

PROMOTION RECOMMENDATION
The University of Michigan
School of Dentistry

Carlos González-Cabezas, associate professor of dentistry, with tenure, School of Dentistry, is recommended for promotion to professor of dentistry, with tenure, School of Dentistry.

Academic Degrees:

MSD	2009	Indiana University
DDS	2004	Indiana University
Cert	2002	Specialty Clinical Certificate, Operative Dentistry, Indiana University
PhD	1997	Indiana University
DDS	1991	Central University of Venezuela

Professional Record:

2009 – Present	Associate Professor of Dentistry, Department of Cariology, Restorative Sciences and Endodontics, School of Dentistry, University of Michigan
2005 – 2009	Associate Professor of Dentistry, Department of Cariology, Restorative Sciences and Endodontics, School of Dentistry, Indiana University
2004 – 2005	Associate Professor, Preventive and Community Dentistry, School of Dentistry, Indiana University
1998 – 2004	Assistant Professor, Preventive and Community Dentistry, School of Dentistry, Indiana University
1996 – 1998	Assistant Scientist, Oral Health Research Institute, School of Dentistry, Indiana University
1992-1994	Research Assistant, School of Dentistry, Indiana University

Summary of Evaluation:

Teaching: Professor González-Cabezas has demonstrated a strong commitment to dental education throughout his career. He is the director of two major courses in the DDS curriculum and is the co-director for two additional dental courses at the school of dentistry. He teaches in four pre-doctoral dental and graduate courses including both clinical and didactic instruction. He has mentored over fifty dental, dental hygiene and graduate level students throughout his career, twenty-two of them since being in rank (2009), and two post-doctoral trainees. In rank, six students he mentored have received research awards, three at the international level. Professor González-Cabezas lists twenty-four continuing education courses at the local, national and international levels while in rank. Professor González-Cabezas received the Indiana University Teaching Excellence Recognition Award, and in 2014, he was nominated for the University of Michigan Provost's Teaching Innovation Prize for his project on exam questions developed by students that in turn leads to a higher cognitive level of learning. Professor González-Cabezas is a highly passionate educator, continuously assessing his teaching methods and evolving his techniques to engage students, foster critical thinking and create life-long learners. His teaching scores (range 4.0 – 5.0) and student and peer comments are clear evidence of his strong

contributions to teaching with numerous comments applauding his genuine passion for teaching and patient care.

Research: Professor González-Cabezas' research is focused on the understanding of mechanisms underpinning dental caries progression and their clinical management. He is engaged in numerous research projects with particular interest in dental tissue remineralization, fluorides, caries diagnosis and the development of oral health products for caries prevention. Currently, he is a co-principal investigator on a substantial NIH grant and is the principal investigator on thirteen industry and university grants totaling more than \$613,000. Since 2009, he has earned two additional government funded grants as the co-investigator and thirty-one industry and university grants. This impressive record demonstrates Professor González-Cabezas' ambition to continually advance his research. He has published sixty-two peer reviewed publications in medium to high impact journals. Thirty-two of his papers have been published since in rank and he is first or last author on eight of those. Additionally, he has ten non-peer reviewed papers and five book chapters. In 2017, Professor González-Cabezas was selected as a fellow of the American Association for Dental Research.

Professor González-Cabezas is recognized as a leader in the field of cariology. His work has unveiled mechanisms of caries progression from white spot lesions. His work has inspired mechanism-based preventive and treatment strategies that have been translated into patient care standards. He has completed numerous projects that supported the development and improvement of several materials for prevention and for treatment of caries. He is the leader of the Michigan site of a major, multi-center, NIH-funded Phase III clinical trial that focuses on the testing of the safety and effectiveness of Silver Diamine Fluoride (SDF) for treatment of existing carious lesions in children from underserved populations. This major clinical trial has the potential to transform the standard of care of children and provide them with a treatment alternative that prevents caries progression.

Recent and Significant Publications:

- González-Cabezas, C. The Chemistry of Caries: Remineralization and Demineralization Events with Direct Clinical Relevance. *Dent Clin N Am* 54 (2010) 469-478.
- González-Cabezas C, Fernández CE. Recent Advances in Remineralization Therapies for Caries Lesions. *Adv in Dent Res* 2018;29(I) 55-59.
- González-Cabezas C, Anderson OS, Wright MC, Fontana M. Association between dental student-developed exam questions and learning at higher cognitive levels. *J Dent Edu* 2015;79(11):1295-1304.
- Fontana M, González-Cabezas C, de Peralta T, Johnsen DC. Dental Education Required for the Changing Health Care Environment. *J Dent Edu* 2017;81(8):eS153-eS160.
- Fernández CE, Aspiras MB, Dodds MW, González-Cabezas C, Rickard AH. The effect of inoculum source and fluid shear force on the development of in vitro oral multispecies biofilms. *J of Applied Microbiology* 2016;122:796-808.

Service: Professor González-Cabezas' contributions to service to the community and to the field of dentistry are substantial. He is a critical member of the Cariology Group at the International Association of Dental Research, and has served as the president from 2014 to 2016. He has served as a member of the CRLT Faculty Advisory Board, a member of the CRLT faculty

special interest group to help the university make decisions about instructional technology, and is a member of the University Council of Global Engagement and the UM Global REACH Faculty Affiliate (GRA) program. At the school level, he has served on several faculty search committees being chair of two, chair of the school's Administrative Quality Assurance Board, chair of the school's Nominations and Elections Committee, member of the school's Executive Committee and is a patient care provider in the school's faculty practice. In 2015, Professor González-Cabezas was appointed as the director of global initiatives in oral and craniofacial health. In his directorship, he developed a strategic plan creating a new vision and mission for the program. He increased the number of students and faculty participants in the program by expanding the number of outreach missions from one to six. He opened opportunities for dental hygiene and dental students from the school's Internationally Trained Dentistry Program to participate in global initiatives. He is exploring opportunities to create a new endowment to support the program and is engaging with other units on campus such as medicine, pharmacy, nursing, public health and engineering to collaborate in global initiatives, as well as leading collaborations with peer institutions. In recognition of his important leadership, he was appointed as the first Richard Christiansen Collegiate Professor of Oral and Craniofacial Global Initiatives.

External Reviewers:

Reviewer A: "He is truly an exceptional leader in the fields of cariology and oral biology, both as a clinician, researcher and a teacher. In the current academic environment that exists in dentistry in the USA, Europe and I believe in other parts of the world, individuals like Dr. González-Cabezas are extremely valuable because they bring in a joint clinical expertise and can also understand the drive of basic scientific research. These individuals are extremely rare indeed especially in the USA."

Reviewer B: "Dr. González-Cabezas clearly demonstrates a sustained record of excellence in teaching, including the training of advanced students; a sustained and growing record of scholarly eminence in cariology with a national and international reputation for leadership and outstanding contributions in the field; and a sustained record of substantive contributions in academic, professional and University service."

Reviewer C: "Based on my experience and the standards of Yonsei University College of Dentistry, I deem Dr. González to be extremely qualified as a tenured professor."

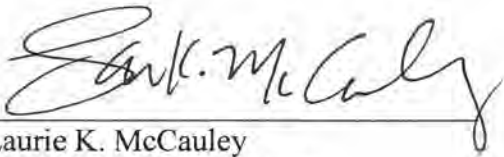
Reviewer D: "I believe that Dr. González has shown a continuous commitment to high quality teaching, and research for many years, and has achieved a great deal in teaching and learning as well as leadership, service and engagement."

Reviewer E: "Dr. González's professional conduct, collegiality, and citizenship in the academic community are exceptional. It is evident to me that Dr. González understands the importance of diversity in academia, among the students, staff and faculty. Dr. González is a critical resource for the school of dentistry and serves as a role model for dental students, advanced clinical trainees, and graduate students. His accomplishments and contributions to the university and scientific community are of outstanding quality and merit the promotion to professor with tenure."

Reviewer F: "Dr. Carlos González is recognized, by all, as a world leader in cariology and laser dentistry disciplines. His lectures are sought after world-wide and they are each attended by hundreds. He is a frequent reviewer of submissions for the finest journals in dentistry."

Summary of Recommendation:

Professor González-Cabezas is a talented clinician scientist who has taken full advantage of the environment at the University of Michigan to further develop his academic and research career. He is respected by colleagues around the world and has significantly enhanced the national and international visibility of the University of Michigan School of Dentistry. Professor González-Cabezas leads by example bringing energy and passion to our classrooms and clinics serving as an inspiration to students and colleagues. His contributions to research are highly significant as they have exerted a profound effect on the field of cariology and to the clinical management of patients. His selfless dedication to service is impactful and is changing students' perspective as they experience the need of dental care to our global citizens. It is with the support of the Executive Committee, that I recommend Carlos González-Cabezas for promotion to professor of dentistry, with tenure, School of Dentistry.



Laurie K. McCauley
Dean, School of Dentistry

May 2019