

CURRICULUM VITAE

PERSONAL DATA

Name: George X. Thyvelikakath

Current Position: Tenured Professor of Chemistry
Biology and Chemistry Department
Oral Roberts University
7777 South Lewis Avenue
Tulsa, Oklahoma 74171

Professional Positions: Dean of School of Arts and Sciences
Oral Roberts University
Tulsa, Oklahoma 74171
May 1998-May 2007

Chair of Chemistry Department
School of Arts and Sciences
Oral Roberts University
Tulsa, Oklahoma 74171
1987-1998

Professor of Chemistry
Chemistry Department, School of Arts and Sciences
Oral Roberts University
Tulsa, Oklahoma 74171
1977-1987

Visiting Assistant Professor of Chemistry
University of Arkansas
Fayetteville, Arkansas
1976-1977

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EDUCATION

Kerala University, Cochin, Kerala, India
B.S. in Chemistry, 1965

University of Southwestern Louisiana, Lafayette, Louisiana
M.S. in Electro Organic Chemistry, 1971

Oklahoma State University, Stillwater, Oklahoma Ph.D. in Medicinal Organic Chemistry, 1975

MAJOR FOCUS OF RESEARCH IS THE FIELD OF MEDICINAL CHEMISTRY WITH SPECIAL EMPHASIS ON CANCER DRUGS, PEDAGOGY, AND PHILOSOPHY OF EDUCATION

Synthesis of cancer drugs with strategically positioned heteroatoms to permit charge transfer complexation with selected anticancer drugs, achieving better knowledge of biochemical bonding propensities to make systematic approaches to a productive and predictive drug design possible.

Investigation of the various causes of cancer, attempting to discover the exact biochemical mechanisms of carcinogens, with special reference to chemical carcinogens.

Isolation and characterization of certain alkoxy and thioalkoxycarbenium ions to help understand many incompletely understood cancer drug activities.

Molecular complexes with cancer drugs to reduce side effects.

NMR and MRI studies for the detection of cancer and heart disease as well as oil, gas, and water flow through rock samples.

Development of a new approach to classroom teaching and philosophy of education. Chemistry of contact lenses and chemistry of pesticides.

Career planning consultancy.

Human nature, world peace, and negotiation.

PROFESSIONAL EMPLOYMENT

- Postdoctoral Fellow, University of Arkansas, Fayetteville, Arkansas, 1975-1976
- Visiting Assistant Professor, University of Arkansas, Fayetteville, Arkansas, 1976-1977
- Assistant Professor of Chemistry, Oral Roberts University, Tulsa, Oklahoma, 1977-1980
- Visiting Professor of Chemistry, Northeastern Oklahoma State University, Tahlequah, Oklahoma, summer 1978
- Associate Professor of Chemistry, Oral Roberts University, Tulsa, Oklahoma, 1980-1983
- Tenured status received, Oral Roberts University, Tulsa, Oklahoma, 1980 Professor of Chemistry, Oral Roberts University, Tulsa, Oklahoma, 1983-present
- Chairman, Department of Chemistry, Oral Roberts University, Tulsa, Oklahoma, 1987-May 1, 1998 Career Planning Consultant for American Chemical Society, 1990-present
- Dean, School of Arts and Sciences, Oral Roberts University, Tulsa, Oklahoma, May 2, 1998-May 2007
- Tenured Professor of Chemistry, Biology and Chemistry Department, Oral Roberts University, August 2007-present

TEACHING EXPERIENCE AND CURRICULUM DESIGN

University of Arkansas, 1976-1977

- Organic Physiological Chemistry for nursing and home economics
- Organic Chemistry for Pre-Med, Pre-Vet, Pharmacy, and Medical Technology
- Special Topics: Drug Design, with special emphasis given to Cancer and Undergraduate Research, honors program

Oral Roberts University, 1977-Present

- Organic Chemistry
- Organic Chemistry Laboratory Biochemistry
- Chemistry Seminar
- Chemistry and Cancer {designed and implemented course} Medicinal Chemistry {chemical

- carcinogens to medical students) Advanced Laboratory
- Synthesis (designed and implemented course) Senior Paper and Research

Courses I am interested in teaching-advanced undergraduate and graduate courses
Spectroscopy (IR, UV, Vis, NMR, MS, etc.)

- Polymer Chemistry General Chemistry
- Qualitative Organic Chemistry or Modern Organic Analysis (MOA) Organic Reaction Mechanism
- Pesticides and Insecticides

HONORS AND AWARDS

- Outstanding Graduate Assistant Teacher Award, Oklahoma State University, Stillwater, Oklahoma, 1974
- Dow Research Fellowship, Oklahoma State University, Stillwater, Oklahoma, summer 1975
- Gulf Research Fellowship, Oklahoma State University, Stillwater, Oklahoma, summer 1975
- Outstanding Faculty of the Year, University of Arkansas, Fayetteville, Arkansas, 1976-1977
- Meritorious Service to the Science Teaching Profession in Oklahoma, certificate, Oklahoma Science Teachers Association, Tulsa, Oklahoma, 1978
- Outstanding Faculty Member Award, Oral Roberts University, Tulsa, Oklahoma, 1979-1980
- Consultant to Metal Cleaning Corporation, Tulsa, Oklahoma, 1980-1981
- Consultant to Cancer Research Teams, India, 1982-present
- Tour Speaker, National American Chemical Society, 1983-present
- Arts and Sciences Performance Award, Oral Roberts University, Tulsa, Oklahoma, 1984-1985
- Catalyst Award for Excellence in Teaching, National Nominee, 1986
- Charles A. Dana Award in Higher Education, National Nominee, 1986
- American Chemical Society Career Consultant for the National Professional and Career Support Program, January 31, 1990-present
- Teacher of the Week, Channel 2, Tulsa, Oklahoma, 1990
- Polymer Summer Course for University Professors participant, Rensselaer Polytechnic Institute, Troy, New York, summer 1991, supported by NSF Grant
- American Chemical Society Local Section Career Program coordinator, 1996-present
- Rotary International member through the Sunrise Rotary Club, 1998- present
- Listed in:
- *Who's Who in Frontiers of Science and Technology*, 2nd ed., Marquis Who's Who, Inc., Chicago, IL, 1985
- *Who's Who in the World*, 8th ed.
- *5000 Personalities of the World*, 2nd ed. *Directory of Distinguished Americans*, 4th ed. *Men of Achievement*, 12th ed.
- *Personalities of America*, 4th ed.
- *Personalities of the South*, 4th ed.
- *Lexington Who's Who* including listing in the *Registry of Executives and Professionals*, 2001-2002
- *Empire Who's Who Registry of Executives and Professionals*, lifetime member since 2004
- TELEVISION APPEARANCES
- Interview by NBC Channel 2 anchorwoman Karen Keith, interview by representative of OETA, Oklahoma's
- educational channel, and numerous appearances on nationally broadcast program *Richard Roberts Live* to discuss the chemistry program at ORU

MEMBERSHIPS IN ORGANIZATIONS

- American Chemical Society, national member
- American Chemical Society, Tulsa Section member, secretary, 1978-1979; editor, 1978-1979; chairman 1983; chairman, symposia program statewide ACS pentasectional, 1978.
- Oklahoma Academy of Science, chairman of Science Education Section, 1982; vice chairman, 1981 Society for Magnetic Resonance Imaging, charter member
- Phi Lambda Epsilon and Alpha Epsilon Delta, lifetime memberships
- Southwest Regional ACS Symposia program, chairman, Biological Chemistry program, 1983 Tulsa Junior College Chemical Laboratory Advisory Committee (past member)
- American Institute of Chemists, fellow
- International Biographical Center, IBC Advisory Council, honorary member International Platform Association
- American Chemical Society, Tulsa Section, director, 1996-present GRANTS
- Principal Investigator, Intramural Grant, Synthesis and Characterization of Thioalkoxycarbenium ion--A Novel Alkylating Agent, Oral Roberts University-\$2,622, 1979
- Associate Investigator, Extramural Grant, Metabolism of Nitrosoureas, National Cancer Institute (NCI)-\$131,902, 1981-1984
- Other proposals written (in collaboration) and submitted:
- Three Phase Relative Permeability Determination using Imaging Nuclear Magnetic Resonance, 1985 Intensity Phantom for Magnetic Resonance Imaging, 1986
- 1993 Undergraduate Biological Science Education Program, 1993, Howard Hughes Medical Institute-\$1,194,560 (not funded); will be resubmitted.

BOOKS

- Thyvelikakath, G. X. (1980). *Basic organic chemistry laboratory procedures: A laboratory manual for organic chemistry for undergraduates*. Tulsa, OK: Oral Roberts University.
- Thyvelikakath, G. X. *Cancer: Chemistry of selected anticancer drugs*. In process.

REVIEWS

Books reviewed by G. X. Thyvelikakath

Pavia, D. L., Lampman, G. M., & Kriz, G. S. (1988). *Introduction to organic laboratory technique*. (3rd ed.). New York: Saunders College.

Williamson, K. (1996). *Organic chemistry experiments*. Houghton Mifflin.

Articles reviewed by G. X. Thyvelikakath

National Chemical Society. (1991). Contact-Lenses. *Chem Matters*.

Price, J. A. (1996). Microplate assay for histamine release from mast cells. *Journal of Laboratory Technology for Bi-Research Biochemtechnique*.

UNIVERSITY SERVICES

- Chairman, Natural Science Department (NSD) Research Committee, 1977-1979
- Chairman, The School of Arts and Sciences Research Committee, 1979-1980
- Secretary, Copyright/Patent Law Committee, 1980-1983

- Faculty Advisor, International Students, 1981
- Representative at Large to Faculty Senate (elected representative of Faculty Senate, serving in Faculty Cabinet), 1980-1981
- Member, Reassessing the Importance of Teaching Committee, 1979-1980 Chairman, Tenured Faculty Committee, 1981-1982
- Member, World Action Committee, 1980-1981 Member, Student Affairs Committee, 1979-1980
- Vice President (an elected Cabinet member), School of Arts and Sciences, 1984-1985
- President-Elect (an elected Cabinet member), School of Arts and Sciences, 1984-1985
- President, Faculty Senate (an elected Cabinet member) School of Arts and Sciences, 1985-1986
- Faculty Advisor, ACS Student Affiliate Chapter, 1981-present (chapter has received national recognition as Outstanding for 3 years and Commendable for 4 years)
- Member, Oral Roberts University and City of Faith Hospital Research Council, 1988-1989
- Member, Department of Chemistry Library Committee, 1989-1991
- Chairman, University International Studies Committee, 1989-present Member, University Admissions Committee, 1989-1990
- Member, University Safety Committee, 1990-present Member, University Biohazards Committee, 1990-1994
- Coordinator, Math, Science, and Engineering Research Planning Committee, School of Arts and Sciences, 1990- present
- Chairman, School of Arts and Sciences Honors Convocation Committee, 1990- 1991
- ORU Faculty Representative for Barry M. Goldwater Scholarship and Excellence in Education Foundation (endowed recognition program established by the United States Congress to foster and encourage excellence in sciences and mathematics), 1990-present
- ORU Faculty Coordinator for the Technical Resource Center (TRAC), which functions under the Oklahoma Center for the Advancement of Science and Technology (OCAST), 1993-present
- Chairman, University General Education Task Force, summer 1992-present

NATIONAL AMERICAN CHEMICAL SOCIETY TOUR SPEAKER

Served since 1983; topics approved by national office

- "Basic Concept of NMR Imaging and Its Application to Detection of Cancer and Heart Disease" {A, B Tech, GP, GSc, Med, N, 0/2, 3, 4}
- "Recent Development in the Etiologies of Cancer as well as Bioethics of Current Research Program" {Drg, Env, GP, GSc, Med, N, 0/2, 3, 4}
- "Fundamentals of Complexation Studies to Understand Combination Therapy" {Drg, Med, 0/1,2, 3}
- "Preparation and Characterization {¹³CMR and PRM} of Mechanistically and Biologically Significant Carbocations" (0, P, 1, 2, 3)
- "Motivation for and Joy of Teaching Chemistry" {Ced, GP, GSc/ 2, 3, 4}
- "Has the Search for a Better Chemical Education Program Touched the Root of the Problem?" {CeD, GP, GSc, Hist/2, 3, 4}
- "The Chemistry of Contact Lenses" {GP, GSc', 0, Poly/ 2, 3, 4}

SCIENTIFIC CREATIVE WORKS

Papers and abstracts {39 publications}

Research supervised and senior research projects advised {over 100 publications}

Invited lectures {national and international) and presentation of papers {over 100}

{Publications and presentations are not listed because of the large number.)

REFERENCES

Will be provided upon request