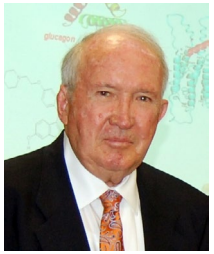
ROBERT M. MAHONEY is President and Chief Executive Officer of Belmont Savings Bank.

Mahoney received his M.B.A. from Columbia Business School in 1971. He is a 1970 graduate of the University of Massachusetts, where he earned a Bachelor of Science degree in Chemistry. He received the 1996 Distinguished Alumnus Award from the University of Massachusetts, and the 2006 Columbia University School of Business Leadership Award. He is the recipient of the 2009 Henry L. Shattuck Boston City Champion Award and the 2011 USS Constitution Museum's Charles Francis Adams Award for public service.

In February 2014, Mahoney was named the "most-admired CEO of a small or mid-sized company in Massachusetts" by the Boston Business Journal. The award follows the bank's significant recent success, doubling its assets in the past three years, surpassing one billion dollars, and opening three new in-store branches. In addition, the bank created the Belmont Savings Bank Foundation, which has become a financial partner to many local non-profit groups, institutions, and schools operating within the communities where the bank operates. Since its inception two years ago, the Foundation has donated over $150,000 to local organizations.

Mahoney has held several community leadership positions in Massachusetts. He is Past Chairman of the United Way Board of Directors and Executive Committee, and serves on the University of Massachusetts Amherst Foundation board. He is also a cofounder of Community Gems, a collaboration of non-profit agencies that work together with community partners to meet the diverse needs of Greater Boston's youth and families. He is a board member of the Sitel Corporation, a $1.5B worldwide customer-service firm in Nashville and International Data Group, a $3B technology media and research group based in Boston. Mahoney also sits on the Archdiocese of Boston Finance Council and chairs the Council's Finance and Real Estate Steering Committee.

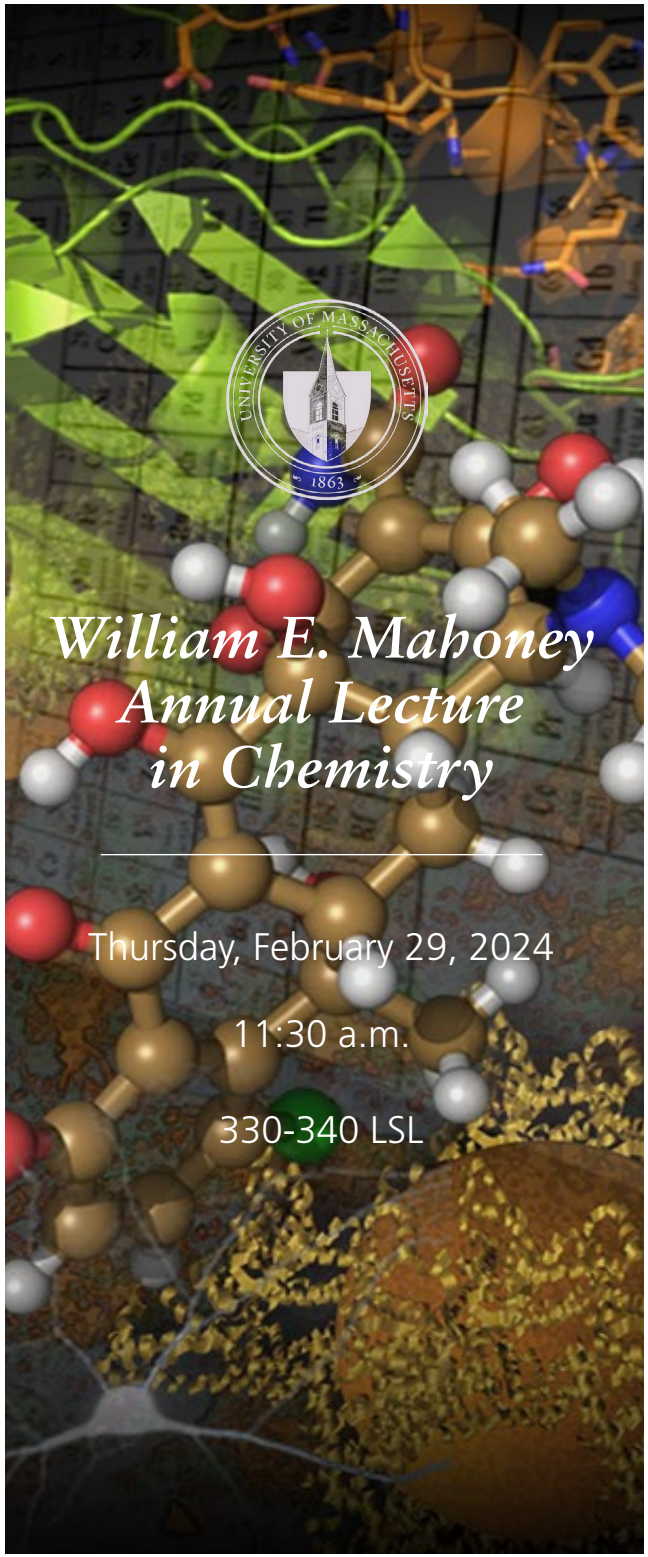


WILLIAM E. MAHONEY was a 1955 alumnus of the Department of Chemistry at the University of Massachusetts, Amherst. Professor Mahoney was Vice Chairman and Chief Operating Officer, as well as Chairman of the Executive Committee of the Board of Directors, of Witco Corporation (now Chemtura Corporation), a Fortune 500 manufacturer of specialty chemical and petroleum products.

After retiring from Witco in 1996, Professor Mahoney diverted his energies to developing the next generation of leadership in science and industry. Professor Mahoney was a longtime adjunct faculty member in the UMass Chemistry Department. He taught a highly successful seminar series entitled "The Business of Science: Contemporary Practices" for several years. Through this seminar series, students were introduced to topics in the management of science and technology by speakers from the business management communities. Professor Mahoney also chaired the Natural Sciences and Mathematics Advisory Council. In recognition of his distinguished achievements, the University of Massachusetts conferred to him the Chancellor's Medal in 1996. In 2006 he received the Distinguished Achievement Award. This award honors individuals for exceptional achievements in a chosen profession, demonstrated leadership, and exemplary accomplishments that merit special recognition by the campus.

Previous Mahoney Speakers

Professor Laura Kiessling, 2022-2023
Professor R. Graham Cooks, 2020-2021
Professor George R. Church, 2019-2020
Professor Jack W. Szostak, 2018-2019
Professor Joanne Stubbe, 2017-2018
Professor Stuart Schreiber, 2016-2017
Professor Prashant Kamat, 2015-2016
Professor Paul Alivisatos, 2014-2015
Professor Peter Schultz, 2013-2014
Professor Richard DiMarchi, 2012-2013
Professor Hagan Bayley, 2011-2012
Professor Harry Gray, 2010-2011
Chancellor Marye Anne Fox, 2009-2010
Dr. Patricia Dehmer, 2008-2009
Professor Roald Hoffmann, 2007-2008
Dr. Ioannis Miaoulis, 2006-2007
Dr. Madeleine Jacobs, 2005-2006
Professor Richard Zare, 2004-2005
Professor Lawrence Krauss , 2003-2004
Professor Bassam Shakashiri, 2002-2003
Professor Dudley Herschbach, 2001-2002



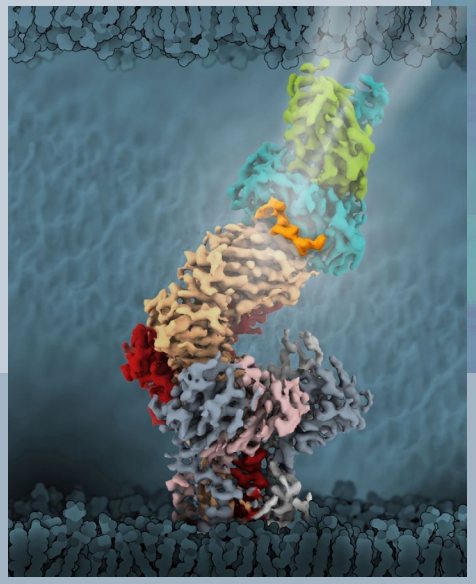
From Antigens to Defense: Cellular Machineries in Quality Control and Adaptive Immunity

ROBERT TAMPÉ

Institute of Biochemistry, Biocenter, Goethe University Frankfurt
Head of Research Center CRC1507 – Protein assemblies and machineries at cell membranes
ERC Investigator Life Sciences | DFG Koselleck Investigator | EMBO Member

Robert Tampé is a biochemist at the Biocenter of Goethe University Frankfurt, known for his contributions in the mechanistic understanding of antigen processing and viral immune evasion. He also discovered the molecular machinery of ribosome recycling and provided structural and mechanistic insights into ribosome splitting and mRNA surveillance. His major passions are macromolecular complexes, membrane biology, control of mRNA translation, as well as chemical and synthetic biology.

Tampé is full professor at Goethe University Frankfurt and director of the Institute of Biochemistry and the Research Center SFB 1507. He co-initiated the Cluster of Excellence Macromolecular Complexes. Before assuming his position in Frankfurt, he was director of the Institute of Physiological Chemistry, Medical School at the University of Marburg, independent group leader at the Max Planck Institute of Biochemistry Martinsried, and assistant professor at the Technical University Munich. As Max Kade Fellow, he worked with Harden M. McConnell at Stanford University. He was awarded with an honorary professorship from Kyoto University and was Visiting Research Fellow at Merton College and Department of Biochemistry, Oxford. He is an elected EMBO member and ERC investigator. In 2023 he received the Schaefer Scholar Research Award at Columbia University.



The structure of the fully assembled T-cell receptor (TCR) complex with a tumor-associated peptide/MHC ligand provides important insights into the biology of TCR signaling. The nature of TCR assembly and unusual plasma membrane architecture reveal the basis of antigen recognition and receptor signaling in the absence of large conformational changes (Sušac *et al*. 2022 *Cell*).

ABSTRACT

To elicit an effective immune response against pathogens and cancerous cells, MHC I molecules undergo an eventful journey from their biogenesis in the ER to their final decoding by cytotoxic T cells on target cell surfaces. Cellular machines, consisting of transporters, chaperones, and receptor clients facilitate MHC I biogenesis, assembly, quality control, and final recognition. However, the mechanistic integration of the corresponding processes remains poorly understood. I will discuss the multichaperone-client interaction network of the MHC I peptide loading complex assembled on the transporter associated with antigen processing. By integrative approaches, we reveal the mechanistic underpinnings of antigen transport, epitope proofreading, quality control, and final release of MHC I complexes. In addition, the structural and mechanistic insights into the T cell receptor complex bound to a tumor-specific human class I pMHC will be discussed, including the functional impact of connecting peptides and sterol lipid for complex assembly.