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

<u>Tobias Else, M.D.</u>, assistant professor of internal medicine, Department of Internal Medicine, Medical School, is recommended for promotion to associate professor of internal medicine, with tenure, Department of Internal Medicine, Medical School.

Academic Degrees:

B.S./M.D. 2000 University of Hamburg

Professional Record:

2014-present Assistant Professor of Internal Medicine, University of Michigan Clinical Lecturer of Internal Medicine, University of Michigan,

Summary of Evaluation:

Teaching: Dr. Else is an excellent educator with a strong commitment to teaching. His teaching has included informal mentoring to undergraduate students, post-graduate fellows, clinical fellows, residents and medical students. He has presented talks for students in the Genetic Counseling Master's Program, has lectured on endocrine cancers in the Cancer Biology 554 course for undergraduate and graduate students, and participates in teaching rounds. Dr. Else taught at the Internal Medicine Residency Program noon conferences on cancer genetics, and has lectured in the Anatomy/Physiology 541 and Psychology 532 courses on mammalian reproductive physiology/gonadal and adrenal development. He provides annual lectures for endocrine fellows, and has taught fellows on inpatient endocrine consult service. Dr Else has participated in multiple CME activities lecturing on topics in his clinical expertise of hereditary endocrine tumor syndromes and adrenal diseases. In 2016, he was awarded the annual Endocrine Fellows' Teaching Award for excellence in teaching. In August 2018, Dr. Else began his service as the program director for the Endocrine Fellowship Program.

Research: Dr. Else is an exceptional scientist whose primary scholarly research focus is on familial cancer syndromes and idiopathic forms of hyperaldosteronism. His scholarly activities have had a significant impact on his field of research where, together with his team science collaborators at the University of Michigan, he was able to define the contribution of Li-Fraumeni syndrome to the development of adult adrenocortical cancer (ACC). Furthermore, his group discovered that ACC is part of the spectrum of Lynch syndrome-associated cancers. As a result, testing for both syndromes is now recommended for ACC patients. In order to enhance collaborations among researchers with an interest in adrenal disorders, further evidence of his international significance lies with his work in creating the legally organized, multinational, A5-Consortium, that is comprised of more than 18 international research institutions with interest in adrenal-related disorders. Dr. Else took the lead in putting together many centers, creating the necessary legal and other documents, guidelines, rules, and organizing meetings and agendas. To date, the A5 leads several ongoing collaborative research projects, including the planning of an international adjuvant therapy trial for ACC. He has published 56 peer-reviewed articles, in high impact journals including the European Journal of Endocrinology, Adrenocortical Carcinoma, and Endocrine Reviews. He has a strong record of extramural funding and is currently the principal investigator on an NIH R01 grant and a consortium study with Chiltern International, is a co-investigator on an NIH R01 grant, is faculty mentor on an American Heart Association Midwest Affiliate grant.

Recent and Significant Publications:

Else T, Lerario A, Everett J, Haymon L, Wham D, Mullane M, Wilson T, Rainville I, Rana H, Worth A, Snyder N, Blair I, McKay R, Kilbridge K, Hammer G, Barletta J, Vaidya A: Adrenocortical carcinoma and succinate dehydrogenase gene mutations: an observational case series. *Eur J Endocrinol* 177(5):439-444, 2017.

Fishbein L, Leshchiner I, Walter V, Danilova L, Robertson A, Johnson A, Lichtenberg T, Murray B, Ghayee H, Else T, Ling S, Jefferys S, de Cubas A, Wenz B, Korpershoek E, Amelio AL, Makowski L, Rathmell W, Gimenez-Roqueplo A, Giordano T, Asa S, Tischler A, Cancer Genome AtlasResearch Network., Pacak K, Nathanson KL, Wilkerson MD: Comprehensive Molecular Characterization of Pheochromocytoma and Paraganglioma. *Cancer Cell* 31(2):181-193, 2017.

Hattangady N, Karashima S, Yuan L, Ponce-Balbuena D, Jalife J, Gomez-Sanchez C, Auchus R, Rainey W, Else T: Mutated KCNJ5 activates the acute and chronic regulatory steps in aldosterone production. *J Mol Endocrinol* 57(1):1-11, 2016.

Petr E, Else T: Genetic predisposition to endocrine tumors: Diagnosis, surveillance and challenges in care. Semin Oncol 43(5): 582-590, 2016.

Nogueira T, Lirov R, Caoili E, Lerario A, Miller B, Fragoso M, Dunnick N, Hammer G, Else T: Radiographic Characteristics of Adrenal Masses Preceding the Diagnosis of Adrenocortical Cancer. *Hormones and Cancer* 6(4):176-181, 2015.

Service: Dr. Else is an outstanding physician specializing in hereditary endocrine cancer. He is an active member of the American Heart Association, the North American Neuroendocrine Tumor Association, the American Association of Clinical Endocrinologists, the American Association of Clinical Endocrinologists, the Endocrine Society, and the Deutsche Gesellschaft für Endokrinologie. Dr. Else was chosen to serve as an ambassador to Mumbai, India for the Endocrine Society's first international exchange program. He has additionally contributed to his field with service as ad hoc reviewer for 27 journals including *PLoS One*, and *Journal of Clinical Endocrinology and Metabolism*, and has served as editorial board member for *Hormones and Cancer*, *Clinical Diabetes and Endocrinology*, and *Endocrine Related Cancer*. In 2017, Dr. Else became associate editor of *Hormones and Cancer*. He has also participated in other important service activities such as abstract evaluator and poster judge at the yearly Endocrine Society Meeting. In 2018, Dr. Else began serving as the director of the Metabolism, Endocrinology and Diabetes Fellowship Program.

External Reviewers:

Reviewer A: "His research career is clearly on the rise, for 14 of the 51 articles were published in 2016 and 2017 alone. Many of his publications I would consider to be outstanding contributions to the field...More recently he has published important clinical research in radiographic characteristics of adrenal masses and how to distinguish between benign and malignant lesions. Dr. Else's standing in the field is exemplary and I would put him in the top few percent of investigators in his field at his level."

Reviewer B: "Dr Else is clearly recognized as a leader in our field of genetics, investigation and therapy of adrenal tumors. He is very much implicated in the newly formed A5 collaborative group on adrenal tumors in Americas and other parts of the world as well as in ENSAT European collaborative group. He is member of guidelines groups both with European Society of Endocrinology as well as in USA. He is regularly invited as expert and speaker in international and

national conferences. He is very active in teaching and supervising students in his university."

Reviewer C: "Dr. Else has greatly contributed to our understanding of genetic predisposition of several adrenocortical diseases, including primary aldosteronism, adrenocortical carcinomas, pheochromocytoma and hereditary endocrine tumor syndromes. His growing clinical experience also has impacted the diagnosis of incidentally discovered adrenal masses using steroid hormone profiles in the differential diagnosis between benign and malignant tumors."

Reviewer D: "Dr. Else's studies on the clinics and treatment of patients with adrenal tumors have had a relevant impact on the clinical ground. Dr. Else's reviewing activity for many prestigious scientific journals contributes to recognize him as an authority in the field of endocrine oncology."

Reviewer E: "The number of publications and book chapters authored by Dr. Tobias, speak volumes about the quantum of his work. Particularly, acceptance of his work in high impact factor peer reviewed journals, which also include esteemed invited reviews especially on Adrenocortical carcinomas, reflects the high quality and scholarly impact of his work."

Reviewer F: "Dr. Else has a well-established research program in diseases of the adrenal cortex, and as the principal investigator, he has recently been awarded an RO1 (through 2021) to study the genetics of primary hyperaldosteronism...As detailed in his packet, many of these papers have helped the field evolve... In summary, Dr. Else is an academic endocrinologist who stands out among his peers. He has been highly productive, awarded extramural funding, and is recognized internationally as an expert and leader in his field."

Reviewer G: "Toby is confirming his identify as a leader in the genetics of hyperaldosteronism and the genetics adrenal tumors. He also has contributed to advances in the field of ACC and adrenal physiology. He is well funded for someone at his stage of his career. He has 12 first author and 3-4 senior author publications of 51. He has been an integral member of the TCGA analysis for both ACC and pheochromocytomas."

Summary of Recommendations:

Dr. Else is an exceptional physician scientist who is internationally known for his important research in endocrine oncology and cancer genetics, primary aldosteronism, adrenocortical carcinoma, and adrenal masses. He provides significant and important leadership as the director of the Metabolism, Endocrinology and Diabetes Fellowship program. I am pleased, therefore, to recommend Tobias Else, M.D. for promotion to associate professor of internal medicine, with tenure, Department of Internal Medicine, Medical School.

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

Executive Vice President of Medical Affairs

Dean, Medical School