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# ARLYNE (MICKEY) SARQUIS

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Director Emerita, Center for Chemical Education
Professor Emerita, Department of Chemistry & Biochemistry
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# **EDUCATION**

Master of Science, Chemistry, Texas A & M University, 1973; Ralph Zingaro, Advisor Science & Mathematics Secondary Teaching Credential (Texas), 1973 Bachelor of Science, Chemistry, University of California, Davis, 1968

# PERTINENT EXPERIENCE

Terrific Innovation, LLC: Partner, 2009-present Terrific Science: CEO & Director 1984-present

Miami University (OH), Department of Chemistry & Biochemistry: Professor Emerita 2010-present, Professor 1990-2009, Associate Professor 1995-2009, Assistant Professor 1993-95, Senior Instructor 1986-93, Instructor 1977-86

Center for Chemical Education Director Emerita 2010-present, Director 1993-2009

Sinclair Community College (OH): Instructor, 1976 Bryan High School (TX): Chemistry Teacher, 1973-75

Texas A&M University, Department of Chemistry: Lecturer, 1973 Kimberly Clark Paper Corp. (Neenah, WI): Analytical Chemist, 1968-70

# **EDITORSHIP AND ADVISORY BOARDS**

Advisor to NSF-funded Advanced Technology Education and Chemical Education projects, 1996-2005 SciTeKS, American Chemical Society, Advisory Board, 1998-2000

Phi Theta Kappa Advisory Council for Improving Science & Technology Education at Community Colleges Project, 1997-8 Secondary School Chemistry Section Editor, *Journal of Chemical Education*, Division of Chemical Education, Inc., 1979-96 Ohio Board of Regents—Ohio Mathematics/Science Discovery Project Writing Committee, 1990; Statewide Steering Committee, 1991-93; Statewide Coordinating Council, Southwest Region Advisory Committee, 1992-96

# PROFESSIONAL AWARDS AND HONORS

Miami University's Benjamin Harrison Medallion, 2010

Cincinnati Section American Chemical Society, Outstanding Service Award, 2009

American Chemical Society's Helen M. Free Award for Public Outreach, 2008

Miami University Alumni Association, Effective Educator Award Nominee, 2007

Cincinnati Section American Chemical Society, Chemist of the Year Award, 2006

National Association of Partners in Education, Inc., Sincere Appreciation for Leadership, Dedication, Commitment, and Volunteer Support, 1998

National Science Foundation, Best Practice for Undergraduate Curriculum in the Analytical Sciences, awarded for the PACT Ambassador Program, 1997

PACT Ambassador Program included in the NOVA Corporation's Top 100 IdeaBook, 1997

Miami University Certificate of Recognition for Outstanding Achievement in Acquisition of Grant Support, 1996

Chemical Manufacturers Association, National Catalyst Award for Excellence in Chemistry Teaching, 1994 Science Education Council of Ohio, Friend of Science Award, 1994

McKee Polying Company Award for Partnership Efforts National Asso

McKee Baking Company Award for Partnership Efforts, National Association for Partners in Education, 1992 Ohio Academy of Science, Outstanding University Educator Award, 1990

Chemical Manufacturers Association, Regional Catalyst Award for Two-Year College Chemistry Instructor, 1985 Engineers and Scientists of Cincinnati Award for Community Service, 1989

Over \$17 million in funded grants to improve science education since 1987-2009; funding agencies include National Science Foundation (NSF), U.S. Dept. of Education, National Institutes of Health (NIH), National Institute of Environmental Health Sciences, Ohio Board of Regents, National Petrochemical Refiners Association (NPRA), American Chemical Society(ACS)—Cincinnati Section, Seoul Metropolitan Office of Education/National Institute for Internal Education Development, Ohio Department of Education, Procter & Gamble, Middletown Community Foundation, Division of Chemical Education ACS, SOCED American Chemical Society.

#### **ARLYNE (Mickey) SARQUIS**

Updated: 6/12/2010

#### **PUBLICATIONS**

Authored or edited more than 60 teacher resource publications including Volumes 1 and 2 of *Chemistry with Charisma:*Lessons that Capture & Keep Attention in the Classroom, Terrific Science Press, Middletown, OH, 2009 and 2010; textbooks including Modern Chemistry (2006) from Holt, Rinehard, and Winston; white papers such as "Chemists in the Classroom," American Chemical Society, 1990 (head of writing team);

More than 25 refereed journal publications including "Recommendations for Offering Successful Professional Development Programs for Teachers" (*Journal of Chemical Education*, June 2001).

Her teacher resource publications have received the following awards and honors:

2008 National Best Books Finalist, Education PreK-12, for Curious Crayons: Early Childhood Science in Living Color 2008 National Health Information Gold Award for Health Promotion/Disease and Injury Prevention Information for the Family for Strive to Thrive! Series

2008 Teachers' Choice Award for the Family for Strive to Thrive! Series

National Best Books 2007 Awards, Young Adult Educational category, for Lather Up! Hand Washing Activity Handbook AEP 2004 Finalist, Distinguished Achievement Award for What's that Smell? The Science Behind Adolescent Odors 2003 Parents Guide to Children's Media Award for Squishy, Squashy Sponges

2001 Parent's Choice Recommended Award for What a Gas!

# PROFESSIONAL PRESENTATIONS

More than 250 invited presentations at Meetings of Learned Societies both nationally and internationally since 1987. The invited international presentation included 20th International Conference on Chemical Education (ICCE 2008), Mauritius, 2008; 28th Latin American Chemical Congress (FLAQ), PR, 2008; International Centre for Innovation in Education (ICIE) Conference, Paris, France, 2008; XVIII Mendeleev Congress on General and Applied Chemistry, Moscow, Russia, 2007; 27th Latin American Congress of Chemistry, Havana, Cuba, 2006; 19<sup>th</sup> International Conference on Chemical Education, Seoul, Korea, 2006; Pacificchem 2005, Honolulu, HI, 2005; Gordon Conference, Queens College, Oxford, England, 2005; 3rd Annual Hawaii International Conference on Education, Honolulu, HI, 2005; XXVI Congreso Latinoamericano De Quimica, Salvador, Brazil, 2004; XXV Chilean Chemistry Society Meeting, Antofagasta, Chile, 2004; Guangzhou Chemistry Teachers Society, Guangzhou, China, November 2003.

# PROFESSIONAL ASSOCIATIONS

American Chemical Society, 1997-present

N&E, 2008-10 (elected); MAC, 2007-8 (appointed); CCA, 2004-8 (appointed)

Division of Chemical Education of the American Chemical Society 1997-present

CHED Councilor, 2004-2009(elected), Alternative Councilor, 2010-2012, and 1989-1991 (elected)

Chairmanship succession, 2001–2003 (elected)

Numerous committee appointments

Cincinnati Section American Chemical Society, 1980-present

National Science Teachers Association, 1975-present

# PROFESSIONAL DEVELOPMENT PROGRAMMING

The themes which guide Mickey's hallmark professional development programs include: Chemistry with Charisma (middle & high school level)—helps build understanding of abstract chemistry concepts while expanding their students' investigative and problem solving skills; Teaching Science with TOYS (all levels)—involved teachers in using toys and everyday objects as motivational and experiential tools to explore physical science concepts; Partners for Terrific Science (middle & high)—fostered interaction among industry scientists, teachers, and students to make science interesting, relevant, understandable, and accessible as a career path; and Risks & Choices & HealthRICH (middle & high)—improves understanding of environmental health science and helps teens make informed personal choices to reduce health risks based on scientific knowledge; Blending Science and Literature (elementary level)—uses children's literature as a springboard for science activities that reinforce process skills common to both disciplines; Science Night Family Fun & Classroom Science (elementary level)—encourage families to get involved in the science education of their children through fun community events that are reinforced through classroom lessons; Big Science for Little Hands (early childhood & primary)—educators learn to transform everyday items such as sponges, crayons, and toy cars into powerful learning tools for young children.