

PROMOTION RECOMMENDATION
The University of Michigan-Dearborn
College of Arts, Sciences, and Letters

Kalyan Kondapalli, assistant professor of biology, Department of Natural Sciences, College of Arts, Sciences, and Letters, is recommended for promotion to associate professor of biology, with tenure, Department of Natural Sciences, College of Arts, Sciences, and Letters.

Academic Degrees:

D.Phil. 2008 Wayne State University, School of Medicine, Detroit, MI
M.Sci. 2003 Wayne State University, College of Science, Detroit, MI

Professional Record:

2014 – present Assistant Professor, Department of Natural Sciences, College of Arts,
Sciences, and Letters, University of Michigan-Dearborn
2014 Adjunct Faculty, Towson University, Baltimore, MD
2013 Teaching Fellow, Towson University, Baltimore, MD
2010 – 2011 Instructional Associate, Notre Dame of Maryland University, Baltimore, MD
2008 – 2014 Post-doctoral Fellow, Department of Physiology, Johns Hopkins University
School of Michigan, Baltimore, MD

Summary of Evaluation:

Teaching: Professor Kondapalli has taught laboratory and lecture sections of cell biology, employing a wide variety of teaching strategies to encourage students to improve their awareness and think critically about the world around them. He believes that learning should be “facilitated” rather than provided and adapts his teaching style to the type of course he is teaching. His concept-based instruction bridges gaps between the real world and the classroom, allowing students to grasp the information in a palpable way with such models as the “cell as a social network.” This also helps students to truly remember facts learned in class versus other rote memorization techniques that may only provide a shorter-term gain. Lastly, Professor Kondapalli employs evaluative techniques to identify the difference each of these learning techniques makes in students’ abilities. His overall student evaluation score range from 4.53 to 4.86 on a scale in which a 5 is considered “excellent.” In his third year as a professor, Professor Kondapalli created a cancer cell biology course which students received positively. The medical relevance of the course fit well with the medical pathways many students at the University of Michigan-Dearborn take during their years in attendance. The primary objective behind the creation of this course is to develop insight into fundamental questions about a disease that is constantly evolving. The intention of this class is to provide a hypothetical therapy design to students who will be training to be in professional health careers in the future.

Research: Professor Kondapalli, a cellular and molecular physiologist, has established a research laboratory that has produced an impressive record of study in the areas of Type 2 Diabetes as well as the role that NHE9 (a sodium proton transporter) plays in adult brain cancer, most

specifically, Glioblastoma Multiforme. These two important lines of study have not only produced seven peer-reviewed publications in reputed journals, but have laid the foundation to continue this research. In addition, Professor Kondapalli has meaningfully involved more than 20 undergraduate students in his research, including three recent publications, and two manuscripts in progress. During his time at University of Michigan-Dearborn, Professor Kondapalli and his collaborators have found support internally and externally through grant funding totaling more than \$200k with grant applications through National Science Foundation and National Institutes of Health under review for a cumulative total of ~\$1.2million. This work has resulted in six invited talks during his time at the University of Michigan-Dearborn.

Recent and Significant Publications:

- Prasad H., Dang D.K., Kondapalli, K.C., Natarajan, N., Cebotaru, V., Rao, R. NHA2 promotes cyst development in an in vitro model of polycystic kidney disease. *Journal of Physiology*, 2019 Jan; 597(2): 499-519.
- Gomez Zubieta, D.M., Hamood, M.A., Beydoun, R., Pall, A.E., and Kondapalli, K.C. MicroRNA-135a regulates NHE9 to inhibit proliferation and migration of glioblastoma cells. *Cell communication and signaling*, 2017; Dec 21;15(1):55.
- Beydoun, R., Hamood, M.A., Gomez Zubeita, D.M., and Kondapalli, K.C. Na⁺/H⁺ Exchanger 9 Regulates Iron Mobilization at the Blood Brain Barrier in Response to Iron Starvation. *Journal of Biological Chemistry*. 2017; Mar 10;292(10): 4293-4301.
- Kondapalli, K.C., Todd, Alexander R., Pluznick, J.L., and Rao, R. NHA2 is expressed in distal nephron and regulated by dietary sodium. *Journal of Physiology and Biochemistry*. 2016; doi: 10.1007/s13105-016-0539-8.
- Kondapalli, K.C., Llongueras, J.P., Capilla-Gonzalez, V., Prasad, H., Hack, A., Smith, C., Guerrero-Cázares, H., Quiñones-Hinojosa, A., Rao, R. A leak pathway for luminal protons in endosomes drives oncogenic signalling in glioblastoma. *Nature Communications*, 2015; 6:6289.
- Kondapalli, K.C., Prasad, H., Rao, R. An inside job: how endosomal Na⁽⁺⁾/H⁽⁺⁾ exchangers link to autism and neurological disease. *Frontiers in Cellular Neuroscience*, 2014;8:172.
- Kondapalli, K.C., Hack, A., Schushan, M., Landau, M., Ben-Tal, N., Rao, R. Functional evaluation of autism-associated mutations in NHE9. *Nature Communications*, 2013;4:2510.

Service: Professor Kondapalli has engaged in meaningful service to the university through service to the department, the campus, and his profession during his first five years at University of Michigan-Dearborn. Among the most notable of his contributions has been his service to the Faculty Senate Research Support Committee to review campus grant proposals to advocate for which best support the research goals of the university community. Professor Kondapalli has also made a significant effort to serve his department through active involvement as a member of review committees for lecturer reviews as well as serving as chair for a lecturer major review. Not only a review member for his colleagues, but he also has served as a member of the external chair search committee for the Department of Natural Sciences, which was a significant undertaking.

External Reviewers:

Reviewer A: “In summary, my assessment of Dr. Kondapalli is that he is an excellent scientist, committed to training students, has appropriate focus but not limited in his thinking or ability to apply his findings. The scholarly impact of his publications is already being demonstrated. As mentioned above both his Nature Communications paper and the JBC paper I consider outstanding... All of these considerations would place Dr. Kondapalli in the top 10% of his peers. His research ideas and efforts to date make me strongly believe that he will continue to develop as a scientist and his research career will grow.”

Reviewer B: “Dr. Kondapalli is to be congratulated on continuing to make significant contributions to the cellular metabolism of iron and the role of the Na/H vesicular exchange... The JBC paper in particular illustrates the breadth of Dr. Kondapalli’s approach and of the research experience his lab offers your undergraduates. It’s a paper I use in my lab to illustrate the approaches one can use to examine iron trafficking at the blood-brain barrier on the one hand, and protein expression and iron deposition in the whole brain on the other: both molecular and physiologic approaches.”

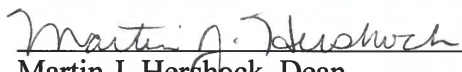
Reviewer C: “In conclusion, it is clear that Dr. Kondapalli is thriving as a teacher-scholar, producing quality scholarship that consistently involves undergraduate students. In my estimation he is exceeding all reasonable expectations and is emerging as a leader in his field. All indications point to his continued success. On a personal note, as a fellow teacher-scholar at a liberal arts college, I’m impressed with his productivity. It’s not easy to direct a sophisticated research program while balancing significant teaching and service responsibilities. The fact that Dr. Kondapalli has performed so well is a testament to his talent and drive. Any institution would be lucky to count him among the tenured faculty.”

Reviewer D: “It seems to me that there is no sign of Dr. Kondapalli slowing down. I am envious of his ability to find new proteins to target in our quest to understand the molecular underpinnings of disease. It speaks well of his training, skills, and scientific intuition that he has launched several interesting projects and has been able to obtain some significant results. I think it is also laudable that researchers at R1 institutions are collaborating with him, as it indicates a high level of respect for his work. He also outlines some interesting new projects on the connection between diabetes and cardiomyopathy.”


Reviewer E: “Dr. [Kondapalli] has already published six solid papers focusing on the roles of NHE9, a Na⁺(K⁺)/H⁺ transporter in the intracellular membranes, in the regulation of endosomal pH homeostasis and membrane receptor trafficking. These papers were published in the high-profile and reputable journals such as Journal of Biological Chemistry and Nature Communications. Very impressively, in all three papers with Dr. [Kondapalli] as the corresponding author, all leading authors are undergraduate students from UM-Dearborn!”

Summary of Recommendation:

Professor Kondapalli has cultivated a body of research which has afforded him the ability to bring more than 20 students into his lab to participate in meaningful research experiences. The backbone of his teaching style lies in its practicality, a style which has garnered him teaching scores which average above 4.6 in the areas of knowledge, effectiveness, communication, and standards for high achievement. As evidenced from not only his research direction but also the external reviews of his work, it is clear that Professor Kondapalli is committed to tirelessly searching for new avenues to fund his current lines of inquiry and to identify new areas of study. We are very pleased to recommend, with strong support of the College of Arts, Sciences, and Letters Executive Committee, Kalyan Kondapalli for promotion to associate professor of biology, with tenure, Department of Natural Sciences, College of Arts, Sciences, and Letters.



Martin J. Hershock, Dean
College of Arts, Sciences, and Letters



Domenico Grasso, Chancellor
University of Michigan-Dearborn

May 2020