

research universities and CTSA institutes, (c) Translational health science teams working on innovative translational science projects, and (d) Individual translational scientists can all contribute to ensuring that translational science fulfills its ethical obligations and social responsibilities. **DISCUSSION/SIGNIFICANCE:** The social responsibility of translational science can be fulfilled by centering its efforts to develop useful, sustainable, and relevant innovations. These criteria clarify how social responsibilities manifest in practice and can help funders shape and guide the next era of translational discovery.

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### **Tools to facilitate participant recruitment into research studies: Assessing early outcomes following implementation**

Chin Chin Lee, Daru Ransford, Carlos Canales, Alfredo Barreto, Ishwar Ramsingh, Rosalina Das, Carl I. Schulman  
University of Miami

**OBJECTIVES/GOALS:** The objective of this presentation is to describe different recruitment tools implemented by the Miami Clinical and Translational Science Institute (CTSI) to facilitate participant recruitment into research studies. **METHODS/STUDY POPULATION:** Participant recruitment is critical to the success of all research studies. In the effort of advancing clinical and translational science and to help investigators recruit volunteers for research studies, the University of Miami has two recruitment tools: 1) Consent to Contact (CTC), an opt-in research registry where University of Miami Health System patients are asked for permission to be contacted about studies matching their demographic and/or health profiles; and 2) UMiami HealthResearch.org (UMHR), implemented with the Michigan CTSA, a community-based registry for volunteers to sign up and be contacted about studies. Study investigators can use these tools once they have obtained IRB approval for their research. **RESULTS/ANTICIPATED RESULTS:** The CTC was launched in 2016; to date, over 130,000 patients have enrolled in CTC; 69 studies have been approved with over 75,000 patients' contact information released to study teams. UMHR was launched in 2020. To date, the site lists 237 studies. A total of 2,727 portal visitors have expressed interest in participating in specific studies. Study team members were successful in engaging interested participants, and enrolling participants into studies. Overall, teams reported a positive impact on recruitment. Data collection on utilization and satisfaction of these recruitments tools is ongoing. In addition, focus groups of study team members are being conducted to identify best practices for using these tools, and findings will be presented. **DISCUSSION/SIGNIFICANCE:** The CTC and UMHR recruitment tools have demonstrated positive impact in helping study teams identify potentially eligible research volunteers. The continued promotion of these tools at the University of Miami Health System and in the community will be crucial to the recruitment process and execution of research studies.

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### **Wnt signaling attenuates mechanotransduction and protects against wound occlusion-mediated abolishment of regeneration**

Allen Oak<sup>1</sup>, Chengxiang Fan<sup>1</sup>, Ying Zheng<sup>1</sup>, Arben Nace<sup>1</sup>, Ruifeng Yang<sup>1</sup>, Anisa Ray, Jen-Chih Hsieh, George Cotsarelis  
University of Pennsylvania, School of Medicine

**OBJECTIVES/GOALS:** Current clinical practice recommends occlusive dressings (e.g., film and hydrocolloid) for wounds with variable

regenerative capacities. However, clinical evidence suggests that occlusion may hinder regeneration. Our objective was to test the impact of occlusion on regeneration using animal models. **METHODS/STUDY POPULATION:** The murine wound-induced hair neogenesis (WIHN) is a well-established model of regeneration characterized by de novo hair follicle (HF) formation in the center of large full-thickness wounds. The quantity of neogenic HFs depends on the robustness of Wnt signaling. Optimal tissue mechanics is also required for WIHN. Utilizing the murine WIHN model, we tested the hypothesis that wound occlusion impedes regeneration. We determined how (i) the timing and duration of wound occlusion impacts WIHN, (ii) Wnt signaling influences the occlusion-induced effects on regeneration and (iii) occlusion alters the tissue mechanics of the wound, which establishes the morphogenetic field needed for WIHN. **RESULTS/ANTICIPATED RESULTS:** Occlusion completely eliminated WIHN. Only a brief period of occlusion between post-wound days 0-3 or 4-7 was sufficient to abrogate WIHN. Microarray and qPCR of open and occluded wounds demonstrated that occlusion promotes fibrosis by upregulating TGF- $\beta$ 2 and mechanotransduction, a mechanosensitive profibrotic pathway. Recruitment of these potent profibrotic pathways generated a symmetrically rigid wound incapable of de novo HF regeneration. Using transgenic animal models with enhanced Wnt signaling, we determined that the ligand-dependent Wnt signaling protected against the occlusion-induced inhibition of WIHN, as well as the occlusion-induced upregulation of both profibrotic pathways. **DISCUSSION/SIGNIFICANCE:** In animal models, occlusion promoted fibrosis at the expense of regeneration during acute wound healing. Augmented Wnt signaling protected against this effect. Occluding wounds may reduce regeneration. Further studies are warranted to validate these findings.

## **Education, Career Development and Workforce Development**

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### **A follow-up evaluation of an expanded good clinical practice online training course: The relevance of community engagement to health research study teams.**

Elias Samuels<sup>1</sup>, Ellen Champagne<sup>1</sup>, Angela Lyden<sup>1</sup>, Mary Janevic<sup>1</sup>, Michelle Culp<sup>2</sup>, Melissa Riddle<sup>2</sup>, Gina Jay<sup>1</sup>, Susan L. Murphy<sup>1</sup>  
<sup>1</sup>University of Michigan, <sup>2</sup>National Institutes of Health

**OBJECTIVES/GOALS:** This study evaluates the impact of an updated and expanded training for social and behavioral health researchers. Participants' experience with training modules focused on community engagement is a focus of this evaluation as is the application of this training by participants in teams. **METHODS/STUDY POPULATION:** The Social and Behavioral Research training series for health researchers and team members was first created by faculty and staff of the Michigan Institute for Clinical and Health Research in 2018. This training was updated and expanded in 2021 with support from the National Institutes of Health to include new material regarding community-engaged health research as well as updates concerning technology and new federal regulations. Past participants of the training were invited to retake the training, as were clinical and translational researchers at University of