

May 17, 2007

PROMOTION RECOMMENDATION
UNIVERSITY OF MICHIGAN MEDICAL SCHOOL
DEPARTMENT OF OBSTETRICS AND GYNECOLOGY

Steven E. Domino, M.D., Ph.D., Assistant Professor of Obstetrics and Gynecology, Medical School, is recommended for promotion to Associate Professor of Obstetrics and Gynecology, with tenure, Department of Obstetrics and Gynecology, Medical School.

Academic Degrees:

M.D.	1990	Vanderbilt University
Ph.D.	1990	Vanderbilt University
M.S.	1984	University of Michigan
B.A.	1982	University of Michigan

Professional Record:

1999-Present	Assistant Professor of Obstetrics and Gynecology, University of Michigan
2004-2006	Research Assistant Professor, Reproductive Sciences Program, University of Michigan
1998-2004	Assistant Research Scientist, Reproductive Sciences Program, University of Michigan
1994-1999	Lecturer, Department of Obstetrics and Gynecology, University of Michigan

Summary of Evaluation:

Teaching: Dr. Domino teaches learners at multiple levels at the University of Michigan including graduate and undergraduate students, house officers, fellows, and junior faculty. For graduate and undergraduate students, Dr. Domino teaches two courses on reproductive biology as part of a team (teaching shared with 5-6 other faculty; 110 students in the fall course and 50 students in the winter course; Course Director 2002-03). He regularly teaches medical students physical diagnosis in the Clinical Simulation Center (20 students every six weeks). He has taught independent study for several senior medical students, two of whom published their work under his mentorship, as well as laboratory rotations for graduate students and research seminars and meetings. He has served on preliminary examination and dissertation committees. For house officers, Dr. Domino teaches 20 internal medicine residents at weekly ambulatory care clinics at the Veterans Affairs Medical Center, ten Obstetrics and Gynecology residents in the Taubman Center ambulatory clinic, and five general surgery residents at the VA for gynecologic surgery. On night and weekend call in Labor & Delivery, he is teaching attending for the on-call resident team. He gives four formal lectures on a rotating basis in the House Officer Core Curriculum, and has been invited to speak at Continuing Medical Education courses.

Dr. Domino has distinguished himself in leadership of research training. During two 3-year terms on the Dean's Advisory Council on Clinical Research (ACCR), he helped to develop new infrastructure and support for clinical research training. With the support of ACCR, a M.S. degree program in clinical research was proposed and achieved extramural funding with an NIH

Clinical Research Curriculum Award. In 2000, Dr. Domino helped conceive and submit the successful NIH training grant "BIRCWH: Building interdisciplinary research careers in women's health." This K12-supported grant is in its sixth year supporting the transition to independence of five junior faculty members a year in the Medical School, Nursing School, School of Public Health, and College of Literature, Science, and the Arts. Dr. Domino was solely responsible for writing the competing renewal for this grant in 2005 and has been appointed Associate Program Director in recognition of his mentoring. He also serves as Associate Program Director for two reproductive research T32's.

Research: Dr. Domino's research focuses on the biologic functions of cell surface glycans. His Ph.D. studies were on the receptor-mediated intracellular pathways stimulated by the fucosylated glycoconjugate of sea urchin egg jelly. Following a clinical residency in Obstetrics and Gynecology, Dr. Domino continued study of the function of fucosylated molecules in reproduction. He developed and tested a hypothesis regarding the function of an endometrial fucosylated carbohydrate proposed to be involved in mouse blastocyst implantation, cloned and characterized three mouse fucosyltransferase genes, and created two lines on knockout mutant mice to definitively address function of this class of fucosylated glycans in reproductive and other tissues. He gave a Plenary Session presentation at the Society for Gynecologic Investigation Annual Scientific Meeting, and has been invited to give seven extramural presentations and a research lab site visit at the NIH. He is active in grant writing and received funding for two NIH K grants from 1997-2000 and 2002-2006. He has supplemented his funding portfolio with six small project grants, generating new lines of research without requiring departmental bridging funds.

His total number of peer reviewed publications is 32 (13 since 2001). Concerning his publication hiatus from 1993-2000, Dr. Domino had a clinical residency from 1990-94 followed by scientific "re-entry" in the novel molecular area of Glycobiology. His mentor had a strict policy on authorship, and trainees from this lab typically had only 1 or 2 publications after a 3-year fellowship. The project Dr. Domino chose for his research training was a high risk/high payoff knockout mouse project that ultimately did not result in the expected phenotype due to circumstances he had no control over, i.e. a lack of overt phenotypes in two knockout mice. Shortly after Dr. Domino obtained the mutant mice, his mentor departed the University of Michigan and Dr. Domino was left to independently develop collaborations to investigate multiple potential phenotypes that are now resulting in high quality publications in glycobiology. He has independently developed a translational research focus on host-microbe interaction in clinical vaginitis patients that he treats professionally, currently funded by BMRC grant ("Nonsecretor polymorphism in host-Candidal interactions") with an RO1 application under revision.

Recent and Significant Publications:

Domino SE, Smith YR, Johnson TRB: Opportunities and challenges of interdisciplinary research career development: Implementation of a women's health research training program. *J Women's Health* 16: 2007 [in press].

Domino SE, Karnak DM, Hurd EA: Cell surface fucosylation does not affect development of colon tumors in mice with germline Smad3 mutation. *Tumor Biology* 27: 2006 [in press].

Domino SE, Hurd EA: LacZ Expression in FUT2-LacZ reporter mice reveals estrogen regulated endocervical glandular expression during estrous cycle, hormone replacement, and pregnancy. *Glycobiology* 14:169-175, 2004.

Hurd EA, Domino SE: Increased susceptibility of secretor factor gene Fut2-Null mice to experimental vaginal candidiasis. *Infect Immun* 72:4279-4281, 2004.

Domino SE, Zhang L, Gillespie PJ, Saunders TL, Lowe, JB: Deficiency of reproductive tract a (1,2)fucosylated glycans and normal fertility in mice with targeted deletions of the FUT1 or FUT2 a (1,2)fucosyltransferase locus. *Molec Cell Biol* 21:8336-8345, 2001.

Service: Dr. Domino is an invaluable contributor to the Department of Obstetrics and Gynecology. He was originally recruited to fill a research niche, but as his strengths in teaching have developed; his position has grown to include a greater effort on research training and administration. The field of Obstetrics and Gynecology has relatively few academic researchers. Dr. Domino has earned a reputation for supportive mentoring of junior faculty within and outside our University. He has assisted 11 peers in helping them submit K and R grant applications and publications. He participated in the organization of four institutional K grant applications for research training, two of which have now received NIH funding. For the University of Michigan Institute for Research on Women and Gender (IRWG), he is Associate Program Director of the BIRCWH program and a member of the Advisory Committee. Dr. Domino wrote a scholarly paper on the BIRCWH program highlighting the opportunities and challenges of interdisciplinary research training as advocated by the NIH Roadmap initiative. Dr. Domino is Associate Program Director for two additional T32 training programs including the interdepartmental Reproductive Sciences Program. For the Reproductive Sciences Program, he has been an extremely active faculty member having served on the Program Committee, Training Committee, Seminar Coordinator, and Executive Committee. He is also departmental lead for the Clinical and Translational Science Award Education Work Group, Co-coordinator of Resident Research projects, faculty participant in several other T32's, and a member of the Fellow Advisory Committee responsible for the 28 advanced trainees in nine Ob/Gyn clinical fellowships with major research components. In recognition of the sum of these activities, Dr. Domino was promoted to Associate Chair for Research Career Development with 20% effort. He served on a national VA Leadership Work Group for pregnancy and infertility guidelines (VISN 11) and co-chaired a scientific session at the annual meeting of the Society for Gynecologic Investigation. Comments from peer faculty on Dr. Domino's effort include: *"Your role in RSP and all the training programs is incredibly important. I am always hearing great comments about your work AND how wonderful it is to work with you!"*

Professional Work: Dr. Domino's clinical effort began in 1997 with 0.2 FTE at the VA Medical Center in addition to Labor & Delivery on-call duties at UMHS. Because of a steadily increasing referral population of women veteran's ages 21 to 45 who demand access to health care by a gynecologist, Dr. Domino's appointment at the VA was increased, despite federal budget cutbacks, to a 'full-time' clinical effort of 0.625 FTE. It is common to hear that Dr. Domino's patients "adore" him. He has 10% effort toward Taubman Center ambulatory clinic and surgery cases with Ob/Gyn residents, and night and weekend on-call. Dr. Domino has updated his procedural skills as new techniques have become available since his residency and increased revenue each year since 2001. Given his cooperative demeanor and exemplary bedside manner,

he is an accomplished clinician covering multiple services and providing experienced clinical teaching.

External Review:

Reviewer A: "As strong as Dr. Domino's laboratory achievements are, his teaching accomplishments shine brightly and speak to achievements of a truly gifted and valued teacher...It is that ability to combine excellence in research with excellence in clinical care that truly distinguishes Dr. Domino from the vast majority of academicians who are only able to achieve excellence in one area."

Reviewer B: "With his productivity and contributions during the past decade, Dr. Domino has become a leader in the reproductive sciences. He is recognized in the national and international community of peers as a superb physician-scientist...Without doubt Dr. Domino is among the top 10% of investigators in academic obstetrics and gynecology."

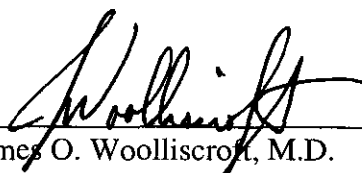
Reviewer C: "As such, his research achievements hold tremendous benefit for the future health care of women...It is my opinion that Dr. Domino is a nationally and internationally recognized physician-scientist and a researcher of exceptional ability."

Reviewer D: "He is a solid investigator, outstanding educator, and a leader in providing innovative programs to develop the next leaders in women's health research."

Reviewer E: "Dr. Domino has achieved national and international recognition for his accomplishments as evidenced by his participation as a reviewer for several prestigious clinical and basic science journals, and as evidenced by his election to full membership in the Society of Gynecologic Investigation, which is the most respected scientific Society in the area of Obstetrics, Gynecology and Reproductive Biology."

Summary of Recommendation:

In summary, Dr. Domino has established a translational research niche in glycobiology with clinical credentials as a board-certified Obstetrician/Gynecologist. His recent promotion to Associate Chair for Research Career Development will allow the Department's growing number of fellows and junior faculty to continue to benefit from his mentoring. His critically useful and important role in the Department of Obstetrics and Gynecology as a research-focused academic obstetrician gynecologist is well grounded in past success with excellent promise for the future. I am, therefore, pleased to recommend Dr. Domino for promotion to Associate Professor of Obstetrics and Gynecology, with tenure.


James O. Woolliscroft, M.D.
Interim Dean
Lyle C. Roll Professor of Medicine

May 2007