

## Post-Doctoral Research Associate

Appointment: Research Associate, Department of Surgery, University of Cincinnati

Project performance site: Shriners Burns Hospital, Cincinnati, Ohio

Position terms: 1 Sep 2008 - 31 August 2010; Full time (1.0 FTE);  
Salary range: \$45-50,000 per year plus full benefits

Research focus: Stem cell and tissue engineering of human skin

Duties and responsibilities: An energetic and talented individual will fill a position for performance of preclinical studies with engineered human skin for wound treatment. Two aims are funded to regulate: 1) The stem cell phenotype in epidermal keratinocytes ( $\alpha 6$  integrin, EGFR, CD71, CD90) to preserve the potential for long term survival *in vitro* and after transplantation to wounds; and, 2) Generation of hair from populations of epidermal keratinocytes and dermal papilla cells through the Wnt /  $\beta$ -catenin pathway. Cell populations will be tracked in engineered tissues and compared to natural tissues for structure and function. Comprehensive laboratories are available which provide facilities for cell culture, biopolymer fabrication, protein and nucleic acid chemistry, light and fluorescence microscopy, flow cytometry, media formulation, and support staff.

Minimum requirements: Ph.D. in cellular, molecular or developmental biology, biomedical engineering, or closely related field. Previous experience with tissue engineering, and cell transplantation preferred. Technical skills needed include: cell culture, immunohistochemistry, protein and nucleic acid analyses (northern, western, & southern blots), transplantation and evaluation *in vivo* of engineered skin, MS Windows computer programs and presentations.

Applicants should provide a Curriculum Vitae, letters of reference, and university transcripts to:

Steven Boyce, Ph.D.  
Department of Surgery  
University of Cincinnati  
o, 513-872-6080  
e, [steven.boyce@uc.edu](mailto:steven.boyce@uc.edu)

### Literature references:

Boyce ST, RJ Kagan, DG Greenhalgh, KP Yakuboff, P Warner, T Palmieri and GD Warden. 2006. Cultured skin substitutes reduce requirements for harvesting of skin autograft for closure of excised, full-thickness burns. *J Trauma* 60(4):821-829.

Supp DM and ST Boyce. 2005. Engineered skin substitutes: practices and potentials. *Clinics Dermatol* 23(4):403-412.

Boyce ST. 2004. Fabrication, quality assurance and assessment of cultured skin substitutes for treatment of skin wounds. *Biomed Eng J* 20:107-112.

Boyce ST and GD Warden. 2002. Principles and practices for cutaneous wound repair with cultured cells and biopolymers. *Amer J Surg* 183:445-456.