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

MeiLan K. Han, 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.S. 2007 Clinical Research and Biostatistics, University of Michigan M.D. 1999 University of Washington, Seattle, WA

### Professional Record:

2015-present Associate Professor of Internal Medicine, University of Michigan
2012-2015 Clinical Associate Professor, Department of Internal Medicine,
University of Michigan
2005-2012 Clinical Assistant Professor, Department of Internal Medicine,
University of Michigan

### Summary of Evaluation:

<u>Teaching</u>: Dr. Han's particular expertise in Chronic Obstructive Pulmonary Disease (COPD), pulmonary rehabilitation and Lymphangioleiomyomatosis make her an ideal candidate for mentoring medical students, residents and fellows. As a junior faculty member, when her activities were more clinically based, Dr. Han served as an instructor in the History Taking and Physician Exam series for M2 students and as mentor for the M1 Clinical Foundations of Medicine sequence and interacted frequently with medical students and residents during inpatient consulting. She is actively involved in weekly multidisciplinary Interstitial Lung Disease conferences as well as periodic noon conferences and morning reports. While serving as the director of Pulmonary Rehabilitation, she supervised the rotation and developed the curriculum for the fellowship program. Her mentorship expands to the Department of Obstetrics and Gynecology where she interacts with Women's Health fellows in the Women's Respiratory Health Clinic. As her focus transitioned from clinical to research, her mentees have expanded to include more of a focus on graduate students, fellows and junior faculty. She has been actively involved in the mentorship of biostatistics graduate students and finds great satisfaction in guiding these individuals to understand human research, pulmonary disease, longitudinal analysis, survival analysis and data mining. Dr. Han is involved in the development of education content for physicians and patients. including COPD guidelines and COPD Quality Improvement for the University of Michigan and was recently elected to the Global Initiative for Chronic Obstructive Lung Disease (GOLD) Scientific Committee, a 20-person international panel that writes the most well recognized diagnosis and treatment guidelines for COPD. Dr. Han is the youngest person ever elected to GOLD and only one of three women on the panel.

Research: Dr. Han performs clinical and translational research in end stage lung disease. Early in her career, she earned recognition in her clinical investigation of gender differences in idiopathic pulmonary fibrosis (IPF). She obtained a master's degree in clinical trial design and biostatistics, and her subsequent efforts resulted in an institutional KL2 and eventually a K23 grant. Dr. Han has 143 peer-reviewed publications, eight book chapters and continuous industry and NIH sponsored funding, including an active K24 and two current R01's in which she is the principal investigator. She continues to expand her research on gender differences in both IPF and COPD and, in recognition of her national leadership in these fields, was asked to chair an NHLBI workshop on gender and lung disease. She is the site PI for the COPD Clinical Research Network. COPDGene and SPRIOMICS at the University of Michigan and has authored or co-authored many publications based on data from these studies. Data gathered from the SPRIOMICS cohort provided the basis for an NHLBI-funded multi-center clinical trial which resulted in a new clinical site at the University of Michigan for the American Lung Association Airway Clinical Research network. Nationally, Dr. Han's research efforts have been recognized in her recent election to the American Society of Clinical Investigation. Internationally, she was recently the recipient of the prestigious GOLD Medal for research in COPD from European Respiratory Society. Of note, Dr. Han is the first American to have ever received this prestigious award.

## Recent and Significant Publications:

Woodruff PG, Barr RG, Bleecker E, Christenson SA, Couper D, Curtis JL, Gouskova NA, Hansel NN, Hoffman EA, Kanner RE, Kleerup E, Lazarus SC, Martinez FJ, Paine R 3rd, Rennard S, Tashkin DP, Han MK, SPIROMICS Research Group: Clinical significance of symptoms in smokers with preserved pulmonary function. *N Engl J Med* 374:1811-1821, 2016.

Han MK, Martinez CH, Au DH, Bourbeau J, Boyd CM, Branson R, Criner GJ, Kalhan R, Kallstrom TJ, King A, Krishnan JA, Lareau SC, Lee TA, Lindell K, Mannino DM, Martinez FJ, Meldrum C, Press VG, Thomashow B, Tycon L, Sullivan JL, Walsh J, Wilson KC, Wright J, Yawn B, Zueger PM, Bhatt SP, Dransfield MT: Meeting the challenge of COPD care delivery in the USA: a multiprovider perspective. *Lancet Respir Med* 4:473-526, 2016.

Bhatt SP, Soler X, Wang X, Murray S, Anzueto AR, Beaty TH, Boriek AM, Casaburi R, Criner GJ, Diaz AA, Dransfield MT, Curran-Everett D, Galbán CJ, Hoffman EA, Hogg JC, Kazerooni EA, Kim V, Kinney GL, Lagstein A, Lynch DA, Make BJ, Martinez FJ, Ramsdell JW, Reddy R, Ross BD, Rossiter HB, Steiner RM, Strand MJ, van Beek EJ, Wan ES, Washko GR, Wells JM, Wendt CH, Wise RA, Silverman EK, Crapo JD, Bowler RP, Han MK, COPDGene Investigators.: Association between functional small airways disease and FEV1 decline in COPD. *Am J Respir Crit Care Med* 194:178-184, 2016.

Han MK, Quibrera PM, Caretta EE, Barr RG, Bleecker ER, Bowler R, Cooper CB, Comellas A, Couper DJ, Curtis JL, Criner G, Dransfield MT, Hansel NN, Hoffman EA, Kanner RE, Krishnan JA, Martinez CH, Pirozzi CB, O'Neal WK, Rennard S, Tashkin DP, Wedzicha JA, Woodruff P, Paine R, Martinez FJ: Frequency of exacerbations in COPD: An analysis of the SPIROMICS cohort. *Lancet Respir Med* 5:619-626, 2017. Epub 2017 Jun 28.

Martinez CH, Diaz AA, Meldrum C, Curtis JL, Cooper CB, Pirozzi C, Kanner RE, Paine III R, Woodruff PG, Bleecker ER, Hansel NN, Barr RG, Marchetti N, Criner GJ, Kazerooni EA, Hoffman EA, Ross BD, Galban CJ, Cigolle CT, Martinez FJ, Han MK, SPIROMICS Investigators: Age and small airway imaging abnormalities in subjects with and without airflow obstruction in SPIROMICS. *Am J Respir Crit Care Med* 195:464-472, 2017.

Service: Dr. Han specializes in end stage lung disease and evaluates and cares for pre- and post-lung transplant patients. She has taken a particularly special interest in women's health, initiating a collaboration with the UM Woman's Health Program to develop the Women's Respiratory Health Clinic. Within this setting, she leads one of the largest LAM clinics in North America. LAM is a rare, cystic lung disease which only affects women and Dr. Han has successfully developed a clinical expertise in the area. She serves as the co-chair for the UM COPD Quality Improvement Committee and developed guidelines for COPD outpatient care. Nationally, she serves on the scientific advisory committee for the American Thoracic Society. She is a national spokesperson for the American Lung Association and was recently successful in advocating to raise the legal age to purchase tobacco in Ann Arbor to 21 years of age. She serves on the medical scientific advisory board for the COPD Foundation and chairs the educational review work group. Dr. Han's leadership in COPD was recognized by the NHLBI when she was asked to represent the pulmonary community in a press conference to launch the COPD national action plan. She serves as the associate editor for the *American Journal of Respiratory and Critical Care Medicine*.

### External Reviewers:

<u>Reviewer A</u>: "Dr. Han has built a robust and highly successful program in COPD and she has made groundbreaking contributions to current understanding about the effects of cigarette smoke on lung function and about the natural history of COPD in large populations....She is already a leader in her field, and I predict many more important research accomplishments and a bright and productive academic future."

Reviewer B: "Dr. Han's research interest is focused on defining phenotypes in COPD. She is one of the international leaders in this field of research....Dr. Han's rise into the upper echelons of Pulmonary and Critical Care Medicine has been impressive to observe. It is clear from my interactions with her that she is only just beginning and will continue on the meteoric trajectory. It has been a pleasure to watch her development into the leader that she is today."

<u>Reviewer C</u>: "Dr. Han has established herself as an international thought leader in COPD by identifying imaging biomarkers that can precisely pinpoint individuals in this population who may be at greater risk for disease progression. As the recent significant publications demonstrate, Dr. Han's contributions and advancement to COPD research are groundbreaking."

Reviewer D: "She currently has an unprecedented 17 funded grants (she is PI in 12 and coPI in an additional 5). Despite this admirable record, she has an additional 16 grant proposals under review."

Reviewer E: "As her bibliography attests, Dr. Han's work is truly impactful and may serve to change clinical practice. She has been highly productive with well over 140 publications. This

work has resulted in national and international recognition of Dr. Han as a leader in COPD clinical research."

<u>Reviewer F</u>: "I was obviously impressed with Dr. Han's productivity. However it was the clarity of her presentation, the creativity of her science and her vision for where research in the COPDgene has to go that captivated me the most. She will change paradigms....She would also be a top candidate to be a Division Director in the best programs in the country."

# Summary of Recommendation:

Dr. Han's leadership skills and expertise in COPD have gained her national and international recognition. She is a talented mentor for pre- and post-doctoral trainees and junior faculty. I am pleased to recommend MeiLan K. Han, M.D. for promotion to professor of internal medicine, with tenure, Department of Internal Medicine, Medical School.

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

Executive Vice President for Medical Affairs

Warestell S. Runge

Dean, Medical School

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