

BIOGRAPHICAL SKETCH

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NAME Suami, Hiroo eRA COMMONS USER NAME (credential, e.g., agency login) HSUAMI	POSITION TITLE Associate Professor Department of Clinical Medicine, Faculty of Medicine and Health Sciences, Macquarie University, Sydney, Australia		
EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)</i>			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	MM/YY	FIELD OF STUDY
Shinshu University School of Medicine, Nagano, Japan	MD	1991	Medicine
Keio University, Tokyo, Japan	Clinical Residency	1991	Plastic Surgery
National Cancer Center, Tokyo, Japan	Oncological Fellow	1993	Surgery
Keio University, Tokyo, Japan	PhD	1998	Plastic Surgery
The Royal Melbourne Hospital, Victoria, Australia	Post-Doctoral Research Fellow	2001	Reconstructive Plastic Surgery

A. Personal Statement

Dr. Suami (MD, PhD) trained in Japan as a reconstructive microsurgeon. He was admitted to the Japan Society of Plastic and Reconstructive Surgery in 1999. Dr Suami started lymphatic research in 2001 when he worked in the Reconstructive Microsurgery Research Unit at the University of Melbourne, Australia. Dr Suami developed a novel radiographic technique to demonstrate the lymphatic system in a cadaver model in 2003 and in 2005 he was awarded the Basic Science Award from the Plastic Surgery Education Foundation in the USA. In 2009, Dr Suami joined the Department of Plastic Surgery at the MD Anderson Cancer Centre in Houston, Texas as Assistant Professor and a director of the microsurgery research centre. Here he developed a large animal model for lymphoedema and assisted with indocyanine green fluorescence lymphography in over 250 surgical lymphoedema cases. Dr Suami was recruited to the Faculty of Medicine and Health Sciences at Macquarie University in 2015 and works with the Australian Lymphatic Education, Research and Treatment (ALERT).

B. Positions and Honors

Positions and Employment

1996-1997	Instructor, Plastic Surgery, Keio University, Tokyo, Japan
1997-2003	Instructor, Plastic Surgery, Kyorin University, Tokyo, Japan
2003-2005	Research Officer, Reconstructive Plastic Surgery Research Unit, The Royal Melbourne Hospital, Victoria, Australia

- 2005-2008 Research Officer, Anatomy and Cell Biology, Reconstructive Plastic Surgery Research Unit, The Royal Melbourne Hospital, Victoria, Australia
- 2009-2010 Clinical Research Program Coordinator, Department of Plastic Surgery, Division of Surgery, The University of Texas MD Anderson Cancer Center, Houston, TX
- 2010-2015 Assistant Professor, Department of Plastic Surgery, Division of Surgery, The University of Texas MD Anderson Cancer Center, Houston, TX
- 2015-present Associate Professor, Department of Clinical Medicine, Faculty of Medicine and Health Sciences, Macquarie University, Sydney, Australia

Honors

- 1999 Research Award, Junior, Japan Society of Plastic and Reconstructive Surgery
- 2005 PSEF Scientific Essay Contest, Basic Science Senior Award (the Annual Bernard G. Sarnat MD Awards)
- 2006 Best of the Best Poster Award (Co-author), 3rd Australian Health and Medical Meeting, Melbourne
- 2007 Winner of the Best Oral Presentation Award (Co-author), 9th Annual Scientific Meeting, Australian and New Zealand Head and Neck Society, Brisbane
- 2009 Research Award, Basic Science Category, Japan Society of Plastic and Reconstructive Surgery
- 2012 Mitsumasa Nishi, MD Incentive Award, The Japanese Society of Lymphology
- 2016 Winner of the Best Research Poster Award, Australian and New Zealand Association of Clinical Anatomy, Canberra

Professional Memberships

- 1991 Japan Society of Plastic and Reconstructive Surgery, Japan
- 1999 International Confederation for Plastic, Reconstructive and Aesthetic Surgery
- 2006 International Society of Lymphology
- 2007 International Sentinel Node Society
- 2007 Japanese Society of Lymphology
- 2009 American Association of Clinical Anatomists
- 2011 American Association of Anatomists
- 2011 Plastic Surgery Research Council
- 2013 Committee Member, Japanese Society of Lymphology, Japan
- 2013 World Society for Reconstructive Microsurgery

C. Selected Peer-reviewed Publications

1. Suami H, Taylor GI, Pan WR. A New Radiographic Cadaver Injection Technique for Investigating the Lymphatic System. *Plast Reconstr Surg* 115(7):2007-13, 6/2005.
2. Suami H, Taylor GI, Pan WR. The Lymphatic Territories of the Upper Limb: Anatomical Study and Clinical Implications. *Plast Reconstr Surg* 119(6):1813-22, 5/2007.

3. Suami H, Taylor GI, O'Neill J, Pan WR. Refinements of the Radiographic Cadaver Injection Technique for Investigating Minute Lymphatic Vessels. *Plast Reconstr Surg* 120(1):61-7, 7/2007.
4. Suami H, Pan WR, Taylor GI. Changes in the Lymph Structure of the Upper Limb after Axillary Dissection: Radiographic and Anatomical Study in a Human Cadaver. *Plast Reconstr Surg* 120(4):982-91, 9/2007.
5. Suami H, Pan WR, Taylor GI. The Lymphatics of the Skin Filled by a Dermal Backflow: An Observation in a Scarred Cadaver Leg. *Lymphology* 40(3):122-6, 9/2007.
6. Suami H, O'Neill JK, Pan WR, Taylor GI. Perforating Lymph Vessels in the Canine Torso: Direct Lymph Pathway from Skin to the Deep Lymphatics. *Plast Reconstr Surg* 121(1):31-6, 1/2008.
7. Suami H, Pan WR, Mann GB, Taylor GI. The Lymphatic Anatomy of the Breast and its Implications for Sentinel Lymph Node Biopsy: A Human Cadaver Study. *Ann Surg Oncol* 15(3):863-71, 3/2008. e-Pub 11/2007. PMID: PMC2234450.
8. Suami H, O'Neill JK, Pan WR, Taylor GI. Superficial Lymphatic System of the Upper Torso: Preliminary Radiographic Results in Human Cadavers. *Plast Reconstr Surg* 121(4):1231-9, 4/2008.
9. Pan WR, Suami H, Taylor GI. Lymphatic Drainage of the Superficial Tissues of the Head and Neck: Anatomical Study and Clinical Implications. *Plast Reconstr Surg* 121(5):1614-24; discussion 1625-6, 5/2008.
10. Pan WR, Suami H, Rozen WM, Taylor GI. Computed Tomography in the Management of Cervical Lymph Node Pathology. *J Plast Reconstr Aesthet Surg* 61(10):1244-5, 10/2008. e-Pub 6/2008.
11. Pan WR, Suami H, Taylor GI. Senile Changes in Human Lymph Nodes. *Lymphat Res Biol* 6(2):77-83, 2008.
12. Pan WR, Suami H, Corlett RJ, Ashton MW. Lymphatic Drainage of the Nasal Fossae and Nasopharynx: Preliminary Anatomical and Radiological Study with Clinical Implications. *Head Neck* 31(1):52-7, 1/2009.
13. Suami H, Pan WR, Taylor GI. Historical Review of Breast Lymphatic Studies. *Clin Anat* 22(5):531-6, 7/2009.
14. Suami H, Chang DW. Overview of Surgical Treatments for Breast Cancer-Related Lymphedema. *Plast Reconstr Surg* 126(6):1853-1863, 12/2010.
15. Suami H, Chang DW, Yamada K, Kimata Y. Use of Indocyanine Green Fluorescent Lymphography for Evaluating Dynamic Lymphatic Status. *Plast Reconstr Surg* 127(3):74e-76e, 3/2011.
16. Suami H, Chang DW, Matsumoto K, Kimata Y. Demonstrating the Lymphatic System in Rats With Microinjection. *Anat Rec (Hoboken)* 294:1566-1573. e-Pub 8/2011.
17. Mehrara BJ, Zampell JC, Suami H, Chang DW. Surgical Management of Lymphedema: Past, Present and Future. *Lymphat Res Biol* 9(3):159-67, 2011.
18. Suami H, Shin D, Chang DW. Mapping of Lymphosomes in the Canine Forelimb: Comparative Anatomy Between Canines and Humans. *Plast Reconstr Surg* 129(3):612-20, 3/2012.
19. Otsuki Y, Yamada K, Hasegawa K, Kimata Y, Suami H. Overview of Treatments for Male Genital Lymphedema: Critical Literature Review and Anatomical Considerations. *Plast Reconstr Surg* 129(4):767e-9e, 4/2012.
20. Yamaguchi K, Kimata Y, Yamada K, Suami H. Peripheral Venous Angle Plasty: A New Lymphovenous Anastomosis Technique for Lower Extremity Lymphedema. *Plast Reconstr Surg* 130(1):233e-5e, 7/2012.
21. Yamazaki S, Suami H, Imanishi N, Aiso S, Yamada M, Jinzaki M, Kuribayashi S, Chang DW, Kishi K.

Three-Dimensional Demonstration of the Lymphatic System in the Lower Extremities with Multi-Detector-Row Computed Tomography: A Study in a Cadaver Model. *Clin Anat* 26(2):258-66, 3/2013. e-Pub 1/2013.

22. Suami H, Yamashita S, Soto M, Chang D. Lymphatic Territories (Lymphosomes) in a Canine: An Animal Model for Investigation of Postoperative Lymphatic Alterations. *Plos One*. e-Pub 7/2013.
23. Buretta K, Brat G, Christensen J, Ibrahim Z, Grahammer J, Furtmuller G, Suami H, Cooney D, Lee W, Brandacher G, Sacks J. Near-Infrared Lymphography as a Minimally Invasive Modality for Imaging Lymphatic Reconstruction in a Rat Orthotopic Hind Limb Transplantation. *Transpl Int*. (10.1111/tri.12150). e-Pub 7/2013.
24. Soto MA, Saumi H, Chang DW. Mapping Superficial Lymphatic Territories in the Rabbit. *Anat Rec*. 296(6):965-70, 2013. PMID: 23613262.
25. Chang DW, Suami H, Skoracki R. A prospective analysis of 100 consecutive lymphovenous bypass cases for treatment of extremity lymphedema. *Plast Reconstr Surg*. *Plast Reconstr Surg* 132(5):1305-14, 2013. PMID: 24165613.
26. Ito R, Suami H. Overview of Lymph Node Transfer for Lymphedema Treatment. *Plast Reconstr Surg*. 134(3):548-556, 9/2014.
27. Karmali R, Suami H, Wood C, Karam JA. Lymphatic drainage in renal cell carcinoma: back to the basics. *BJU Int*. 114(6):806-817, 12/2014.
28. Mario F. Scaglioni, Hiroo Suami. Lymphatic Anatomy of the Inguinal Region in aid of Vascularized Lymph Node Flap Harvesting. *J Plast Reconstr Aesthet Surg*. 63(3):419-427, 3/2015.
29. Nguyen A, Suami H. Laparoscopic Free Omental Lymphatic Flap for the Treatment of Lymphedema. *Plast Reconstr Surg* 136(1):114-118, 7/2015.
30. Nguyen A, Chang EI, Suami H, Chang DW. Prospective Analysis of an Algorithmic Approach to Simultaneous Vascularized Lymph Node Transfer with Microvascular Breast Reconstruction. *Ann Surg Oncol*, 22(9):2919-2924, 9/2015.
31. Ito R, Suami H. Lymphatic territories (lymphosomes) in swine, an animal model for future lymphatic research. *Plast Reconstr Surg* 136(2):297-304,8/2015.
32. Suami H, Schaverien MV. Swine Hind Limb Model for Supermicrosurgical Lymphaticovenular Anastomosis Training *Journal of Plastic,Reconstructive & Aesthetic Surgery*.69(5):723-5, 5/2016
33. Chang EI, Amir I, Nguyen AT, Suami H, Yu P. Perforator Mapping and Optimizing Design of the Lateral Arm Flap: Anatomy Revisited and Clinical Experience. *Plast Reconstr Surg* 138(2):300e-6e, 8/2016
34. Suami H, Scaglioni MF, Dixon KA, Taylor RC. Interaction between vascularized lymph node transfer and recipient lymphatics after lymph node dissection- a pilot study in a canine model. *J Surg Res* 204:418-427,2016.
35. Suami, H. Lymphosome Concept: Anatomical Study of the Lymphatic System. *J Surg Oncol* 115(1):13-17;2017.
36. Nguyen AT, Suami H, Hanasono MW, Womack VA, Wong FC, Chang EI. Long-term Outcomes of the Minimally Invasive Free Vascularized Omental Lymphatic Flap for the Treatment of Lymphedema. *J Surg Oncol* 115(1):84-89;2017.

37. van Zanten MC, Mistry R, Suami H, Campbell-Lloyd A, Finkmeyer J, Piller N, Caplash Y. The lymphatic response to injury with soft tissue reconstruction in high-energy open tibial fractures of the lower extremity. *Plast Reconstr Surg* 139(2):483-491;2017.
38. Sen Y, Qian Y, Koelmeyer L, Ricketts R, Borotkanics R, Mackie H, Lam, T, Shon KH, Suami H, Boyages J. Breast Cancer Related Lymphoedema: differentiating fat from fluid using MRI segmentation. *Lymphatic Res Biol* 16(1):20-29;2018.
39. Suami H, Scaglioni MF. Lymphatic Territories (Lymphosomes) in the Rat: an Anatomical Study for Future Lymphatic Research. *Plast Reconstr Surg* 140(5):945-951;2017.
40. Schaverien MV, Butler CE, Suami H, Liu J, Selber JC. Comparison of lie rat femoral artery model with intraoperative microvascular anastomosis. *J Reconstr Microsurg* 33(9):641-648;2017.
41. Schaverien MV, Butler CE, Suami H, Garvey PB, Liu J, Selber JC. Interview scores correlate with fellow microsurgical skill and performance. *J Reconstr Microsurg* 34(3):211-217;2018.
42. Shinaoka A, Koshimune S, Yamada K, et al. A fresh cadaver study on indocyanine green fluorescence lymphography: A new whole body imaging technique for investigating the superficial lymphatics. *Plast Reconstr Surg* 141(5):1161-1164;2018.
43. Matsumoto K, Kosaka J, Suami H, Kimata Y. Enhancement of lymphatic vessels in the superficial layer in a rat model of a lymphedematous response. *Plast Reconstr Surg Glob Open* 25;6:e1770:2018.
44. Suami H, Scaglioni M. Anatomy of the lymphatic system and the lymphosome concept with reference to lymphoedema. *Semin Plast Surg.* 32:5-11;2018.
45. Suami, H; Heydon-White, A; Mackie, H; Koelmeyer, L.A; Boyages, J. Cryogenic Numbing to Reduce Injection Discomfort during Indocyanine Green Lymphography. Submitted to *Journal of Reconstructive Microsurgery* 2018 [e-pub ahead of print]
46. Suami H, Koelmeyer L, Mackie H, Boyages J. Patterns of lymphatic drainage after axillary node dissection impact arm lymphoedema severity: a review of animal and clinical imaging studies. *Surg Oncol* 27:743-750:2018.
47. Flores-Arredondo J, Vergara L, Saucedo AM, Cerda JDL, Suami H, Serda R. Multimodal imaging of the tumor microenvironment and biological responses to immune therapy. *Biomed Microdevices* 2018 [e-pub ahead of print]
48. Ngo Q, Suami H, Koelmeyer L, Mackie H, Munot S, Heydon-White A, Boyages J. Is lymphatic reconstitution possible after meshed skin grafting? *Lymphology* 51:132-135;2018.

D. Book Chapters

1. Suami H, Pan WR, Taylor GI. Redefined lymphatic anatomy of the breast with clinical implications. In: *From Local Invasion to Metastatic Cancer: Involvement of Distant Sites through the Lymphovascular System*. Humana Press: New Jersey, USA, 45-55, 2009.
2. Suami H. Anatomy of the lymphatic system in extremities. In: *Clinical Textbook of Lymphedema*. Ed(s) Koshima S. Nagai Syoten: Tokyo, 19-27, 2011.
3. Suami H, Chang DW. Surgical Treatment for Lymphedema. In: *Advanced Therapy of Breast Disease*, 3rd, Chapter 47. Ed(s) Babiera GV, Skoracki RJ, Esteva FJ. People's Medical Publishing House: Shelton, Connecticut, 743-751, 2012.

4. Chang DW, Suami H, Skoracki R. Chapter 49. A Prospective Analysis of 100 Consecutive Lymphovenous Bypass Cases for Treatment of Extremity Lymphedema: 50 Studies Every Plastic Surgeon Should Know. Ed Hultman CS. CRC Press, 313-318, 2014.
5. Suami H. Controversies in the treatment of lymphedema. In: Microsurgery for lymphedema. Ed(s) Cheng M, Chang D, Patel K. Elsevier. 17-24, 2015.
6. Suami H. Anatomy and physiology of the lymphatic system and pathophysiology of the breast cancer related lymphedema. In: Oncologic Breast Reconstruction. Ed(s) Wu J, Yu P. People's Medical Publishing House, Beijing, China. 382-390, 2016.
7. Yamazaki S, Suami H, Imanishi N, Aiso S, Yamada M, Jinzaki M, Kuribayashi S, Chang DW, Kishi K. Lymphatics of the lower limb. In: Bergman's comprehensive encyclopedia of human anatomic variation. Ed(s) Tubbs RS, Shoja MM, Loukas M. John Wiley & Sons, Inc. Hoboken, NJ. 935-938, 2016.
8. Suami H, Lee BB. Embryological background of CVM. In: Congenital vascular malformations: a comprehensive review of current management. Ed(s) Kim YM, Lee BB, Yakes WF, Do YS. Springer-Verlag Berlin Heidelberg, 7-14, 2017.
9. Suami H, Kato S. Anatomy of the Lymphatic System and Its Structural Disorders in Lymphoedema. In: Lymphedema: A Concise Compendium of Theory and Practice. Ed(s) Lee BB, Rockson SG. Springer, Netherland. 57-78, 2018.
10. Ly CL, Verma R, Dayan JH, Suami H, Mehrara BJ. Lymphedema: Anatomy, Pathophysiology, Evaluation, and Treatment Algorithm. In Problem-Solving in Reconstructive Surgery. Ed(s) Hanasono M, Mardini S, St-Cyr M, Moran S. CRC Press, St Louis, (In press).

E. Books (edited and written)

1. Kato S, Suami H. New Lymphology. Kinpo-Do, Kyoto, Japan. February 2015.