ICIQ

Institut Català d'Investigació Química

2011

Seminar Program

Av. Països Catalans, 16, Campus Sescelades (St. Pere i St. Pau), Tarragona. Tel. 977920200

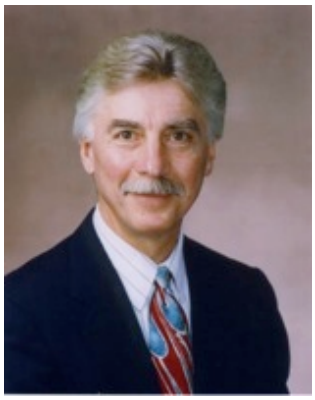
Toward the ideal synthesis: the role of step economy and function oriented synthesis in first-in-class approaches to aids eradication, Alzheimer's disease and resistant cancer

Prof. Paul A.Wender

Standford University (California, USA)

Monday 04th July, 2011. ICIQ Auditorium, 12 p.m.

Professional career



Paul Wender is the Bergstrom Professor of Chemistry at Stanford University, Professor of Chemical and Systems Biology (Stanford Medical School), a cofounder of the Quantitative Chemical Biology Program on the science advisory boards of the Stanford Molecular Imaging Program and of the Stanford Epithelial Biology Program and a member of the Program for Molecular and Genetic Medicine, the Comprehensive Cancer Center, the Cancer Pharmacology Program, the Cancer Nanotechnology Program, and the Molecular Therapeutics Program. He was also a cofounder, science advisor and board member of CellGate, a now acquired biotech company that pioneered new strategies for drug delivery and has contributed to the founding of two new biotech companies focused on therapies developed in his laboratories. He serves on numerous science advisory boards including the Lilly TB Drug Discovery Initiative, the Vanderbilt Institute of Chemical Biology, the Burnham Institute, the Rockefeller Neurosciences Institute, the SUNY Upstate Cancer Research Institute and the Institut des Biomolecules Max Mousseron (France).

Research Interests

His research involves studies in chemistry, biology, medicine and materials science. His group is interested in the design and mechanism of action of molecules that exhibit unique biological activity and therapeutic potential and in developing fundamentally new ways of synthesizing such compounds with an emphasis on the Ideal Synthesis, step economy and function oriented synthesis and design. His group has introduced over 25 new reaction classes including arene-alkene meta photocycloadditions and numerous transition metal-catalyzed cycloadditions (e.g., 3+2, 4+4, 5+2, 6+2, 5+2+1 processes), has completed the first or one of the first total syntheses of numerous major synthetic targets (including phorbol, taxol, resiniferatoxin, bryostatin, etc), and has advanced therapeutic leads and drug delivery systems (e.g., arginine-rich molecular transporters) into human clinical trials. Current research involves studies on synthesis, with an emphasis on transformative strategies and methods, and novel chemistry driven approaches to imaging, diagnostics, drug delivery, cancer and disease resistance,HIV/AIDS, tuberculosis, cognitive dysfunction, the biochemistry of learning, and Alzheimer's disease.