

PROMOTION RECOMMENDATION  
THE UNIVERSITY OF MICHIGAN  
MEDICAL SCHOOL  
DEPARTMENT OF SURGERY

Michael S. Sabel, M.D., associate professor of surgery, with tenure, Department of Surgery, Medical School, is recommended for promotion to professor of surgery, with tenure, Department of Surgery, Medical School.

Academic Degrees:

M.D.	1992	Temple University School of Medicine
B.S.	1988	Pennsylvania State University

Professional Record:

2007-present	Associate Professor of Surgery, University of Michigan
2001-2007	Assistant Professor of Surgery, University of Michigan
1999-2001	Instructor, State University of New York, Buffalo

Summary of Evaluation:

Teaching: Dr. Sabel is a devoted teacher and mentor for medical students, residents, fellows, nursing staff and junior faculty. He lectures on topics such as tumor immunology, breast cancer, melanoma, management of clinical trials and careers in surgery. Dr. Sabel dedicates 200 hours per year with medical students providing the required didactics as the M3 coordinator for the surgical oncology service, overseeing the M4 rotations and mentoring the SCRUBS student group with interests in surgery careers. Resident education involves 800 hours per year of lectures and instruction in the clinic and operating rooms, as well as in the research field. Dr. Sabel additionally spends 100 hours per year training the breast surgery fellow, including teaching in the OR and clinic, holding regular didactic lectures, and providing mentorship, and he was responsible for designing and developing the breast surgery fellow curriculum with Dr. Jacqueline Jeruss. Medical students, residents and fellows consider Dr. Sabel very knowledgeable and a skilled surgeon, ranking him near superior in overall rating. His educational leadership duties include providing CME lectures to nursing staff and faculty, organizing a yearly course in cancer updates with community physicians and serving as a faculty lecturer at many national society symposiums. Using the most advanced methods in educating the trainees is Dr. Sabel's forte. As the director of the Michigan Peri-Operative Wireless Education Resource (M-POWER), he designs and develops pre-tests, training modules and post-tests for on-line curriculum. Additional examples of national educational activities include membership and chairing educational committees with the Society of Clinical Oncology and Society of Surgical Oncology.

Research: Dr. Sabel's research is focused on the immunology of cancer cell death and studying the intratumoral cytokine release in non-thermal and thermal tumor ablation. His laboratory has demonstrated the thermal cyroablation effects on breast cancer in situ generated the anti-tumor immune response which has led to clinical trials and the development of a start-up company for

the translation to clinical use. After review of the clinical trials data, further research demonstrated how the different types of cell deaths impact the immune response and how changes in the cryoablative technique can impact the ratio of necrosis to apoptosis and hence immune stimulation versus suppression. Dr. Sabel is recognized as the international expert on this subject of cryoimmunology and cryosurgery as demonstrated by multiple highly-cited publications. Biomarkers in oncology is another research interest where he interacts with variety of collaborative researchers within the University of Michigan and at peer institutions. One example is conducting research using glycoprotein microarrays on serum samples from melanoma patients that are used to identify antibodies to help predict regional metastases. Collaboration with the Morphomics Analysis Group has led to the discovery of how the body also affects the tumors, such as certain types of fat measurements inhibit immunotherapy in stage III melanoma. He works with a team that has created multiple tissue microarrays from breast tumors for discovery and testing biomarkers used by basic and translational scientists. Innovation and the use of novel technologies, such as the M-POWER education resource, are important parts of Dr. Sabel's research. He developed mobile apps such as the UMSkinCheck for early detection of melanoma and BreastCancerAlly for patients with breast cancer. Other patient educational apps are being developed in collaboration with industrial partnerships. Dr. Sabel has over 134 peer-reviewed publications in the leading journals such as *Annals of Surgical Oncology* and *Journal of Proteome Research*, four books and 38 book chapters. He received the most highly cited article published in *Annals of Surgical Oncology* in 2005 which is still relevant and has recently renewed interests in cryoimmunology. Dr. Sabel has a history of being the principal investigator and co-investigator on NIH and foundation grants that have funded his translational research and clinical trials. He collaborates with the Center for Health Communications, CanSORT, Institute for Healthcare Policy and Innovation and Biomedical Engineering. For the past 11 years, he has participated in ad hoc peer-review service with the Department of Defense Congressionally Directed Medical Research Programs and the Susan G. Komen Breast Cancer Foundation. He has accepted 10 visiting professorships across the United States and China. Additionally, he has given keynote addresses and invited presentations at numerous national society symposiums. Dr. Sabel is currently on the editorial board for *Immunotherapy*, *Journal of Surgical Oncology*, *Technology in Cancer Research and Treatment*, and *The Breast Journal*.

#### Recent and Significant Publications:

Liu Y, He J, Xie X, Su G, Teitz-Tennenbaum S, Sabel MS, Lubman DM: Serum autoantibody profiling using a natural glycoprotein microarray for the prognosis of early melanoma. *J Proteome Res* 9:6044-6051, 2010.

Sabel MS, Su G, Griffith KA, Chang AE: Rate of freeze alters the immunologic response after cryoablation of breast cancer. *Ann Surg Oncol* 17:1187-1193, 2010.

Sabel MS, Lee J, Cai S, Englesbe MJ, Holcombe S, Wang S: Sarcopenia as a prognostic factor among patients with stage III melanoma. *Ann Surg Oncol* 18:3579-3585, 2011.

Simmons R, Cox C, Carp N, Sabol J, Hwang R, Attai D, Sabel M, Kenler A, et al.: A phase II trial exploring the success of cryoablation therapy in the treatment of invasive breast carcinoma: Results from ACOSOG (Alliance) Z1072. *Annals of Surgical Oncology* 23:2438-2445, 2016.

Sabel MS, Dal Cin S: Trends in media reports of celebrities' breast cancer treatment decisions. *Ann Surg Oncol* 23:2795-2801, 2016.

Service: Dr. Sabel serves this institution in leadership positions such as the director of the Michigan Peri-Operative Wireless Education Resource (M-POWER) developing a repository of surgical learning modules and videos. He is the chair for the Cancer Work Group, chair for the Oncology Care Model Documentation Work Group and committee member for several university, Medical School and cancer center committees covering innovation, education, leadership, patient care and research. His professional contributions at the national level include his work on the Board of Directors for the American College of Cryosurgery, the Constitutional and By-Laws Committee and Education Committee for the American College of Surgeons Oncology Group, and several other committees with national societies. His expertise is nationally recognized by his membership in several prominent societies including the prestigious election to the American Surgical Association and the Society of University Surgeon with its criteria "given to persons of well-established professional position and demonstrated scholarly or creative ability that positively impacts their field." Dr. Sabel is an esteemed member of editorial boards with several journals and provides national grant peer-review service. Dr. Sabel is the division chief for surgical oncology and the medical director of the Cancer Center Gold Team Ambulatory Care Unit. He specializes in breast and melanoma cancer treatments and is internationally recognized as an expert in cryoimmunology. His expertise is demonstrated by the multiple top doctor honors from national and regional publications and councils that he receives annually. Dr. Sabel is an excellent role model for his skillful surgical techniques, knowledge base, and compassion towards patients.

External Reviewers:

Reviewer A: "Dr. Sabel is highly regarded among experts in the field of breast cancer and melanoma. He has a highly productive research lab with a strong focus looking at the immunological impact associated with cryoablation."

Reviewer B: "Michael would have been promoted a long time ago at [my institution] and they would probably have given him my job as division chief based on his scholarly accomplishments and international reputation. He was also just elected to the American Surgical Association, this nation's oldest and most prestigious surgical society, an honor conferred on leaders in American Academic Surgery and rarely for someone not having yet obtained the rank of full professor."

Reviewer C: "He is a national expert on cryosurgery for breast cancer...His most important roles have been on the Experimental Cancer Therapeutics Study Section of the NCI, and as a member of the editorial board of the Journal of Clinical Oncology. He has worked as [a] reviewer for the Komen Foundation and has had extensive time on the editorial boards of the Journal of Surgical Oncology and Immunotherapy..."

Reviewer D: "He has one hundred and thirty-two peer-reviewed publications with a major interest in cancer immunology, melanoma, breast cancer and more recently morphomics in oncology. It is certainly not an over statement to say that Dr. Sabel is a world authority in each of these areas....There is no doubt in my mind that he can be relied on to continue gaining prominence in the field."

Reviewer E: “He has contributed significant work to the medical literature especially with regard to immune aspects of cancer treatments and clinical strategies involving the surgical management of patients with breast cancer and melanoma in the current era of effective systemic therapies. He has a national reputation as a talented clinical surgeon and an academic educator.”

Reviewer F: “...Dr. Sabel is a recognized leader and educator in the field. He has taught at international symposiums, regional courses, and has served as a medical student lecturer for sixteen years. Dr. Sabel sits on numerous councils and boards in prominent surgical societies and institutional committees....He is a remarkable researcher, leader, and educator.”

Summary of Recommendation:

Dr. Sabel is an internationally renowned expert with seminal contributions in the area of immunology oncology research. He is highly recognized by his peers as an excellent clinician, surgeon and educator. I am pleased to recommend Michael S. Sabel, M.D. for promotion to professor of surgery, with tenure, Department of Surgery, Medical School.

A handwritten signature in cursive script, reading "Marschall S. Runge". The signature is written in dark ink and is positioned above a horizontal line.

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Marschall S. Runge, M.D., Ph.D.  
Executive Vice President for Medical Affairs  
Dean, Medical School

May 2018