

## CURRICULUM VITAE

### Gwendolyn M B Hoben MD

Assistant Professor  
Department of Plastic Surgery

#### OFFICE ADDRESS:

Tosa Center  
1155 N Mayfair Rd  
Milwaukee, WI 53226

#### EDUCATION:

08/01/1997 - 06/01/2001 BS Chemistry, Rice University, Houston, TX  
08/01/2002 - 06/01/2009 MD, Baylor College of Medicine, Houston, TX  
08/01/2004 - 12/07/2007 PhD- Bioengineering, Rice University, Houston, TX

#### POSTGRADUATE TRAINING AND FELLOWSHIP APPOINTMENTS:

06/27/2009 - 07/02/2017 Plastic and Reconstructive Surgery Combined Residency Program, Surgery, Plastic and Reconstructive Surgery, Washington University-Barnes Jewish Hospital, 660 South Euclid, Campus Box 8238, St.Louis, MO 63110  
07/01/2013 - 06/17/2015 Peripheral Nerve Research Fellowship, Surgery, Plastic and Reconstructive Surgery, Washington University School of Medicine, 660 South Euclid, Campus Box 8238, St.Louis, MO 63110  
08/01/2017 - 08/01/2018 Plastic-Orthopedic Surgery Combined Hand Fellowship, Plastic Surgery and Orthopedic Surgery, Hand Surgery, Medical College of Wisconsin, 1155 North Mayfair Rd, Wauwatosa, WI 53226

#### FACULTY APPOINTMENTS:

09/01/2018 - Present Instructor, Plastic Surgery, Medical College of Wisconsin, 1155 North Mayfair Rd, Wauwatosa, WI 53226

#### AWARDS AND HONORS:

05/1999 - Present Rice University Vice President's Appreciation Award: exceptional contributions to Rice University and the community in extracurricular activities  
07/2000 - Present Mayo Clinic Abbott Scholar: outstanding Mayo Clinic summer undergraduate research fellowship student  
06/2001 - Present American Institute of Chemists Award: outstanding chemistry student  
06/2001 - Present Salzburg Memorial Chemistry Major Award: outstanding chemistry major  
06/2001 - Present Election to Phi Beta Kappa Honor Society  
06/2001 - Present Rice University- Summa Cum Laude  
07/2001 - Present Fulbright Enterprise Award: outstanding Fulbright Fellowship recipient  
03/2007 - Present Institute of Biosciences and Bioengineering Annual Conference: Best graduate poster  
06/2009 - Present Medical Scientist Training Program Best Overall Performance in Medical School  
06/2009 - Present Election to Alpha Omega Alpha Honor Medical Society  
06/2009 - Present American Medical Women's Association Glasgow-Rubin Certificate of Commendation for Academic Achievement  
09/2014 - Present American Society for Surgery of the Hand Annual Meeting Scholarship  
01/2015 - Present Best Scientific Paper, "Schwann cell senescence: a key role in reducing axon regeneration," American Society for Peripheral Nerve Annual Meeting, Paradise Island, Bahamas  
09/2015 - Present American Society for Surgery of the Hand Annual Meeting Scholarship  
05/2017 - Present Midwest Association of Plastic Surgery Best Clinical Presentation

06/2017 - Present James Barret Brown Resident Research Day Best Presentation

**MEMBERSHIPS IN HONORARY AND PROFESSIONAL SOCIETIES:**

01/2014 - Present American Society of Plastic Surgeons  
09/2015 - Present American Society for Surgery of the Hand  
09/2018 - Present Plastic Surgery Research Council

**EDITORSHIPS/EDITORIAL BOARDS/JOURNAL REVIEWS:**

Journal Review  
01/2008 - Present Stem Cells, Transplantation, Acta Biomaterialia, Tissue Engineering

**NATIONAL ELECTED/APPOINTED LEADERSHIP AND COMMITTEE POSITIONS:**

05/2014 - 05/2017 ASPS Research Development Committee, member  
05/2014 - Present ASPS Researcher Education Committee, Co-chair of Scholarships sub-committee  
06/2017 - Present PSRC Newsletter Committee, member  
06/2017 - Present PSRC Bylaws Committee, member

**RESEARCH GRANTS/AWARDS/CONTRACTS/PROJECTS:**

**Prior**

Peer Review

Title: Vasculogenesis, Schwann cells, and senescence in long acellular nerve allografts  
Source: PSF-ASPN  
Role & Effort: Co-Principal Investigator  
Dates: 07/01/2014 - 07/01/2015  
Direct Funds: \$10,000

Title: Assessing burdens to axonal regeneration across nerve autografts  
Source: PSF-ASPN  
Role & Effort: Co-Principal Investigator  
Dates: 07/01/2015 - 07/01/2016  
Direct Funds: \$10,000

**INVITED LECTURES/WORKSHOPS/PRESENTATIONS:**

National

Hoben G. "Blood, sweat, and tears of finding a job." Plastic Surgery Foundation Research Fundamentals Workshop: Durham, - 05/06/2017

Local

Hoben G. "Targeted muscle reinnervation: plugging sensory nerves into motor nerves for pain control?" Pain Research Symposium, podium presentation: Milwaukee, - 10/16/2018

**PEER REVIEWED WORKSHOPS/PRESENTATIONS:**

National

Hoben G, Ee X, Schellhardt L, Yan Y, Hunter D, Moore AM, Snyder-Warwick A, Stewart S, Mackinnon SE, Wood M. "A bronze standard: Nerve autografts and Schwann cell senescence." American Society for Peripheral Nerve, podium presentation: Scottsdale, - 01/15/2016  
Hoben G, Xueping Ee, Amy M Moore, Alison Snyder-Warwick, Susan E Mackinnon, Matthew D Wood. "Examining reduced regeneration with increasing length in nerve autografts." American Society for Surgery of the Hand, podium presentation: Austin, - 09/29/2016  
Hoben G, Ee X, Prange L, Hunter D, Moore AM, Stewart S, Mackinnon SE, Wood M. Notch signalling in senescent Schwann cells: a target for improving nerve regeneration. Plastic Surgery Research Council,

- podium presentation: Seattle, - 05/14/2015
- Poppler L, Ee X, Prange L, Hoben G, Hunter D, Yan Y, Stewart S, Mackinnon SE, Wood M. Cellular senescence onset coincides with axonal regeneration arrest in long acellular nerve grafts. Plastic Surgery Research Council, podium presentation: Seattle, - 05/14/2015
- Hoben G, Ee X, Prange L, Hunter D, Moore AM, Stewart S, Mackinnon SE, Wood M. Notch signalling in senescent Schwann cells: a target for improving nerve regeneration. American Association of Plastic Surgeons, podium presentation: Scottsdale, - 04/11/2015
- Hoben G, Ee X, Moore AM, Wu Y, Newton P, Hunter D, Johnson P, Stewart S, Wood M, Mackinnon SE. "Schwann cell senescence: a key role in reducing axon regeneration." American Society for Peripheral Nerve, podium presentation: Paradise Island, - 01/23/2015
- Hoben G, Varmun R, James A, Juknis N, Ruvinskaya R, Novak C, Davidge K, Kahn L, Mackinnon S, Fox IK. "Nerve transfers to restore hand function in cervical spinal cord injury: A more appealing and accessible option for patients?" American Society for Peripheral Nerve, podium presentation: Para, - 01/23/2015
- Hoben G, Yan Y, Iyer N, Newton P, Hunter D, Moore A, Sakiyama-Elbert S, Wood M, Mackinnon SE. "Returning what is lost: Schwann cell versus VEGF addition to acellular nerve allografts." American Society for Surgery of the Hand, podium presentation: Boston, - 01/18/2014
- Hoben G, Wu Y, Newton P, Ee X, Hunter D, Moore AM, Stewart S, Johnson P, Wood M, Mackinnon SE. "Senescent Schwann cells inhibit nerve regeneration in a short conduit model." Plastic Surgery Research Council, podium presentation: New York City, - 05/07/2014
- Patel K, Hoben G, Skolnick G, Naidoo S, Smyth M, Woo A. "Endoscopic assisted management of sagittal synostosis: wide vertex suturectomy and barrel stave osteotomies versus narrow vertex suturectomy." American Society of Plastic Surgeons, podium pres, - 10/11/2013
- Hoben G, Koay EK, Athanasiou KA. "Fibrochondrogenesis in two embryonic stem cell lines: Effects of differentiation timelines." Biomedical Engineering Society Conference, poster presentation: Los Angeles, - 09/26/2007
- Hoben G, Athanasiou KA. "Fibrocartilage tissue engineering with diverse cell sources, " Keystone Symposia: Tissue Engineering and Development, poster presentation: Snowbird, - 04/12/2007
- Hoben G, Hu J, Athanasiou KA "Self assembly of meniscal fibrochondrocytes for tissue engineering of the knee meniscus." Biomedical Engineering Society Conference, podium presentation: Baltimore, - 09/28/2005
- Möbest D, Jaeger M, Hoben G, Hamann D, Wollner S, Stark GB. "Carbon source has considerable influence on extracellular matrix formation demonstrated by specific collagen expression in primary human tenocytes." European Society of Animal Cell Culture, - 05/11/2003
- Hoben G, Xueping Ee, Amy M Moore, Alison Snyder-Warwick, Susan E Mackinnon, Matthew D Wood. "Disparities in senescence and protein expression in nerve autografts and injured nerve, " Plastic Surgery Research Council, podium presentation: Durham, - 05/04/2017
- Hoben G, Hunter D, Juknis N, Ruvinskaya R, Novak C, Davidge K, Kahn L, Mackinnon S, Fox IK. "Histomorphometric analysis of recipient nerve tissue in the setting of late nerve transfer after cervical spinal cord injury." American Society for Peripheral Nerve, podium presentation: Scot, - 01/15/2016

### **Regional**

- Hoben G, Xueping Ee, Amy M Moore, Alison Snyder-Warwick, Susan E Mackinnon, Matthew D Wood. "Disparities in senescence and protein expression in nerve autografts and injured nerve, " Midwestern Association of Plastic Surgeons, podium presentation: Chicago, IL. 2017

## **BIBLIOGRAPHY**

### **Refereed Journal Publications/Original Papers**

1. Hoben G, Ee X, Schellhardt L, Yan Y, Hunter D, Moore A, Snyder-Warwick A, Stewart S, Mackinnon S, Wood MD. Increasing nerve autograft length increases senescence and reduces regeneration. *Plastic and Reconstructive Surgery*. Plastic and Reconstructive Surgery: 2018, 142(4):952-961.
2. Fox IK, Novak CB, Krauss EM, Hoben G, Zaidman C, Ruvinskaya R, Juknis N, Winter AC, Mackinnon SE. The use of nerve transfers to restore upper extremity function in cervical spinal cord injury. *PM & R*: 2018, 15: [epub ahead of print]
3. Poppler L, Ee X, Schellhardt L, Hoben G, Pan D, Hunter D, Yan Y, Moore A, Snyder-Warwick A, Stewart S,

- Mackinnon SE, Woor MD. Axonal growth arrests after an increased accumulation of Schwann cells expressing senescence markers and stromal cells in acellular nerve allografts. *Tissue Engineering Part A*: 2016, 22(13): 946-61.
4. Dlouhy B, Nguyen D, Patel K, Hoben G, Skolnick G, Naidoo S, Woo A, Smyth M. Endoscopic assisted management of sagittal synostosis- wide vertex suturectomy and barrel stave osteotomies versus narrow vertex suturectomy. *Journal of Pediatric Neurosurgery*: 2016, 25(6): 674-78.
  5. Farber SJ, Hoben G, Hunter DA, Yan Y, Johnson PJ, Mackinnon SE, Wood MD. Vascularization is delayed in long nerve constructs compared to nerve grafts. *Muscle Nerve*: 2016, 54(2): 319-21.
  6. Fox IK, Davidge KM, Novak CB, Hoben G, Kahn LC, Juknis N, Ruvinskaya R, Mackinnon SE. Nerve transfers to restore upper extremity function in cervical spinal cord injury: Update and preliminary outcomes. *Plastic and Reconstructive Surgery*: 2015, 136(4): 780-92.
  7. Hoben G, Yan Y, Iyer N, Newton P, Hunter D, Moore A, Sakiyama-Elbert S, Wood M, Mackinnon SE. Comparison of acellular nerve allograft modification with Schwann cells or VEGF. *HAND*: 2015, 10(3), 396-402.
  8. Fox IK, Davidge K, Novak C, Hoben G, Kahn L, Juknis N, Ruvinskaya R, Mackinnon SE. Use of peripheral nerves transfers in tetraplegia: evaluation of feasibility and morbidity. *HAND*: 2015, 10(1), 60-67.
  9. Hoben G, Schmidt VJ, Bannasch H, Horch RE. Tissue augmentation with fibrin sealant and cultured fibroblasts: a preliminary study. *Aesthetic Plastic Surgery*: 2011, 35(6), 1009-15.
  10. Hoben G, Willard V, Athanasiou KA. Fibrochondrogenesis of hESCs: Growth factor combinations and co-cultures. *Stem Cells and Development*: 2009, 18(20), 283-92.
  11. Hoben G and KA Athanasiou. Use of staurosporine, an actin modifying agent, to enhance fibrochondrocyte matrix gene expression and synthesis. *Cell and Tissue Research*: 2008, 334(3), 469-76.
  12. Hoben G, Koay EJ, Athanasiou KA. Fibrochondrogenesis in two embryonic stem cell lines: Effects of differentiation timelines. *Stem Cells*: 2008, 26(2), 422-30.
  13. Hoben G and KA Athanasiou. Creating a spectrum of fibrocartilages through different cell sources and biochemical stimuli. *Biotechnology and Bioengineering*: 2008, 100(3), 587-598.
  14. Hoben G, Koay EJ, Athanasiou KA. Scaffoldless cartilage tissue engineering with chondrogenically-differentiated human embryonic stem cells. Invention disclosure and patent application, 2007.
  15. Koay EJ, Hoben G, Athanasiou KA. Tissue engineering with chondrogenically-differentiated human embryonic stem cells. *Stem Cells*: 2007, 25(9), 2183-90.
  16. Hoben G, James R, Hu J, Athanasiou KA. Self assembly of meniscal fibrochondrocytes for tissue engineering of the knee meniscus. *Tissue Engineering*: 2007, 13(5), 939-46.
  17. Hoben G, Athanasiou KA. Meniscal repair with fibrocartilage engineering. *Biomaterials in Sports Medicine Issue: Sports Medicine and Arthroscopy Review*: 2006, 14(3), 129-137.
  18. Vertrees T, Hoben G, Kobylivker A, Edwards C, Bott S, Barron A. Molecular structure of [(tBu)2Al( $\mu$ -OC6H4-2-Me)]<sub>2</sub>. *J. Chem. Cryst*: 2005, 35, 313.
  19. Hoben G, Huang W, Thoma BS, LeBaron RG, Athanasiou KA. Quantification of varying adhesion levels in chondrocytes using the cytodetacher. *Annals of Biomedical Engineering*: 2002, 30(5), 703-712.

### **Books, Chapters, and Reviews**

1. Hoben G and Snyder-Warwick A. "Nerve Transfers." Grabb and Smith's Plastic Surgery, 8th ed. Wolters Kluwer/ Lippincott, Williams, and Wilkins: 2018
2. Hoben G and Moore AM. "Neuropathies of the Wrist and Hand." *Orthopaedic Sports Medicine: Principles and Practice*, 5th ed. Elsevier: 2018
3. Hoben G and Patel K. "Plastic and Reconstructive Surgery." *The Washington Manual of Surgery*, 7th ed. Lippincott, Williams, and Wilkins: 2015.
4. Hoben G and Fox I. "Chest Wall Defect." *Plastic Surgery Case Review: Oral Board Study*. Thieme: 2014
5. Hoben G and Tenenbaum M. "Gynecomastia." *Plastic Surgery Case Review: Oral Board Study*. Thieme: 2014
6. Hoben G and Woo A. "Scalp Burn Reconstruction." *Plastic Surgery Case Review: Oral Board Study*. Thieme: 2014
7. Hoben G and Woo A. "Neck Burn Contracture." *Plastic Surgery Case Review: Oral Board Study*. Thieme: 2014

### **Non-Peer Reviewed Educational Products**

1. Hoben G, Moore AM, Wood M, Mackinnon SE. Schwann cell senescence: a new consideration in nerve repair and grafting. *American Society for Peripheral Nerve Newsletter*: 2013, 3(5), 8-10.
2. Hoben G, Moore AM, Wood M, Mackinnon SE. Schwann cell senescence: a new consideration in nerve repair

and grafting. World Society for Reconstructive Microsurgery Newsletter: 2013, 4(1), 6-7.