

PROMOTION RECOMMENDATION
THE UNIVERSITY OF MICHIGAN
MEDICAL SCHOOL
DEPARTMENT OF INTERNAL MEDICINE

Approved by the
Regents
May 21, 2015

Amr H. Sawalha, M.D., associate professor of internal medicine, with tenure, Department of Internal Medicine, Medical School, is recommended for promotion to professor of internal medicine, with tenure, Department of Internal Medicine, Medical School.

Academic Degrees:

M.D.	1998	Jordan University of Science and Technology, Irbid, Jordan
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Professional Record:

2012-present	Associate Professor of Internal Medicine, University of Michigan
2010-2012	Adjunct Associate Professor of Pathology, University of Oklahoma
2010-2012	Associate Professor of Medicine, University of Oklahoma
2008-2010	Adjunct Assistant Professor of Pathology, University of Oklahoma
2005-2010	Assistant Professor of Medicine, University of Oklahoma

Summary of Evaluation:

Teaching: Dr. Sawalha has played a significant role in education throughout his professional career and at the University of Michigan. He contributes to teaching students at all training levels including undergraduate students, post-doctoral fellows, medical students, residents, junior faculty, and rheumatology fellows rotating in the outpatient clinic and on the inpatient/consult service. He has taught visiting students from the U.S. and abroad, and senior faculty members from abroad that have spent time in his laboratory to receive training in specific research areas, such as in genomics. At Michigan, Dr. Sawalha is involved in didactic sessions with residents and grand rounds with rheumatology fellows, and has taught the Rheumatology/Musculoskeletal Sequence for medical students. In addition to mentoring his own research group, Dr. Sawalha is also an associate director for an NIH-funded training grant (T-32), Training of Arthritis Research Scientists. In recognition of his excellence in teaching, the American College of Rheumatology has awarded his students, and him as their mentor, the Medical Student Research Preceptorship Award (2008), and the Ephraim P. Engleman Endowed Resident Research Preceptorship Award (2012). In 2013, Dr. Sawalha became an affiliate faculty member of the Center for Computational Medicine and Bioinformatics (CCMB) Graduate Program. In the CCMB program, he participates in the dissertation exam committees, attends events and activities, and mentors and teaches Ph.D. students. In 2014, he also became a faculty member for the Graduate Program in Immunology at the Medical School where he will be teaching Immunology 851--Special Topics in Immunology for Immunology Ph.D. students.

Research: Dr. Sawalha has a distinguished research career focused on elucidating genetic and epigenetic contributions to the pathogenesis of systemic autoimmune and inflammatory rheumatic diseases. He has a strong record of funding, and currently holds one NIH R01 grant as the principal investigator, two NIH grants as a co-investigator, and is the principal investigator on a Lupus Research Institute grant. He has 69 peer-reviewed publications with a great number of them as first or senior author in top-tier journals such as *Nature Genetics*, the *American Journal of Human*

Genetics, the *Annals of the Rheumatic Diseases*, and *Arthritis & Rheumatism*. He also has eight book chapters as first or senior author, and 68 abstracts. As a testament to his expertise, Dr. Sawalha serves as a journal reviewer for many national and international journals, serves on numerous study sections, and reviews grants for multiple international agencies including the Dutch Arthritis Association, the Medical Research Council, and the Landsteiner Foundation for Blood Transfusion Research. His prominence as a leading investigator was further solidified when he was elected to membership in the American Society for Clinical Investigation in 2014.

Recent and Significant Publications:

Saruhan-Direskeneli G, Hughes T, Aksu K, Keser G, Coit P, Aydin SZ, Alibaz-Oner F, Kamali S, Inanc M, Carette S, Hoffman GS, Akar S, Onen F, Akkoc N, Khalidi NA, Koenig C, Karadag O, Kiraz S, Langford CA, McAlear CA, Ozbalkan Z, Ates A, Karaaslan Y, Maksimowicz-McKinnon K, Monach PA, Ozer HTE, Seyahi E, Fresko I, Cefle A, Seo P, Warrington KJ, Ozturk MA, Ytterberg SR, Cobankara V, Onat AM, Guthridge JM, James JA, Tunc E, Duzgun N, Bicakcigil M, Yentür SP, Merkel PA, Direskeneli H, Sawalha AH: Identification of multiple genetic susceptibility loci in Takayasu's arteritis. *American Journal of Human Genetics* 93:298-305, 2013.

Coit P, Jeffries M, Altorok N, Dozmorov MG, Koelsch KA, Wren JD, Merrill JT, McCune WJ, Sawalha AH: Genome-wide DNA methylation study suggests epigenetic accessibility and transcriptional poising of interferon-regulated genes in naïve CD4+ T cells from lupus patients. *Journal of Autoimmunity* 43:78-84, 2013.

Hughes T, Coit P, Adler A, Yilmaz V, Aksu K, Düzgün N, Keser G, Cefle A, Yazici A, Ergen A, Alpsyoy E, Salvarani C, Casali B, Kötter I, Gutierrez-Achury J, Wijmenga C, Direskeneli H, Saruhan-Direskeneli G, Sawalha AH: Identification of multiple independent susceptibility loci in the HLA region in Behçet's disease. *Nature Genetics* 45:319-324, 2013.

Altorok N, Tsou E, Coit P, Khanna D, Sawalha AH: Genome-wide DNA methylation analysis in dermal fibroblasts from patients with diffuse and limited systemic sclerosis reveals common and subset-specific DNA methylation aberrancies. *Annals of the Rheumatic Diseases* 2014 May 8. doi: 10.1136/annrheumdis-2014-205303. [Epub ahead of print]

Hughes T, Ture-Ozdemir F, Alibaz-Oner F, Coit P, Direskeneli H, Sawalha AH: Epigenome-wide scan identifies a treatment-responsive pattern of altered DNA methylation among cytoskeletal remodeling genes in monocytes and CD4+ T cells in Behçet's disease. *Arthritis & Rheumatology*. 2014 Feb 19. doi: 10.1002/art.38409. [Epub ahead of print].

Service: Dr. Sawalha is active in clinical care. He sees patients in the rheumatology clinic, and serves regularly on the inpatient rheumatology consult service with coverage at both the University Hospital and the Ann Arbor Veterans Administration Medical Center. His clinical focus has been on systemic vasculitis with a particular interest in Behçet's disease. He has important and significant national service as a member of the Medical Scientific Advisory Council of the Lupus Foundation of America, and the Vasculitis Foundation Medical and Scientific Advisory Board. In addition, he serves on the editorial boards for *The Open Autoimmunity Journal*, the *Journal of Clinical & Cellular Immunology*, and *Clinical Immunology*. He is also the academic editor for *PLoS One*, and an advisory board member for *Translational Research*.

External Reviewers:

Reviewer A: "When evaluating the overall impact of his work, I would place Dr. Sawalha in the very top rank of individuals within his scientific area, and certainly his work has had substantial impact on the field."

Reviewer B: "In my view, Dr. Sawalha's scholarly activities and his recognition as a leading national and international expert in the immunogenetics and epigenetics of autoimmunity rank him among the experts in this field, certainly justify an appointment to the rank of professor...Dr. Sawalha has become acknowledged by his peers in the United States and abroad as an expert in the field of Rheumatology, particularly in Immunogenetics..."

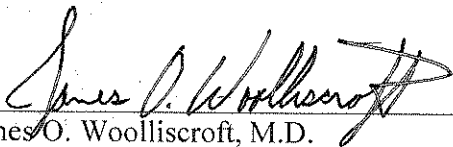
Reviewer C: "In terms of research, Amr has carved out a niche for himself in the area of genetics and epigenetics. His work is original and of very high caliber....Particularly noteworthy is the fact that he is an elected member of the American Society of Clinical Investigation, an honor that few rheumatologists in this country have."

Reviewer D: "During the last 8 years or so, he has developed into a very productive and highly respected investigator in the field of autoimmune disease research. He has performed land-mark studies of genome-wide methylation differences in Takayasu arteritis and systemic sclerosis that have been published to the premier journals of rheumatology..."

Reviewer E: "I have the highest regard for the creativity, importance and significance of these publications. His studies on the genetics and epigenetics of complex autoimmune and inflammatory diseases place him within a very small group of elite investigators who have driven substantial advances in our understanding of epigenetic mechanisms that contribute to the development of these diseases. Many of his publications are among the first in the field."

Summary of Recommendation:

Dr. Sawalha is an innovative, collegial and exceptional physician scientist who has made important clinical and scholarly contributions through his work on the genetics and epigenetics of complex autoimmune and inflammatory diseases. He is a brilliant scholar who is highly regarded nationally and internationally. His teaching and service contributions are of the highest caliber, and he serves the university with distinction. His professional activities and scholarly activities can be expected to continue to have a significant impact on our institution and on his field of research well into the future. For these reasons, I enthusiastically recommend Amr H. Sawalha, M.D. for promotion to professor of internal medicine, with tenure, Department of Internal Medicine, Medical School.



James O. Woolliscroft, M.D.

Dean

Lyle C. Roll Professor of Medicine

May 2015