

CURRICULUM VITAE

Robert Edwards Thach

Professor

EDUCATION/TRAINING

INSTITUTION AND LOCATION, DEGREE, YEAR(s), FIELD OF STUDY

Princeton University, Princeton NJ

A.B. 1961 Chemistry

Harvard University, Boston, MA Ph.D. 1964

Biochemistry

Positions and Honors.

Positions and Employment

1993 - 2008 Dean, Graduate School of Arts and Sciences

1983 - 1993 Coordinator, Program for Special Major in Biochemistry and Molecular Biology

1977 - 1981 Chairman, Biology Department, Washington University

1972 - 1977 Director, Center for Basic Cancer Research, Washington University

1974 - 1977 Director, Graduate Program in Molecular Biology Division of Biology and Biomedical Sciences, Washington University

1977 – present Professor, Department of Biology, Washington University, St. Louis, MO

1973 - present Professor of Biological Chemistry, Washington University School of Medicine, St. Louis, MO

1970 - 1973 Associate Professor of Biological Chemistry, Washington University School of Medicine, St. Louis, MO

1969 - 1970 Associate Professor of Biochemistry and Molecular Biology, Harvard University, Boston, MA

1966 - 1969 Assistant Professor of Biochemistry and Molecular Biology, Harvard University, Boston, MA

1964 - 1966 Research Fellow, Department of Biochemistry and Molecular Biology, Harvard University, Boston, MA

Other Experience and Professional Memberships

2005-2011; Organizer, International Graduate Scholarship Conference (China)

2004 Middle States Commission on Higher Education, Evaluation Team for the University of Pennsylvania

2004 Ad Hoc Advisory Committee on Graduate Education, Evaluation Team for the California Institute of Technology

2001 - 2002 Graduate Record Examination Board Chair

2001 - 2003 Woodrow Wilson Foundation's "Responsive Ph.D." Advisory Council

2003 – 2005; Co-Chair of "Responsive Ph.D."

1998 - 2003 Graduate Record Examination Board

1998 - 2000 Association of Graduate Schools, Executive Committee

1997 - 2000 CGS Board of Directors

1997 - 1998 CGS Executive Committee

1996 - 2000 Council of Graduate School's Task Force on Publications

1996 - 1998 North Central Association's Graduate Education Advisory Group

1996 - 1997 AAU Title IX Advisory Group
1996 - 2000 Emory University, Graduate Advisory Council
1990 - 1991 Enzyme, Guest Editor
1984 - 1989 Journal of Biological Chemistry
1980 - 1981 National Science Foundation, Biochemistry Review Panel
1980 - 1983 Monsanto Company, Institutional Biosafety Committee
1977 - 1979 United Cancer Council, Inc., Member, Research Grant Review Committee
1972 -1978 Archives of Biochemistry and Biophysics

Honors

2011-present Marquis "Who's Who in Science and Medicine"
2010-present Marquis "Who's Who in the World"
2009-present Marquis "Who's Who in America"
1992 American Association for the Advancement of Science Fellow
1969-70 John Simon Guggenheim Memorial Foundation Fellow
1962-64 National Science Foundation Fellow
1961-62 Woodrow Wilson Fellow
1961 American Chemical Society "Outstanding Young Investigator" Award
1961 Phi Beta Kappa, Sigma Xi

Selected peer-reviewed publications (in chronological order).

2. "Synthesis of Block Oligonucleotides", R.E. Thach and P. Doty, Science 147, 1310 (1965). PubMed PMID: 14250329
3. "Enzymatic Synthesis of Tri- and Tetranucleotides of Defined Sequence", R.E. Thach and P. Doty, Science 148, 632 (1965). PubMed PMID: 14268724
5. "The Polarity of Messenger Translation in Protein Synthesis", R.E. Thach, M.A. Cecere, T.A.Sundararajan and P. Doty, Proc. Natl. Acad. Sci. 54, 1167 (1965). PubMed PMID: 5219824; PubMed Central PMCID: PMC219823
8. "Formylmethionine Codon AUG as an Initiator of Peptide Synthesis", R.E. Thach, K.F. Dewey, Brown and Paul Doty, Science 153, 416 (1966). J.C. PubMed PMID: 5328567
14. "Studies on the Binding of Formylmethionyl-tRNA and Aminoacyl-tRNA to Ribosomes", Takahisa Ohta and Robert E. Thach, Nature 219, 238 (1968). PubMed PMID: 4876465
16. "Junction of the 50S Ribosomal Subunit with the 30S Initiation Complex", Daniel Kolakofsky, Takahisa Ohta, and Robert E. Thach, Nature 220, 244 (1968). PubMed PMID: 5684849
27. "One Molecule of Guanosine Triphosphate is Present in Each 30S Initiation Complex", Sigrid S.Thach and Robert E. Thach, Nature New Biology 229, 219-220 (1971). PubMed PMID: 5281021
32. "The Mechanism of Viral Replication, II. Structure of Replication Complexes of Encephalomyocarditis Virus", S.S. Thach, D. Dobbertin, C. Lawrence, F. Golini and R.E. Thach, Proc. Natl. Acad. Sci. 71, 2549-2553 (1974). PubMed PMID: 4366773; PubMed Central PMCID: PMC388497
57. "Translational Specificity in Reovirus-Infected Mouse Fibroblasts", by B.M. Detjen, W. Walden and R.E. Thach, J. Biol. Chem., 257, 9855-9860 (1982). PubMed PMID: 7107592
61. "ATP-Dependent Unwinding of Messenger RNA Structure by Eukaryotic Initiation Factors," by B.K.Ray, T.G. Lawson, J. Kramer, J.A. Grifo, R.D. Abramson, W.C.Merrick and R.E. Thach, J. Biol.Chem., 260, 7651-7658 (1985). PubMed PMID: 3838990
62. "Shutoff of Host Translation by Encephalomyocarditis Virus Infection Does Not Involve Cleavage of Eukaryotic Initiation Factor-4F that Accompanies Poliovirus

Infection," by J. Mosenkis, S. Daniels-McQueen, S. Janovec, R. Duncan J.W.B. Hershey, J.A. Grifo, W.C. Merrick and R.E. Thach, *J. Virol.* 54, 643-645 (1985). PubMed PMID: 2985829; PubMed Central PMCID: PMC254842

65. "Influence of 5' Proximal Secondary Structure on the Translational Efficiency of Eukaryotic mRNAs and on their Interaction with Initiation Factors", by T.G. Lawson, B.K. Ray, J.T. Dodds, J.A. Grifo, R.D. Abramson, W.C. Merrick, D.F. Betsch, H.L. Weith and R.E. Thach, *J. Biol. Chem.*, 261, 13979-13989 (1986). PubMed PMID: 3771516

71. "Discriminatory Interaction of Purified Initiation Factors 4F Plus 4A with the 5' Ends of Reovirus mRNAs," by T.G. Lawson, M.H. Cladaras, B.K. Ray, K.A. Lee, R.D. Abramson, W.C. Merrick and R.E. Thach, *J. Biol. Chem.* 263, 7266-7276 (1988). PubMed PMID: 3366779

73. "Nucleotide Sequence of a cDNA Encoding Rabbit Ferritin L Chain," by S. Daniels-McQueen, A. Ray, W.E. Walden, B.K. Ray, and R.E. Thach, *Nucl. Acids Res.*, 16, 7741 (1988). PubMed PMID: 3412911; PubMed Central PMCID: PMC338463

76. "Translational Repression in Eukaryotes: Partial Purification and Characterization of a Repressor of Ferritin mRNA Translation," by W.E. Walden, S. Daniels-McQueen, P.H. Brown, L. Gaffield, D.A. Russell, D. Bielser, L.C. Bailey and R.E. Thach, *Proc. Natl. Acad. Sci. USA* 85, 9503-9507 (1988). PubMed PMID: 3200835; PubMed Central PMCID: PMC282781

77. "Renewed Interest in Translational Control," by R.E. Thach, *Cell* 55, 543-544 (1988).

78. "Dissociation of Double-Stranded Polynucleotide Helical Structures by Eukaryotic Initiation Factors, as Revealed by a Novel Assay," by T.G. Lawson, K.A. Lee, M.M. Maimone, R.D. Abramson, T.E. Dever, W.C. Merrick and R.E. Thach, *Biochemistry* 28, 4729-4734 (1989). PubMed PMID: 2548591

85. "Cap Recap: The Involvement of eIF-4F in Regulating Gene Expression," (Minireview) by R.E. Thach, *Cell* 68, 177-180 (1992). PubMed PMID: 1733496

86. "Enhanced Degradation of the Ferritin Repressor Protein During Induction of Ferritin Messenger RNA Translation," by L.S. Goessling, S. Daniels-McQueen, M. Bhattacharyya-Pakrasi, J.-J. Lin, and R.E. Thach, *Science* 256, 670-673 (1992). PubMed PMID: 1316633

89. "Irreversible Steps in the Ferritin Synthesis Induction Pathway," by L.S. Goessling, D. P. Mascotti, M. Bhattacharyya- Pakrasi, H. Gang, and R.E. Thach, (1994) *J. Biol. Chem.* 269:4343-48. PubMed PMID: 8308003

93. "Involvement of Heme in the Degradation of Iron-Regulatory Protein 2," by L.S. Goessling, D.P. Mascotti, and R.E. Thach, *J. Biol. Chem.* 273, 12555-12557 (1998). PubMed PMID: 9575215

96. "Blood Meal Analysis to Identify Reservoir Hosts for *Amblyomma americanum* Ticks," by B. F. Allan, L. S. Goessling, G. A. Storch, and R. E. Thach, *Emerg. Inf. Dis.* 16, 433-440 (2010)

97. "Invasive Honeysuckle Eradication Reduces Tick-borne Disease Risk by Altering Host Dynamics," by B. F. Allan, H. P. Dutra, L. S. Goessling, K. Barnett, J. M. Chase, R. J. Marquis, G. Pang, G. A. Storch, R. E. Thach, and J. L. Orrock, *Proc. Natl. Acad. Sci. USA* 107, 18523-18527 (2010)

Research Support

Ongoing Research Support

R.E. Thach (PI); Time for Lyme, Inc; “Vertebrate Reservoirs for Tick-Borne Diseases in the Central United States”; \$25,000; 10/1/2011-9/30/2012

Recent Research Support

R.E. Thach (PI); Time for Lyme, Inc; “Vertebrate Reservoirs for Tick-Borne Diseases in the Central United States”; \$25,000; 10/1/09-3/31/10.

R. E. Thach (Co-Investigator); “Landscape Design Guidelines for Mitigating Human Risk of Exposure to Lone Star Tick-Associated Pathogens”; Jonathan M. Chase, Project Coordinator; \$237,439; 9/1/09-8/31/11