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

Joanne M. Kahlenberg, M.D., Ph.D., associate professor of internal medicine, with tenure, Department of Internal Medicine, and associate professor of dermatology, without tenure, Department of Dermatology, Medical School, is recommended for promotion to professor of internal medicine, with tenure, Department of Internal Medicine, and professor of dermatology, without tenure, Department of Dermatology, Medical School.

# Academic Degrees

M.D. 2006 Case Western Reserve University School of Medicine

Ph.D. 2004 Case Western Reserve University

# **Professional Record**

2018-present Associate Professor of Internal Medicine (with tenure ) University of Michigan

2020-2021 Associate Professor of Dermatology, University of Michigan 2012-2018 Assistant Professor of Internal Medicine, University of Michigan 2011-2012 Clinical Lecturer of Internal Medicine, University of Michigan

#### Summary of Evaluation:

<u>Teaching:</u> Dr. Kahlenberg is an excellent educator, both inside and outside the classroom. She works with undergraduate students, post-doctoral fellows, medical students, graduate students, clinical fellows, advanced post-graduate fellows, and faculty members. She has utilized formal classroom lectures, small group instruction, and individual mentorship to effectively train and educate these students. Dr. Kahlenberg has mentored undergraduate students, fellows, faculty, Ph.D. candidates, rotation students, and medical students. She has served as a scientific consultant for the patient based scientific inquiry course PBSI 8302 MEDADM in 2019, 2020, and 2022. Since 2018, Dr. Kahlenberg has frequently participated in immunology student seminars and journal club presentations.

Research: Dr. Kahlenberg has made exceptional independent contributions to clinical translational research in the field of rheumatology. Her research productivity has been nothing short of extraordinary with current funding from the National Institutes of Health (both the National Institute of Arthritis, Musculoskeletal and Skin Disease and the National Institute of Allergy and Infectious Diseases), the Rheumatology Research Foundation, the U.S. Department of Defense, numerous industries, and foundations. She was awarded a K24 in 2020 and an R01 in 2017, both of which she is the principal investigator. Dr. Kahlenberg has 92 peer-reviewed publications including a recent publication as senior author in *Science Translational Magazine*, one of the most prominent non-subspecialty journals in medicine.

Dr. Kahlenberg has developed a successful research program that is changing the paradigm of autoimmunity-associated skin disease and the role of skin cells in driving immune miseducation. Her research spans the breadth of basic, translational, and clinical research and she is training the next generation of physician-researchers as part of this cutting-edge work. She has established a national reputation as an expert in cutaneous and systemic lupus and the role of skin autoimmunity as manifested by national and internal invited talks, invited reviews, and high-level editorial positions for the flagship rheumatology journal as well as Science Translational Medicine. Her exceptional work

has been recognized with the 2019 Presidential Early Career Award for Scientists and Engineers (PECASE), the highest honor the U.S. government bestows for the exceptional promise for leadership in science and technology, and the 2018 Mary Betty Stevens Award given by the Lupus Foundation of America to a junior investigator for excellent contributions to lupus research.

# Five Recent Significant Publications:

- Tsoi LC, Hile GA, Berthier CC, Sarkar MK, Reed TJ, Liu J, Uppala R, Patrick M, Raja K, Xing X, He K, Xing E, Gudjonsson JE, Kahlenberg JM, "Hypersensitive Interferon Responses in Lupus Keratinocytes Reveal Key Mechanistic Determinants in Cutaneous Lupus," *J Immunol* 2019 Apr;202(7):2121-2130. doi: 10.4049/jimmunol.1800650. Epub 2019 Feb 11. PMID: 30745462; PMCID: PMC6424612.
- Wolf SJ, Estadt SN, Theros J, Moore T, Ellis J, Liu J, Reed TJ, Jacob CO, Gudjonsson JE, Kahlenberg JM, "Ultraviolet light induces increased T cell activation in lupus-prone mice via type I IFN-dependent inhibition of T regulatory cells," *J Autoimmun* 2019 Sep;103:102291. doi: 10.1016/j.jaut.2019.06.002. Epub 2019 Jun 24. PMID: 31248690; PMCID: PMC6708464.
- Tsoi L, Gharaee-Kermani M, Berthier CC, Nault T, Hile G, Estadt SN, Patrick MT, Wasikowski R, Billi AC, Lowe L, Reed TJ, Gudjonsson J, Kahlenberg JM, "IL-18-containing five-gene signature distinguishes histologically identical dermatomyositis and lupus erythematosus skin lesions," *JCI Insight* 2020 Aug 20;5(16):e139558. doi: 10.1172/jci.insight.139558. PMID: 32644977; PMCID: PMC7455118.
- Turnier JL, Pachman LM, Lowe L, Tsoi LC, Elhaj S, Menon R, Amoruso MC, Morgan, GA, Gudjonsson JE, Berthier CC, and Kahlenberg JM, "Comparison of lesional juvenile myositis and lupus skin reveals overlapping yet unique disease pathophysiology," *Arthritis Rheumatol.* 2021 Jun;73(6):1062-1072 doi: 10.1002/art.41615. Epub 2022-06-01. PMID: 33305541; PMCID: PMC8274390.
- Billi AC, Ma F, Plazyo O, Gharaee-Kermani M, Wasikowski R, Hile GA, Xing X, Yee CM, Rizvi SM, Maz MP, Berthier CC, Wen F, Tsoi LC, Pellegrini M, Modlin RL, Gudjonsson JE, Kahlenberg JM, "Nonlesional lupus skin contributes to inflammatory education of myeloid cells and primes for cutaneous inflammation," *Sci Transl Med* 2022 Apr 27;14(642):eabn2263. doi: 10.1126/scitranslmed.abn2263.Epub 2022 Apr 27. PMID: 35476593.

<u>Service</u>: Dr. Kahlenberg has a strong record of service. She has exhibited excellence in serving on several international, national, and institutional committees. Since 2021, she has served as a co-chair of the Cutaneous Lupus Erythematosus (CLE) section for the International Lupus 21<sup>st</sup> Century Meeting, as well as a co-chair of the Executive Board Member for Creating Adult Rheumatology Mentorship in Academia since 2018. She has been a member of the Scientific Advisory Board, of the Arthritis National Research Foundation since 2020. Institutionally, she serves as a member of the Department of Internal Medicine, Division of Rheumatology, Fellowship Selection Committee, Advisory Board for the Advanced Genomics Core Committee, and Biomedical Research Core Facilities Capital Equipment Committee. Dr. Kahlenberg is a reviewer for 25 journals including *Science Immunology*, *Clinical Immunology*, *PLOS Pathogens*, and the *Journal of Rheumatology*. She also serves on numerous international, national, and institutional study sections.

## **External Reviewers:**

Reviewer A: "Michelle is clearly a star in rheumatologic research with a continuing upwards trajectory. She has published well. Her research incorporates state-of-the-art techniques. She serves on editorial boards and review committees. She is supportive of trainees and assists them in obtaining fellowships and advancing their careers. Her stature in the field keeps rising and her original research grows in importance and visibility. There is absolutely no question that she deserves this promotion."

<u>Reviewer B</u>: "Dr. Kahlenberg is simply a star and one of the most impactful academic scientists of her generation...based on her very impressive career trajectory, attainment of critical evaluation metrics and substantial potential for further expansion of her innovative translational research as well as leadership and educational areas..."

<u>Reviewer C</u>: "Her work is consistently characterized as 'cutting edge' and 'impactful' and, as such, renders her efforts as potentially transformational given the dual goals of this work to better understand disease pathogenesis and to identify novel treatment targets...I enthusiastically support Dr. Kahlenberg's promotion and appreciate the opportunity to weigh in on this 'slam dunk' application."

Reviewer D: "Dr. Kahlenberg's scholarship is readily apparent in her remarkable publication record. She has regularly published in leading journals, including Science Translation Medicine, The Journal of Clinical Investigation, and Annals of Rheumatic Diseases. Throughout her career, Dr. Kahlenberg has provided many insights into pathogenesis of cutaneous lupus, for which there are currently no FDA- approved therapies...Dr. Kahlenberg is an accomplished scientist who consistently applies her skills and resources to address critical unmet needs in immunology."

<u>Reviewer E</u>: "Michelle Kahlenberg is clearly an outstanding basic scientist with major translational interests...She has clearly worked extraordinarily hard to get to this point and has been the beneficiary of grants worth millions of dollars from peer-reviewed funders...I consider Dr. Kahlenberg to be in the top 5% of people in her peer group. She is clearly an outstanding clinician/scientist who has already achieved a remarkable amount in her career...."

## Summary of Recommendation:

Dr. Kahlenberg has made substantive and meaningful contributions to the field in her research work. She is an exceptional researcher, clinician, and mentor who has made tremendous impacts in clinical translational research in the field of rheumatology and will continue to do so. Therefore, I am pleased to recommend Joanne M. Kahlenberg, M.D., Ph.D. for promotion to professor of internal medicine, with tenure, Department of Internal Medicine, and professor of dermatology, without tenure, Department of Dermatology, Medical School.

Marschall S. Runge, M.D., Ph.D.

Executive Vice President for Medical Affairs

Warehead S. Runge

Dean, Medical School