# BIOGRAPHICAL SKETCH

Provide the following information for the Senior/key personnel and other significant contributors in the order listed on Form Page 2.

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NAME

Henry C. Hsia, M.D., F.A.C.S.

eRA COMMONS USER NAME (credential, e.g., agency login)

hsiahc

POSITION TITLE

Assistant Professor of Surgery (Plastic)

Founding Director, Yale Regenerative Wound Healing Center

F

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable.)*

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| --- | --- | --- | --- |
| INSTITUTION AND LOCATION | DEGREE*(if applicable)* | MM/YY | FIELD OF STUDY |
| Harvard University, Cambridge, MA | A.B. (6/90) | 09/86-06/90 | Biology & Anthropology |
| Cambridge University, Cambridge, England | Fellowship | 09/90-06/91 | "Scholar-in-Residence" |
| Yale Univ. School of Med., New Haven, CT | M.D.(5/96) | 09/91-05/96 | Medicine |
| Yale-New Haven Hospital, New Haven, CT | Residency | 06/96-06/99 | General Surgery |
| Yale-New Haven Hospital, New Haven, CT | Residency | 07/99-06/02 | Plastic Surgery |
| Princeton University, Princeton, NJ | Postdoctoral | 07/02-07/05 | Molecular Biology |

# A. Personal Statement:

As a board-certified plastic surgeon in active clinical practice, I have dedicated my professional life to finding innovative wound treatments for patients through basic and clinical research. My clinical training at Yale had given me a strong foundation to understand wound healing. I also acquired firsthand knowledge of the limitations of current therapies for treating difficult wounds and the great challenges in developing novel treatments that can be widely adopted by practitioners. I came to the conclusion during my clinical training that if I wished to make significant contributions to therapeutic advances for these challenging clinical entities, it would require a much deeper understanding on my part of the basic biological processes underlying wound healing. Through an NIH-funded postdoctoral position at Princeton University, I studied the role of the extracellular matrix in regulating wound cell behavior, work which led to a successful application for NIH funding in the form of a K08 career development award. Accordingly, I have developed an intellectual and professional background that is uniquely well rounded among my clinical and scientific colleagues and find myself poised to bridge the widening translational gap between the basic and clinical sciences. My ambition is to develop a program that encourages scientific and clinical collaborations that will lead to the development of novel approaches in regenerative medicine and attract trainees that will benefit from direct exposure to such approaches, and as a consequence, allow them deeper insights to answer questions relevant to the “bedside” as well as the “bench.”

# B. Positions and Honors

# Positions and Employment:

Yale Plastic Surgery Combined Training Program, Dept. of Surgery, Yale-New Haven Hospital, New Haven, CT - Program Director & Chair: John A. Persing, M.D.

General Surgery Resident Physician, non-tenured/full-time, 1996-1999 Plastic Surgery Resident Physician, non-tenured/full-time, 1999-2001 Chief Resident of Plastic Surgery, non-tenured/full-time, 2001-2002

Department of Molecular Biology, Princeton University, Princeton, NJ - Supervisor: Jean E. Schwarzbauer, Ph.D. Postdoctoral Fellow, non-tenured/full-time, 2002-2005

Department of Surgery, Rutgers-Robert Wood Johnson Medical School (formerly UMDNJ-Robert Wood Johnson Medical School), New Brunswick, NJ - Interim Chair: Leonard Lee, M.D.; Assistant Professor, non-tenured/full-time, 2007-2015 (Instructor, 2005-2007)

Section of Plastic Surgery, Department of Surgery, Yale School of Medicine, New Haven, CT – Chief: John A. Persing, M.D.; Assistant Professor of Surgery & Founding Director of Yale Regenerative Wound Healing Center, non-tenured/full-time, 2015 - present

# Other Experiences and Professional Memberships:

Medical Licensure: Connecticut, New Jersey, New York

Medical Staff Privileges: Yale-New Haven Hospital, New Haven, CT 2015-present Board Certification: American Board of Plastic Surgery, 2006-present

American Society for Cell Biology, Member, 2004-present

American College of Surgeons 2008-present

Plastic Surgery Research Council, 2006-present American Society of Plastic Surgeons, 2007-present Association for Academic Surgery, 2007-present American College of Surgeons, 2008-present

Peer Reviewer for American Journal of Surgery, trauma and wound healing manuscripts, 2009-present Wound Healing Society, 2009-present

Association for the Advancement of Wound Care, 2009-present

Institutional Review Board, Rutgers-Robert Wood Johnson Medical School, 2012- 2015

National Institutes of Health Clinical Research Course (Completion Certificate, April 2013)

Hyperbaric Medicine Training Course, UHMS-approved (Completion Certificate, August 2014)

# Honors:

Harvard College Scholar (Dean’s List), Harvard University, 1986-1990 (all semesters)

Lt. Charles Henry Fiske III Scholarship, Cambridge University, Cambridge, England, 1990-1991 Wilbur G. Downs International Health Scholarship, Yale University School of Medicine, 1992

Cum Laude Presentation, Annual Scientific Meeting of Radiological Society of North America, 1995 Farr Scholar for Academic & Leadership Excellence, Yale University School of Medicine, 1996 Thesis Prize for Distinguished Dissertation, Yale University School of Medicine, 1996

Philip Corso Prize for Best Paper, Yale Plastic Surgery Research Day, 2000

Joseph F. Murray Award for Best Paper, Annual Scientific Meeting of New England Society of Plastic and Reconstructive Surgeons, 2001 & 2002.

New Jersey Center for Biomaterials Postdoctoral Training Fellowship Grant, 2002-2004 National Institutes of Health K08 Career Development Award, 2005

Named Fellow of American College of Surgeons, 2007

Wound Healing Society Young Investigator Travel Award, 2010-11

Foundation of UMDNJ Collaborative High-Impact Project Award, 2011

Feldstein Medical Foundation Research Award, 2012-2013

LifeCell ISIS Award for Investigator-Initiated Research, 2014-2015

# C. Contribution to Science

1. Wound cell biology: Tissue repair continues to present significant challenges to biomedical scientists and clinicians wishing to understand and manipulate its associated biological processes to facilitate wound healing while also preventing fibrotic complications. My publications here represent a long-term effort to better understand the role of the extracellular matrix in wound healing and fibrosis and have deepened understanding of how matrix proteins including fibronectin and tenascin regulate and alter wound cell behavior, providing insights contributing to the development of improved scaffolds and treatments in regenerative medicine.

Hsia HC, Nair MR, Corbett SA. The fate of internalized a5 integrin is regulated by matrix-capable fibronectin. J Surg Res. 2014 Oct;191(2):268-79.

Hsia HC, Nair MR, Mintz RC, Corbett SA. The fiber diameter of synthetic bioresorbable extracellular matrix influences human fibroblast response. Plast Reconstr Surg. 2011; 127: 2312-20.

Desai VD, Hsia HC**\***, Schwarzbauer JE. Reversible modulation of myofibroblast differentiation in adipose-derived mesenchymal stem cells. PLoS One. 2014 Jan 23;9(1):e86865. **\*Corresponding author**

Midwood KS, Valenick LV, Hsia HC, Schwarzbauer JE. Co-regulation of fibronectin signaling and matrix contraction by tenascin-C and syndecan-4. Molecular Biology of the Cell 15:5670-5677, 2004.

Valenick LV, Hsia HC, Schwarzbauer JE. Fibronectin fragmentation promotes alpha4beta1 integrin-mediated contraction of a fibrin-fibronectin matrix. Experimental Cell Research 309:48-55, 2005.

Hsia HC, Schwarzbauer JE. Meet the tenascins: Multifunctional and mysterious. Journal of Biological Chemistry 280:26641-26644, 2005.

Midwood KS, Mao Y, Hsia HC, Valenick LV, Schwarzbauer JE. Modulation of cell-fibronectin matrix interactions during tissue repair. Journal of Investigative Dermatology Symposium Proceedings 11:73-78, 2006.

Hsia HC, Schwarzbauer JE. Adenoviral-mediated expression and local deposition of recombinant tenascin-C perturbs cell-dependent matrix contraction. Journal of Surgical Research 136:92-97, 2006.

2. Evidence-based approaches to surgical practice: Most plastic surgery procedures including liposuction involve practices that are not based on evidence. These publications describing the use of local anesthetics in tumescent liposuction have contributed to a dialogue emphasizing the importance of examining the basis for commonly accepted surgical practices and the need for surgeons to re-evaluate commonly held assumptions when data suggest otherwise.

Paik AM, Daniali LN, Lee ES, Hsia HC. Local anesthetic use in tumescent liposuction: An American Society of Plastic Surgeons survey. Ann Plast Surg. 2015 Feb;74(2):145-51.

Failey C, Vemula R, Borah GL, Hsia HC. Intraoperative Use of Bupivacaine in Tumescent Liposuction: The Robert Wood Johnson Experience. Plast Reconstr Surg. 2009; 124:1304-1311.

Paik AM, Daniali LN, Lee ES, Hsia HC. Local anesthetics in liposuction: considerations for new practice advisory guidelines to improve patient safety. Plast Reconstr Surg. 2014 Jan;133(1):66e-7e.

**Complete List of Published Work in MyBibliography:** http://www.ncbi.nlm.nih.gov/sites/myncbi/henry.hsia.1/bibliography/41146284/public/?sort=date&direction=ascending

D. Research Support

Ongoing Research Support

*Source: LifeCell Corporation*

 Period: 1/1/14 – 3/31/15

 Title: Impact of Acellular Dermal Matrix on Post-Surgical Wound Fluid Biomarkers

 Role: PI

Completed Research Support

 *Source: Feldstein Medical Foundation*

 Period: 7/1/12 – 12/31/13

 Title: Developing new and personalized approaches to healing challenging wounds

 Role: PI

 *Source: Foundation of UMDNJ*

 Type: High-impact Collaborative Award

 Period: 1/1/11 - 12/31/11

 Title: MG53 as a therapeutic agent to treat hemorrhagic shock

 Role: Co-investigator

 *Source: NIH/National Institute of General Medical Sciences* ID: K08GM072546

 Type: K08 (Mentored Clinical Scientist Development Award)

 Period: 3/1/05-2/28/10

 Title: “Role of wound provisional matrix in endothelial function”

 Role: PI

 *Source: NIH/National Institute of General Medical Sciences* ID: K08GM072546S

 Type: K08 ARRA Supplement

 Period: 8/31/09-2/28/10

 Title: “Role of wound provisional matrix in endothelial function”

 Role: PI

 *Source: NIH/New Jersey Center for Biomaterials*

 Type: Postdoctoral fellowship (T32 training grant)

 Period: 8/1/02-7/31/04