

PROMOTION RECOMMENDATION  
University of Michigan  
College of Engineering  
Department of Biomedical Engineering  
Macromolecular Science and Engineering Program

Mohamed ElSayed Hamed ElSayed, assistant professor of biomedical engineering, Department of Biomedical Engineering, College of Engineering and Medical School, and assistant professor of macromolecular science and engineering, Macromolecular Science and Engineering Program, College of Engineering, is recommended for promotion to associate professor of biomedical Engineering, with tenure, Department of Biomedical Engineering, College of Engineering and Medical School, and associate professor of macromolecular science and engineering, without tenure, Macromolecular Science and Engineering Program, College of Engineering.

Academic Degrees:

Ph.D. 2002 University of Maryland, College Park, MD  
B.S. 1994 Cairo University, Cairo Egypt

Professional Record:

2010-present Assistant Professor, Macromolecular Science and Engineering Program, University of Michigan  
2007-present Assistant Professor, Department of Biomedical Engineering, University of Michigan  
2002-2006 Post-doctoral Research Fellow, University of Washington, Seattle, WA  
2000-2002 Visiting Scientist, Guilford Pharmaceuticals Incorporated, Baltimore, MD

Summary of Evaluation:

Teaching: Professor ElSayed has performed very well in the classroom. He has been involved in both undergraduate and graduate teaching, and has introduced several new classes at the graduate level, all of which have been well received by the students. His student evaluations show that he has developed into an effective instructor who is appreciated by students at all levels. As a research mentor, Professor ElSayed has again been successful in directing both graduate and undergraduate students. He has graduated two Ph.D. students and is currently advising another five. His past students have successfully gone on to research positions and his students describe him as a dedicated and passionate mentor.

Research: Professor ElSayed's research program has been highly successful and visible on both national and international levels. He works in the challenging area of nanomedicine and has published a significant number of papers since joining the University of Michigan. These papers are being widely cited and recognized within the scientific community, as evidenced by his h-index of 17, which does not account for six recently published manuscripts. Professor ElSayed's work has resulted in multiple speaking invitations, including at colloquia and conference venues, and the external reviewers all cite his prominence and growing stature in the field. His research production has concomitantly given rise to multiple grants and he is well funded at this stage, even in these times of tight federal budgets. Professor ElSayed was also the recipient of a 2008 NSF Early CAREER award. Going forward, there are many positive aspects of Professor ElSayed's research program that will both enhance and benefit from the growing interactions between the College of Engineering and the Medical School now that the Department of Biomedical Engineering is part of both units.

#### Recent and Significant Publications:

- Eli Vlaisavljevich, Yasemin Yuksel Durmaz, Adam Maxwell, Mohamed E.H. ElSayed and Zhen Xu, "Nanodroplet-mediated histotripsy for image-guided targeted ultrasound cell ablation," *Theranostics*, in press.
- Scott H. Medina, Gopinath Tiruchinapally, Maxim V. Chevliakov, Yasemin Y. Durmaz, Rachell N. Stender, William D. Ensminger, Donna S. Shewach and Mohamed E.H. ElSayed, "Targeting hepatic cancer cells with PEGylated dendrimers displaying *N*-acetylgalactosamine and SP94 peptide ligands," *Advanced Healthcare Materials*, DOI: 10.1002/adhm.201200406, 2013.
- Yasemin Y. Durmaz, Yen-Ling Lin and Mohamed E. H. ElSayed, "Development of degradable, pH-sensitive, star vectors for enhancing the cytoplasmic delivery of nucleic acids," *Advanced Functional Materials*, DOI: 10.1002/adfm.201203762, 2013.
- Scott H. Medina, Maxim V. Chevliakov, Gopinath Tiruchinapally, Yasemin Y. Durmaz, Siburu Kuruvilla and Mohamed E.H. ElSayed, "Development of enzyme-activated nanoconjugates for tunable release of doxorubicin in hepatic cancer cells," *Biomaterials*, 34(19): 4655-4666, 2013.
- Stephanie Grainger, Juliana Valencia Serna, Steffi Sunny, Yun Zhou, Cheri X. Deng and Mohamed E.H. ElSayed, "Pulsed ultrasound enhances nanoparticle penetration into breast cancer spheroids," *Molecular Pharmaceutics*, 7(6): 2006–2019, 2010. (ASAP Article)
- Yen-Ling Lin, Khalil Khanafer, and Mohamed E.H. ElSayed, "Quantitative evaluation of the effect of poly (amidoamine) dendrimers on the porosity of Caco-2 cell monolayers," *Nanoscale*, 2: 755-762, 2010.

Service: Professor ElSayed has been very active in the area of service, both for his department, the College of Engineering, and the university. Specifically, within his department, he has been involved with graduate admissions and curriculum development. Other activities have included his involvement with faculty searches, and he currently serves as a member of the Library Advisory Committee. Professor ElSayed has also advised the University of Michigan Post-baccalaureate Research Education Program and he continues to be the liaison for the Medical Student Training Program. Given his expertise in the areas of nanomedicine and drug delivery, Professor ElSayed has been a frequent reviewer for many top journals in his discipline, and has likewise served on review panels for the U.S. Department of Defense, the National Science Foundation, and the National Institutes of Health.

#### External Reviewers:

Reviewer A: "...Dr. ElSayed's productivity and scholarly impact has been outstanding since he joined the faculty of Biomedical Engineering...He is clearly recognized as one of the top people at his stage of development in his field. I expect remarkable things from him in the future."

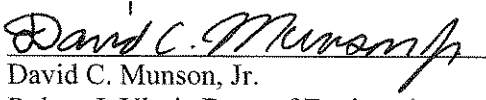
Reviewer B: "...Dr. ElSayed has demonstrated excellence in all three areas of evaluation...I am certain he would be appointed as a tenured Associate Professor at my University."

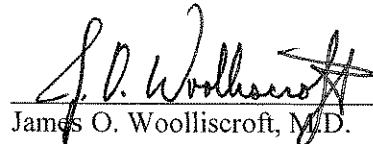
Reviewer C: "Dr. ElSayed has the publication record, external funding history and teaching ability that exceed the standards for promotion to Associate Professor with tenure at top-tier institutions, including [my institution]."

Reviewer D: "This candidate has excellent strengths in mentoring and service..."

Reviewer E: "...Dr. ElSayed has demonstrated notable strength in academic research, teaching, and services. Therefore, I enthusiastically support Dr. ElSayed's promotion to Associate Professor with tenure in your department."

Summary of Recommendation: Professor ElSayed is a very prominent and very productive biomedical engineer who has made significant contributions to the field of biomedical engineering. He is an excellent teacher and mentor; and he is a leader who contributes both in external and internal service. It is with the support of the College of Engineering Executive Committee that I recommend Mohamed ElSayed Hamed ElSayed for promotion to associate professor of biomedical engineering, with tenure, Department of Biomedical Engineering, College of Engineering and Medical School, and associate professor of macromolecular science and engineering, without tenure, Macromolecular Science and Engineering Program, College of Engineering.

  
David C. Munson, Jr.  
Robert J. Vlasic Dean of Engineering  
College of Engineering

  
James O. Woolliscroft, M.D.  
Dean, Medical School

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