



American Chemical Society

Central Wisconsin Section



"An Approach to Anti-Alzheimer's Therapeutics: Inhibitors of Acetylcholinesterase"

by
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7:30 PM Tuesday, October 5, 2004
UW - Stevens Point Room A121 *Trytten Lecture Hall*

6:00 Dinner, Hilltop Pub & Grill

Abstract

As America's population ages, one of the fastest growing causes of death is Alzheimer's dementia. Among several physical and chemical events occurring in the central nervous systems of disease sufferers is the depletion of stored and available acetylcholine, a critical neurotransmitter. Therapeutic interventions that have sought to increase acetylcholine's biosynthesis have been unsuccessful, while several candidate drugs that retard its metabolism do seem to offer modest clinical improvement. Both reversible and irreversible inhibitors of acetylcholinesterase, with unsymmetrical choline carbonates as the basic framework, have been designed, synthesized, and tested. New synthetic approaches have been developed to such inhibitors, which release chemotoxic agents like quinone methide and haloketones at the enzyme's active site. Promising inhibitors with IC₅₀ values in the micromolar range are in hand.



About the Speaker

Biographical Sketch

Professional activities: President, American Chemical Society (Washington, DC), 1994; director, American Chemical Society (Washington, DC), 1985-1996; director; Council for Chemical Research, 1995-1999; Board Member, IUPAC-USA, 1995-2001; Board Member, Chemical Sciences Roundtable-National Academy of Sciences, 2001-present; director; Centcom Advertising, Ltd. (Westport, CT), 1987-1995; trustee, Northampton County Historical Society; 1989-present; trustee, Keystone Junior College (1975-89) trustee, Chemical Heritage Foundation (Board then Heritage Council), 1986-present; member, Journal Pharmaceutical Science board (to 12/90); member, Bioconjugate Chemistry board (to 12/03); chairman, Chemical & Engineering News board (1988, 1992-93; member 1994-95); consultant, Unimed Pharmaceuticals, Somerville, NJ, 1989-1995; consultant, Digestive Care, 1992-present; consultant, Bio-ProX, 1995-1997; consultant, DCV Pharmaceuticals, 1998-2000; consultant Serenix Pharmaceuticals, 1999-present; consultant, National Museum of American History, Smithsonian Institution, Washington DC; 1990-present; consultant, Air Products and Chemicals, Allentown, PA, 1991-present; consultant, Apollon Corp., Malvern, PA, 1992-1995. Education/Degrees: Lebanon Valley College, B.S. cum laude, 1959 (Chemistry/Math); University of Delaware, Ph.D., 1963 (Organic Chemistry); Princeton University, fellow, 1964 (medicinal Chemistry); Lebanon Valley College, honorary D.Sc. 1985; Albright College, honorary D.Sc., 1993. Experience: instructor, University of Delaware, 1962-63; visiting fellow, Princeton University, 1963-64; assistant professor, Ohio University, 1965; assistant professor, Marshall University, 1964-66; assistant, associate full professor of chemistry, Lehigh University, 1976-present; professor of nuclear medicine, Hahnemann University, 1971-present; director, Center for Health Sciences, Lehigh University, 1980-87.

Prior to the meeting, a 6:00 PM dinner will be held at Hilltop Pub & Grill, 4901 Main Street, Stevens Point (Across from the Best Western Royale, I-39 and Highway 10). Reservations may be made by calling Christina Altobelli (Chem. Dept. office) at 715-346-2888 (or email caltobel@uwsp.edu) by noon on Tuesday Oct. 5.