foot ulcers.

**DR. YAVUZ AND RESEARCH TEAM PUBLISH PAPER IN "THE FOOT" JOURNAL**

A paper by Dr. Yavuz and his research team was published in the December issue of "The Foot" journal. The research paper, titled "Can Plantar Temperature Be Used to Assess Triaxial Loading Under the Foot?", had been previously presented at the annual conference of the American College of Foot & Ankle Orthopedics & Medicine (ACFAOM). The paper discusses the value of plantar temperature measurement in revealing the 3D force distribution under the foot.

**DEADLINES-AT-A-GLANCE: UPCOMING GRANT APPLICATION DEADLINES**

**American Diabetes Association**

*Basic Science Award*

The ADA Research Awards provide grant support to new and established investigators. Applications will be considered in any area that is relevant to the etiology or pathophysiology of diabetes and its complications. Funding is available for up to \$115,000 per year for up to three years. Up to 20% of total costs for PI salary support and up to 15% for indirect costs may be requested.

*Clinical/Translational Award*

The ADA Clinical/Translational Awards are designed to support patient-oriented research in diabetes. For the purpose of this award, clinical research is defined as research directly involving humans, and includes education, psychosocial, behavioral, epidemiologic, and health services research as well as studies of normal physiology and mechanisms of disease. Funding is available for up to \$200,000 per year for up to three years. Up to 20% of total costs for PI salary support and up to 15% for indirect costs may be requested.

*Innovation Award*

The ADA Innovation Awards are pilot or feasibility grants designed to support novel hypotheses that may lack preliminary data, but offer considerable promise for the cure, prevention or treatment of diabetes. Funding is available for a maximum of \$50,000 per year for two years. No indirect costs may be requested.

*Henry Becton Innovation Award*

The ADA Henry Becton Innovation Awards are pilot or feasibility grants designed to support hypotheses in the following areas: medical informatics in direct patient therapy, advanced methods of insulin delivery, community-based care, and the role of allied health professionals care of children with Type 2 diabetes. Funding is available for a maximum of \$50,000 per year for up to two years. No indirect costs may be requested.

Website for all ADA grant opportunities:

[http://professional.diabetes.org/Diabetes\\_Research.aspx?typ=18&cid=64381](http://professional.diabetes.org/Diabetes_Research.aspx?typ=18&cid=64381)

Deadlines for all applications: January 15 and July 15, 2010

**AO Research Fund**

*Start Up Grant*

The AO Research Fund start up grant is designed to encourage researchers to develop unconventional, novel projects and to expand in a wide range of research fields within the general areas of interest of the AO Foundation. This includes basic scientific, pre-clinical and clinical research in all areas of trauma, surgery of the musculoskeletal system and related problems. Awards are a maximum of CHF 60,000 per year for up to two years. More information on this grant is available at [www.aofoundation.org](http://www.aofoundation.org)

Deadline for application: February 15 and August 15, 2010

**National Institutes of Health (NIH)**

*Public Health Service Research Grants (R01)*

The NIH is accepting proposals for research in a wide variety of fields, including arthritis, musculoskeletal disorders, diabetes and skin diseases. Funding is available for three to five years, with no restrictions on amount of support. More information on this grant is available at <http://grants.nih.gov/grants/guide/pa-files/PA-07-070.html>

Deadlines for application: February 5, June 5

*Academic Research Enhancement Award (R15)*

The NIH AREA program has three objectives: 1) to develop the research environment a "smaller, less prominent, four-year, public and private colleges and universities which provide baccalaureate or advanced training for a significant number of our nation's research scientists but which have not shared adequately in the growth of the NIH extramural program", 2) to expose students at such institutions to the research experience, and 3) to support meritorious research. The AREA program supports small-scale research projects, including feasibility or pilot studies, in health-related topics. More information is available at <http://grants.nih.gov/grants/guide/pa-files/PA-06-042.html>

Deadlines for application: February 25, June 25

*Exploratory/Developmental Research Award (R21)*

The NIH R21 program is intended to encourage exploratory and/or developmental research by providing support for the early and conceptual stages of project development. These studies may involve considerable risk but may lead to a breakthrough in a particular area, or to the development of novel techniques, agents, methodologies, models, or applications that could have a major impact on a field of biomedical, behavioral, or clinical research. Applicants may request a maximum of \$150,000 total direct costs plus applicable Facilities & Administrative (F&A)/indirect costs for the entire project period of up to three years. More information is available at <http://grants.nih.gov/grants/guide/pa-files/PA-09-164.html>

Deadlines for application: February 16, June 16