

PROMOTION RECOMMENDATION
UNIVERSITY OF MICHIGAN
MEDICAL SCHOOL
DEPARTMENT OF EMERGENCY MEDICINE

John G. Younger, M.D., associate professor of emergency medicine, with tenure, Department of Emergency Medicine, Medical School, is recommended for promotion to professor of emergency medicine, with tenure, Department of Emergency Medicine, Medical School.

Academic Degrees:

M.S.	1997	University of Michigan
M.D.	1991	University of Missouri-Kansas City
B.A.	1991	University of Missouri-Kansas City

Professional Record:

2005–present	Associate Professor of Emergency Medicine, University of Michigan
1999–2005	Assistant Professor of Emergency Medicine, University of Michigan
1994–1999	Lecturer, Department of Surgery, Section of Emergency Medicine, University of Michigan

Summary of Evaluation:

Teaching: Dr. Younger devotes significant time toward teaching and educational activities. He maintains an active teaching role in the Medical School, University and nationally. He supervises residents and medical students during his clinical shifts (six clinical shifts/month) and delivers two to three core curriculum lectures to the residents each year. His evaluations from emergency medicine residents are outstanding and he is highly regarded by the residents as a role model and educator. His fund of knowledge and command of the literature are most highly rated. Dr. Younger lectured annually (2004-2008) to the M2 respiratory sequence and intermittently to the M1 respiratory and cardiovascular sequences. He has lectured in the cardiovascular sequence in the Dental School and PIBS Pathology Course.

Research: Dr. Younger's research interests include sepsis and bacterial infection of vascular devices; advanced computational, mathematical and statistical methods; and informatics-based approaches to critical care in emergency departments. He has published extensively and has received extramural funding for his work since 1995. He is one of only a dozen NIH-funded basic scientists in the field of emergency medicine. He has received PI-based grant support exceeding \$2.5M in his career. He has received a Young Investigator Award from the Society for Academic Emergency Medicine and a Career Investigator Award from the American Lung Association of Michigan. Dr. Younger currently has one NIH grant, one NSF grant, one Society for Academic Emergency Medicine Institutional Research Training Grant, and three institutional training grants. He has 59 papers in print or in press with others currently under review. To deepen his understanding of the clinical issues related to his research focus, he also served for two years as a faculty member on the ECMO Service at the University of Michigan where he cared for adults, children and neonates with respiratory or cardiac failure. He is the only emergency physician in the United States to have served in this clinical capacity.

Recent and Significant Publications:

Dzul SP, Thornton MM, Hohne DN, Stewart EJ, Shah AA, Bortz DM, Solomon MJ and Younger JG: Contribution of the *Klebsiella pneumoniae* capsule to bacterial aggregation and biofilm microstructures. *Applied and Environmental Microbiology* 77:1777-1782, 2011.

Nypaver CM, Thornton MM, Yian SM, Bracho DO, Nelson PW, Jones AE, Bortz DM and Younger JG: Dynamics of human complement-mediated killing of *Klebsiella pneumoniae*. *American Journal of Respiratory Cell and Molecular Biology* 43:585-590, 2010.

Bortz DM, Jackson TL, Taylor KA, Thompson AP and Younger JG: *Klebsiella pneumoniae* flocculation dynamics. *Bulletin of Mathematical Biology* 70:745-768, 2008.

Chung MH, Cartwright MM, Bortz DM, Jackson TL, and Younger JG: Dynamical system analysis of staphylococcus epidermidis bloodstream infection. *Shock* 20:518-526, 2008.

Lugo JZ, Price S, Miller JE, Ben-David E, Merrill VJ, Mancusco P, Weinberg, JB and Younger JG: Lipopolysaccharide O-Antigen Promotes Persistent Murine Bacteremia. *Shock* 27:186-191, 2007.

Service: Dr. Younger is a diplomat of the American Board of Emergency Medicine and member of the Society for Academic Emergency Medicine, American College of Emergency Medicine, Shock Society, International Complement Society, Society for Industrial and Applied Mathematics, and American Society for Microbiology. Dr. Younger serves as director of the University of Michigan Emergency Medicine Research Fellowship (funding from the Society for Academic Emergency Medicine). This program recently underwent formal peer review through a joint SAEM/NHLBI process and became formally accredited in the specialty for the next three years. The first fellows started in 2010. He serves on the dissertation committees of students across the University including Mathematics and Chemical, Biomedical, and Mechanical Engineering. Additionally, he currently co-advises three graduate students in Chemical Engineering. He has lectured nationally on grant writing and research program development for the past five in courses given through the Society for Academic Emergency Medicine and the American College of Emergency Physicians. He is currently a manuscript reviewer for the following journals: *Academic Emergency Medicine*, *Annals of Emergency Medicine*, *American Journal of Cardiology*, *Chest*, *Journal of Applied Physiology*, *Infection and Immunology*, *Journal of the American Society of Artificial Internal Organs*, *Critical Care*, *Journal of Interferon and Cytokine Research*, *Journal of Infection Disease*, *Critical Care Medicine*, *Mathematical Biosciences*, and *Critical Care*.

External Reviewers:

Reviewer A: "His grant record is especially impressive. He is current[ly] PI of an R01, along with foundation grants, and he has held a K08, an SBIR grant, and two other NIH grants, in addition to serving as co-investigator on numerous other grants. In the field of Emergency Medicine, these credentials unequivocally place him in the top 10%, if not the top 5%, of researchers."

Reviewer B: "I have watched with interest as his marvelous research career has grown to become one of the most productive in the field of Emergency Medicine. His list of funded grants as Principal Investigator alone is at the very apex of our field. His list of publications is similarly outstanding....In short he is one of the most respected researcher in the field of Emergency

Medicine....He has a tremendous academic record and he has been profoundly productive in our field.”

Reviewer C: “...John is in an elite group of emergency physicians, an exceptional researcher and an exceptional human being....His CV speaks for itself. Sustained funding and excellent well received publications. Impressive.”

Reviewer D: “He is a national thought-leader in emergency medicine, recognized for his focus in both the basic science and translational aspects of infectious diseases in the acute care setting, and he is influential in our field....Dr. Younger is a strong educator, willing to create curriculum and teach, not only at the bedside but through other mechanisms that allow many to be influenced. He is frequently sought to lecture at other programs and at national venues, all attesting to his educational abilities. He also mentors junior faculty and trainees, raising their skills through his insight and guidance.”

Reviewer E: “Dr. Younger is an established national leader in academic emergency medicine. He has been at the forefront of research into how infections can lead to bacteremia and sepsis....Indeed, Dr. Younger is one of the few investigators in emergency medicine to be the principal investigator on multiple NIH R01 grants....Impressively, five of his grants were in a role as mentor for research trainees in his laboratory.”

Reviewer F: “He has not only advanced in his own career – with grant funding and publication success that rivals the top 10% within Emergency Medicine – but he has helped inspire others around him in pursuing new directions of science related to our treatment of severe shock....He has always worked to encourage junior investigators and has worked diligently to support the development of women and minority faculty within both Emergency Medicine and resuscitation science. He is a wonderful educator who has the ability to inspire clinicians and basic scientists, a unique gift in any specialty.”

Summary of Recommendation:

Dr. John Younger is an asset to his department and institution and nationally to the specialty of emergency medicine. He is a nationally and internationally respected leader and researcher in the specialty of emergency medicine. I enthusiastically support the promotion of John G. Younger, M.D. to professor of emergency medicine, with tenure, Department of Emergency Medicine, Medical School.



James O. Woolliscroft, M.D.

Dean

Lyle C. Roll Professor of Medicine

May 2012