Authors: Christina Goudreau Collison, Jennifer Swartzenberg, Douglas Tusch, Asma Sheikh, Morgan Bauer, Kaitlyn Clark and Cristophorus Budidharma

Institution: School of Chemistry and Materials Science, Rochester Institute of Technology, Rochester, NY

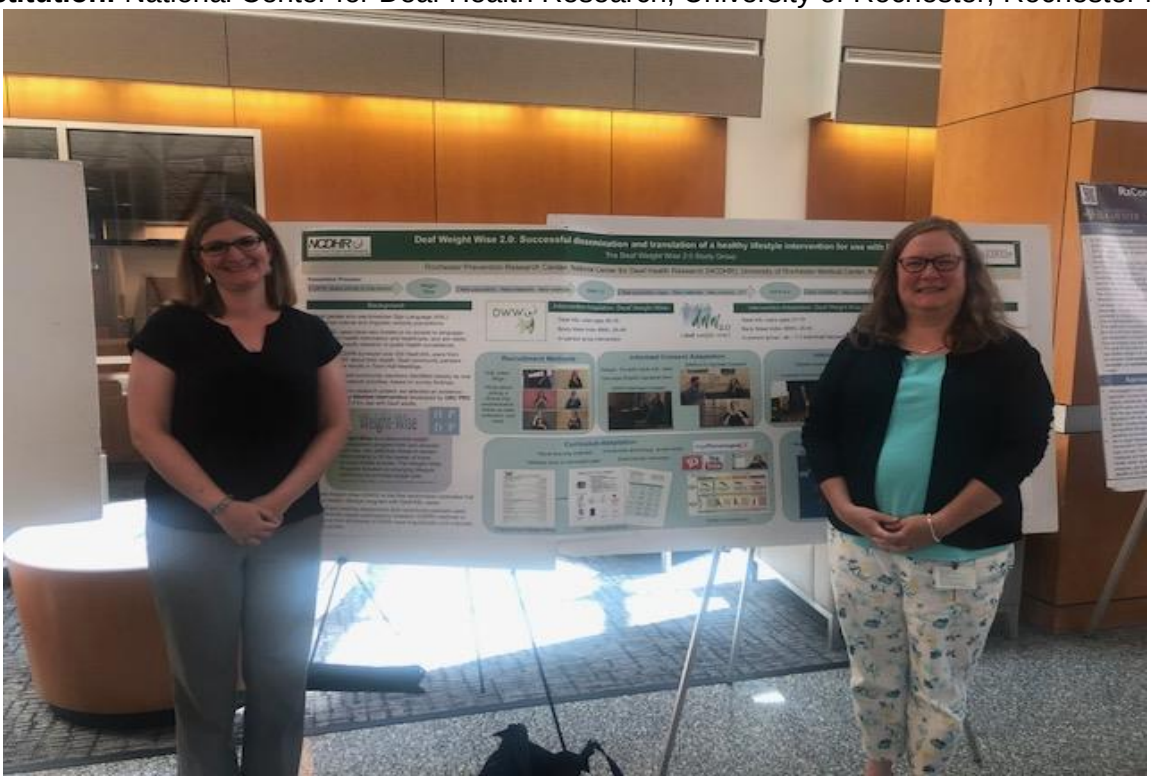
Extrapolating REActivities: Reformed chemistry curriculum that incorporates inclusivity, continuity, and engaged student learning in organic chemistry

School of Chemistry and Materials Science, Rochester Institute of Technology, Rochester, NY

This work extrapolates our REActivities lab pedagogy in order to leverage the adoption benefits for deaf and hard of hearing students observed in previous research (TUES-1245160 and IUSE 1625649). The main objective of our research is the design, implementation, and assessment of American Sign Language signs and sign expansions for organic chemistry terminologies. This presentation will outline progress to date on sign adoption and propagation of the organic chemistry ASL terms through classroom interpreters, and Peer Led Team Learning (PLTL). Implementation and future propagation using REActivities lab curriculum will also be discussed.

Authors: Lori DeWindt and Erika Sutter

Institution: National Center for Deaf Health Research, University of Rochester, Rochester NY

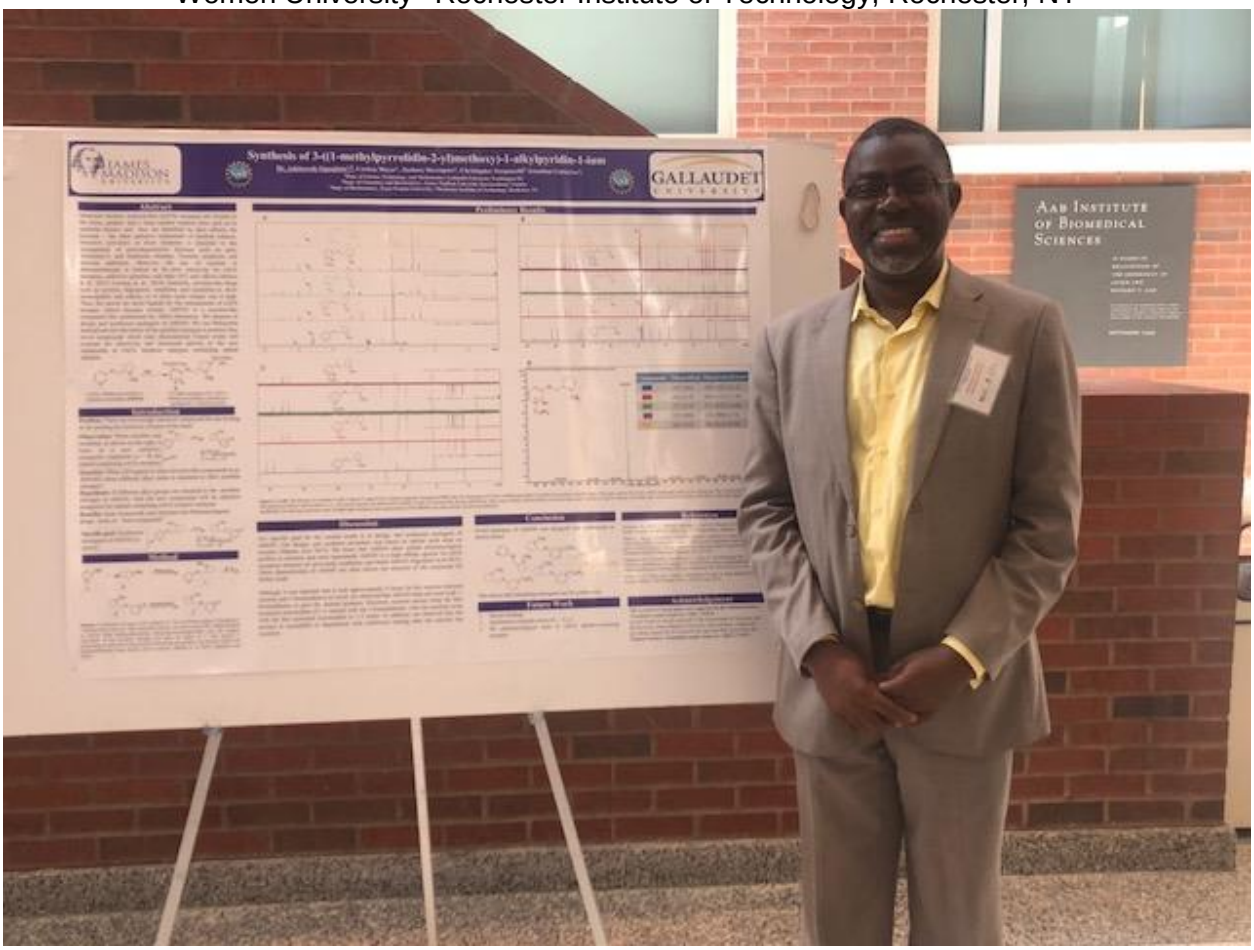


Deaf Weight Wise 2.0: Successful dissemination and translation of a healthy lifestyle intervention for use with Deaf adults

Deaf Weight Wise 2.0 (DWW 2.0) is the current core research project of the Rochester Prevention Research Center: National Center for Deaf Health Research (RPRC/NCDHR). Deaf and hearing researchers and community members worked together to select, design, and develop this intervention and clinical trial. The overall goal of the DWW 2.0 study is to establish the effectiveness of a healthy lifestyle intervention with Deaf people ages 21 to 70, who use American Sign Language (ASL) as their primary language. DWW 2.0 is an adaptation of Deaf Weight Wise (previously completed by RPRC/NCDHR with Deaf adults ages 40-70), and of Weight-Wise, originally developed by the University of North Carolina PRC. DWW 2.0 will evaluate the in-person group intervention and a newly-adapted individual 1:1 counseling intervention delivered over videophone. Novel methods were used in recruitment, informed consent, and data collection activities within this clinical trial. RPRC/NCDHR plans to disseminate the interventions in collaboration with other Deaf communities. RPRC/NCDHR will further translate DWW methods (in-person group and 1:1 remote videophone counseling) for use with other chronic condition self-management and behavior change interventions, to promote health and prevent disease with Deaf populations within and outside of Rochester NY.

Authors: Adebowale Ogunjirin[A,B], Carissa Meyer[C], Jonathan Gutierrez[A], Zachary Davenport[A], Christopher Pasquarelli[D]

Institution: [A]Dept. of Science, Technology, and Mathematics; Gallaudet University Washington DC [B]Dept. of Chemistry and Biochemistry, James Madison University Harrisonburg Virginia [C]Dept. of Biochemistry, Texas Women University [D]Rochester Institute of Technology, Rochester, NY



Synthesis of 3-((1-methylpyrrolidin-2-yl)methoxy)-1-alkylpyridin-1-ium

Neuronal nicotinic acetylcholine receptors (nAChRs) and associated ligands are important in the management of many clinically relevant psychopathologies, and neurodegenerative diseases, as well as tobacco dependence. Although, there are available pharmacotherapies for tobacco dependence, relapse rate continues to be high. Thus, the need for novel medication for the management of tobacco dependence remain. Currently available smoking cessation agents include varenicline, cytisine, and bupropion. These agents are either partial agonists or antagonist of nAChRs. In fact, nicotine (the addictive component in tobacco) owe its rewarding effect to the release of dopamine (DA) in the brain reward pathway through nAChR subtypes mediating nicotine-evoked dopamine (DA) release. Therefore, compounds that selectively inhibit these receptor subtypes should be efficacious as tobacco use cessation agent.

Recent research show that quaternary ammonium nicotine compounds with N-n-alkyl substituent of three carbons or more in length show efficacy as antagonists at nAChR subtypes mediating nicotine-evoked DA release. Therefore, we extend our search for potent antagonists that will mediate nicotine-evoked DA release to include mono-quaternary ammonium compound of 3-((S)-1-Methyl-pyrrolidin-2-ylmethoxy)-pyridine; because 3-((S)-1-Methyl-pyrrolidin-2-ylmethoxy)-pyridine exhibit similar pharmacological profile to nicotine. We hypothesized that N-n-alkyl substituent of 3-((S)-1-Methyl-pyrrolidin-2-ylmethoxy)-pyridine with three carbons or more in length will be potent, and selective antagonists at nAChR subtypes mediating nicotine-evoked DA release. Here we present the progress made in the synthesis of the mono quaternary ammonium compounds of 3-((S)-1-Methyl-pyrrolidin-2-ylmethoxy)-pyridine.