

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

Christopher J. Alteri, assistant professor of biological sciences, Department of Natural Sciences, College of Arts, Sciences, and Letters, is recommended for promotion to associate professor of biological sciences, with tenure, Department of Natural Sciences, College of Arts, Sciences, and Letters.

Academic Degrees:

Ph.D.	2005	Math Microbiology and Immunology, University of Arizona, Tucson, AZ
B.S.	2000	Microbiology and Chemistry, University of Arizona, Tucson, AZ

Professional Record:

2018-present	Assistant Professor of Biology, University of Michigan-Dearborn, Dearborn, MI
2017-2018	Lecturer I, University of Michigan-Dearborn, Dearborn, MI
2014-2018	Research Assistant Professor, University of Michigan, Ann Arbor, MI
2010-2014	Research Investigator, University of Michigan, Ann Arbor, MI
2010-2012	Lecturer I, University of Michigan-Dearborn, Dearborn, MI

Summary of Evaluation:

Teaching: Professor Alteri's teaching is rated excellent. Professor Alteri has taught seven different courses ranging from introductory biology to upper-level microbiology since he was hired, and developed a new capstone course. Professor Alteri has mentored eighteen students in independent research, independent study, and research capstone experiences. Professor Alteri has contributed to the curriculum in the College of Arts, Sciences, and Letters (CASL) and Department of Natural Sciences in multiple ways. He developed new material for each course he taught and completely re-designed three courses. When the onslaught of the pandemic hit in the winter of 2020, Professor Alteri swiftly made the pivot to online learning. He helped the introductory molecular cellular biology course to make the transition online successful by helping to design and implement online synchronous laboratories, and then pivoted back to in-person teaching in 2021-2022 with all of the challenges still encountered in face-to-face teaching. Professor Alteri's student evaluations consistently rank his teaching as excellent and comment on his knowledge and passion for microbiology and his commitment to a supportive and inclusive classroom environment. Students recognize that he genuinely cares about their success and takes a compassionate approach to education, which is needed more than ever. Professor Alteri has used new technology and analyses in numerous courses – something the students have benefited from. Professor Alteri's innovative approach to handling scientific misinformation by contrasting local media with peer-reviewed scientific journal articles teaches students how to be critical thinkers and consumers of information.

Research: Professor Alteri's research is rated excellent. Since he was appointed as an assistant professor in 2018, Professor Alteri has published ten peer-reviewed primary research articles in reputable journals. Professor Alteri made a logical choice to focus on collaborations that enabled

him to progress despite the restrictions of the pandemic. In his research laboratory, he has supervised eighteen undergraduate students (including volunteers). Nine of these students presented their work at local meetings (CASL Undergraduate Research Showcase, Natural Sciences Poster Session, and Undergraduate Research Symposium at the University of Michigan-Ann Arbor) and one was awarded an undergraduate research fellowship for the Summer Undergraduate Research Experience program 2023. In part due to his mentoring, several former students have been accepted to professional or graduate schools.

#### Recent and Significant Publications:

Alteri CJ, Rios-Sarabia N, De la Cruz MA, González-Y-Merchand JA, Soria-Bustos J, Maldonado-Bernal C, Cedillo ML, Yáñez-Santos JA, Martínez-Laguna Y, Torres J, Friedman RL, Girón JA, Ares MA. “The Flp type IV pilus operon of *Mycobacterium tuberculosis* is expressed upon interaction with macrophages and alveolar epithelial cells.” *Frontiers in Cellular and Infection Microbiology*, 2022 Sep 20;12:916247. eCollection 2022. PMID: 36204636.

Sugihara K, Kitamoto S, Saraithong P, Nagao-Kitamoto H, Hoostal M, McCarthy C, Rosevelt A, Muraleedharan CK, Gilliland MG 3rd, Imai J, Omi M, Bishu S, Kao JY, Alteri CJ, Barnich N, Schmidt TM, Nusrat A, Inohara N, Golob JL, Kamada N. “Mucolytic bacteria license pathobionts to acquire host-derived nutrients during dietary nutrient restriction.” *Cell Rep*. 2022 Jul 19;40(3):111093 PMID: 35858565.

Niemiec Maria Joanna, Kapitan Mario, Himmel Maximilian, Döll Kristina, Krüger Thomas, Köllner Tobias G., Auge Isabel, Kage Franziska, Alteri Christopher J., Mobley Harry L.T., Monsen Tor, Linde Susanne, Nietzsche Sandor, Kniemeyer Olaf, Brakhage Axel A., Jacobsen Ilse D. “Augmented Enterocyte Damage During *Candida albicans* and *Proteus mirabilis* Coinfection.” *Frontiers in Cellular and Infection Microbiology*. 2022 May 16;(12): DOI=10.3389/fcimb.2022.866416.

Ohno M, Hasegawa M, Hayashi A, Caballero-Flores G, Alteri CJ, Lawley TD, Kamada N, Núñez G, Inohara N. “Lipopolysaccharide O structure of adherent and invasive *Escherichia coli* regulates intestinal inflammation via complement C3.” *PLoS Pathog*. 2020 Oct 7;16(10): e1008928. PMID: 33027280.

Forsyth VS, Himpsl SD, Smith SN, Sarkissian CA, Mike LA, Stocki JA, Sintsova A, Alteri CJ, Mobley HLT. “Optimization of an Experimental Vaccine To Prevent *Escherichia coli* Urinary Tract Infection.” *mBio*. 2020 Apr 28;11(2). pi: e00555-20.PMID: 32345645

Himpsl SD, Shea AE, Zora J, Stocki JA, Foreman D, Alteri CJ, Mobley HLT. “The oxidative fumarase FumC is a key contributor for *E. coli* fitness under iron-limitation and during UTI.” *PLoS Pathog*. 2020 Feb 27;16(2):e1008382. PMID: 32106241.

Service: Professor Alteri’s service is rated excellent. He has served two consecutive terms as the faculty secretary. Professor Alteri was also involved in a critical, time-consuming service to participate in the microbiology program review, completed in 2023. This critical exercise ensures the continuing success of the program. He also served as a member of the CASL Practice-Based Learning (PBL) Advisory Committee, where he represented Natural Sciences, among other departments, in addressing the complex issues related to the PBL initiative in CASL. Professor Alteri also served on the college’s Budget Task Force, whose goal was to examine the budget given the current enrollment trends. As a service to his profession, Professor Alteri has served as a reviewer for several journals in his field regularly.

External Reviewers:

Reviewer A: “Dr. Alteri’s current and past research encompasses several important topics in microbial pathogenesis and vaccine development.”

Reviewer B: “The field of UTI pathogenesis knows and respects Dr. Alteri. His contributions have been paradigm-shifting and continuous.”

Reviewer C: “I am most familiar with his work on UTI, and especially his research on the development of UTI vaccines and the metabolism of Uropathogenic Escherichia coli (UPEC) during infection. A lot of this research is cutting edge, and addresses significant questions with clear translational implications.”

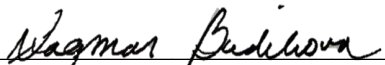
Reviewer D: “One thing that strikes me immediately about Dr. Alteri’s research productivity during the probationary period is not only an impressive quantity of publications (10 total) but more so the breadth of research are as covered”

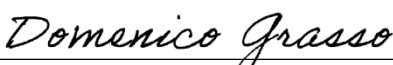
Reviewer E: “Dr. Alteri’s has a high standing amongst his peers compared to other comprehensive universities.”

Reviewer F: “It is appropriate to say that he is recognized as a leader in the role of cellular metabolic regulation in UPEC and other pathogens.”

Reviewer G: “It is clear from these papers that Dr. Alteri has a deep understanding and proficiency in a broad set of areas including molecular biology, bacterial physiology, biochemistry, and microbiology.”

Summary of Recommendation: Professor Alteri is a very prominent and productive microbiologist who has made significant contributions to the field of bacterial pathogenesis and infectious diseases. He is an excellent teacher and mentor and a leader who contributes to external service, as well as internal service. With the strong support of the College of Arts, Sciences, and Letters Executive Committee, we are delighted to recommend Christopher J. Alteri for promotion to associate professor of biological sciences, with tenure, Department of Natural Sciences, College of Arts, Sciences, and Letters.

  
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Dagmar Budikova, Dean  
College of Arts, Sciences, and Letters

  
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Domenico Grasso, Chancellor  
University of Michigan-Dearborn

May 2024