

# William C. Davis

San Antonio, TX  
Mobile: (210) 422-1663  
Office: (210) 486-2262

## EDUCATION

- 1965 University of Idaho  
Ph.D., Biochemistry, Minor: Organic Chemistry
- 1958 Tuskegee Institute, Tuskegee, Alabama  
M.S., Organic Chemistry
- 1956 Talladega College, Talladega, Alabama  
B.S., Chemistry, Minor: Mathematics, Physics, Biology

## HONORS

G.W. Carver Fellow, Tuskegee Institute, 1956-1958  
Academic Honors, City College of New York, 1948-1950  
Texas Science Hall of Fame, 2000  
Purple Heart, 1953

## PROFESSIONAL EXPERIENCE

Jr. Chemist, Chemical Research Section, College of Engineering, Washington State University, Pullman, Washington, 1959-1960.

Laboratory Technician, Department of Poultry Science, Washington State University, Pullman, Washington, 1961-62. (While in graduate school).

Assistant Chemist, Chemical Research Section, College of Engineering, Washington State University, Pullman Washington, September 1964 to March 31, 1965.

Post-Doctoral, solid phase immuno assay, George Hyman Research Institute, Washington, D.C., 1974-1976.

Academic Dean of the College of Naturopathy, Portland, Oregon, 1976-1980.

Research Staff Consultant, Immutech Inc., Dallas, Texas, 1980- 1982.

Research Associate, The University of Texas Health Science Center, 1979-1982.

Instructor in Chemistry, St. Philip's College, San Antonio, Texas, 1983-1986.

Assistant Professor in Chemistry, St. Philip's College, San Antonio, Texas, 1986-1990.

Associate Professor in Chemistry, St. Philip's College, San Antonio, Texas, 1990-1995.

Professor in Chemistry, St. Philip's College, San Antonio, Texas 1995-2009.

Professor Emeritus of the Natural Sciences Department, St. Philip's College, San Antonio, Texas 2009-present.

Chair of Natural Sciences, St. Philip's College, San Antonio, Texas 1996-2007.

### **EXPERIENCE WITH RADIOISOTOPES, RADIATIONS, and ALTERNATE ENERGY SOURCES**

Graduate student with Dr. Clarence T. Mason, solid-rocket fuel for space exploration, George W. Carver Foundation, 1956-1958.

Consultation with Mr. Roger Brown, Health Physicist, Washington State University, Pullman Washington, 1965.

Study with Dr. Mark Adams, Division of Industrial Research, Washington State University, Pullman Washington, Experiments with fuel cell technology (Micro power – fuel cells), 1962-1966.

Study with Dr. Roy M. Chatters, Associate Nuclear Engineer, Head Radioisotopes and Radiations

Clinical Chemist and Head of Radioisotopes Department and Physicist, United Medical Laboratories, Portland, Oregon, 1965-1967.

Visiting Scholar, Department of Physical Sciences, Warner Pacific College, Portland, Oregon, 1967-1976.

Head of the Biochemistry Department and Consultant, Physicians Medical Laboratories, Portland, Oregon, 1967-1973.

Director and Founder of Albina Health Care Center Medical Clinic of Portland, Oregon, 1972-1980.

Associate Professor of Chemistry and Director of Clinical Laboratories, Western States Chiropractic College, Portland Oregon, 1975-1979.

Director of Renewable Energy, St. Philip's College, 2002-2007.

### **SPECIAL EXPERIENCE**

1. Isolation and purification of peptide hormones (parathyroid hormone, thyrocalcitonin growth hormone, others).
2. Immunological assay methods (micro-complement fixation and radioimmunoassay).
3. Dispersed cell cultures of functional endocrine tissues (adrenal cortex, pituitary gland, parathyroid gland, others).

4. Design and analysis of biological assays.
5. Studies of the mechanism of hormone actions and of the relationship of structures to biological activity.
6. Isolation of the possible antigen from various woods for the Allergy Clinic in conjunction with Dr. O'Hallaren, Poland, Oregon.
7. Recombinant DNA Technology and solid-phase radioimmunoassay.
8. Consultations with Abbott Laboratories for radioimmunoassay kits.
9. Special qualifications and skills (license, skills with machines, patents, or inventions), publications, membership in professional or scientific societies.
  - a. License: Registered Medical Technologist: Health Physicist (Radioisotope license); Certified Clinical Chemist.
  - b. Skills with machines: Atomic absorption, Chromatography (all kinds), Radioactive-counting machines. Autochemist, automatic clinical assay machine, proton NMR spectroscopy, mass spectroscopy and infrared spectroscopy.

## PUBLICATIONS

- 1) Davis, W.C., D. LeTourneau, M.V. Zaehring and H.H. Cunningham, 1954. Sloughing as related to the teaching of certain constituents from potato tissue. *Amer. Potato J.* 41:296 (ABST).
- 2) Davis, W.C., and D. LeTourneau, The effect of various salts on the sloughing of potato tuber slices previously soaked in distilled water. *Amer. Potato J.* 4:355-362 (1967)
- 3) Davis, W.C., A comparison of the T-4 and PBI Test. *J. of Medical Technology* 29: 600 (1967)
- 4) Davis, W.C., A radioisotope Manual for Medical Technologist. (United Medical Laboratory Press) 1965.
- 5) Davis, W.C., Radiation Protection Program (United Medical Laboratory Press) 1965
- 6) Davis, W.C., A simple column procedure for the determination of serum thyroxine. *J. of Medical Technology* 31, 289-293 (1969).
- 7) Davis, W.C., Plasma Cortisol, Technical Bulletin No.3 (Physicians Medical Laboratories, Portland, Oregon, 1970).
- 8) Davis, W.C., Serum Thyroxine by Radioassay, Technical Bulletin No.2 (Physicians Medical Laboratories, Portland, Oregon 1969).

- 9) Davis, W.C., Ed. Minerals and Carbohydrate Metabolism, Annotated Bibliography (Western States College, Portland Oregon 1969).
- 10) Davis, W.C., and M.K. Ticku (1981a) Solubilization of picrotoxinin binding receptor form mammalian brain, *J. Neurochem.* 36: 1572-1579.
- 11) Davis, W.C., and M.K. Ticku (1981a) Solubilization of the dihydropicrotoxinin binding sites. *Eur. J. Pharmac.* 68: 297-399.
- 12) Davis, W.C., and M.K. Ticku (1981b) Pentobarbital enhances ( $^3\text{H}$ )-Diazepam binding to soluble receptor at the benzodiazepine-GABA receptor-ionophore complex. *Nuerosci. Lett.* 23: 209-213.
- 13) Ticku, M.K., and William C. Davis (1981). Evidence that ethanol and pentobarbital enhance ( $\text{H}^3$ ) diazepam at the Benzodiazepine-GABA receptor Ionophore Complex indirectly. *Eur. J. Pharmac.* 71: 521-522.
- 14) Ticku, M.K., and William C. Davis. The isolation and characterization of the protein involved in Benzodiazapine and BABA-Receptor-Ionophore complex (1981) *Neuroscience.* 1: 1240-1268
- 15) Ticku, M.K., and William C. Davis (1981) Valporic acid reaction of the Benzodiazepine GABA-Receptor-Ionophore Complex. *Brain Res.* 154: 519-529
- 16) Ticku, M.K., Burch, T.P. and William c. Davis (1981). Amino and Neurotransmitter (Ed. by F.V. DeFeudis and P. Mande Raven Press, New York page 411.
- 17) Ticku, M.K., and William C. Davis (1981). Interaction of pentylenetetrazol with Diazepam and Dihydropecrotoxinin components of the Benzodiazepine-GABA-receptor-ionophore complex. *Life Sci.* 25: 463-470.
- 18) Davis, W.C., and M.K. Ticku and I. Chen. Ethanol and barbiturates enhance [ $\text{H}^3$ ]-diazepam binding at the benzodiazppine-GABA-receptor-ionophore complex *Fed. Proc.* 40: 310 (1981).
- 19) Davis, W.C., and Ticku, M.K.. Molecular Interactions of Etazolate with Benzodiazepine and Picrotoxinin Binding Sites. *Neurochem.* 38: 1180- 1182 (1982).
- 20) Davis, W.C. A heated Argument for the use of Nuclear Energy, January 2001
- 21) Davis, W.C. U.S. must end its dangerous oil dependence. *San Antonio Express News.*, November 11, 2001.
- 22) Davis, W.C. The use of ethanol will backfire. *San Antonio Express News*, September 9, 2002.
- 23) Davis, W.C. "Kinetic Water", An overview of Natural Science at St. Philip's, (Publication 1982).

- 24) Davis, W.C. A case for nuclear energy health physics society, Newsletter, November 2000.
- 25) Davis, W.C. What about Coal?, Chemical & Engineering News, Newsletter 2000.
- 26) Davis, W.C. “U.S. Must End It’s Dangerous Oil Dependence”, page 4G, San Antonio Express News, November 11, 2001.
- 27) Davis, W.C. “Ethanol Mandate Will Backfire”, page 5G, San Antonio Express News, September 8, 2002.

## **PROFESSIONAL SOCIETIES**

HONORARY SOCIETIES: Sigma XI, Phi Sigma, Beta Kappa Chi

PROFESSIONAL SOCIETIES:

American Chemical Society, American Nuclear Society, American Institute of Biological Sciences, Registry of the Medical Technology Society, Registry of the Medical Technology Society, Society of Nuclear Medical, Health Physicist Society, American Association for the Advancement of Science, Blue Ribbon Science Task Force of Professional Educators and Community Leaders, Mentor in Minority Research Program at University of Incarnate Word, National Association of Advisors for the Health Professions.

## **GRANTS AWARDED**

NSF – Solid fuel rocket propulsion, Carver Foundation, 1956-1959.

NSF – Nuclear Energy research, Washington State University, Dept. of Chemical Engineering, 1960-1963.

NSF – Nuclear Energy resulted in certification Health Physicist, 1963-1965.

NSF – Visiting Professor of Physical Sciences, 1968-1972.

NSF – Solid Phase Immuno Assay, George Human Research Institute, Washington, D.C., 1974-1976.

NSF - Experiments with fuel cell technology (Micro power – fuel cells), Division of Industrial Research, Washington State University, Pullman Washington, 1962-1966.

NSF - Head Radioisotopes and Radiations Laboratory, College of Engineering, Washington State University, Pullman Washington, 1965-1968.

NSF - Visiting Scholar, Department of Physical Sciences, Warner Pacific College, Portland, Oregon, 1967-1976.

NIH - Director and Founder of Albina Health Care Center Medical Clinic of Portland, Oregon, 1972-1980.

NIH - Research Associate, The University of Texas Health Science Center, 1979-1982.

NSF – UTSA, publications resulted from grant listed in “Publications” section, 10-19.

#### **ADDITIONAL EXPERIENCE**

A. Experience with Community Health Service:

Duties included management and direction of other professional and paraprofessionals.

Comprehensive planning and study in the following areas:

- 1) The private medical laboratory in Community Health Services.
- 2) Wrote a comprehensive laboratory services manual for doctors. (Printed by United Medical Press, 1965).
- 3) Collaborated with Health Screening units and program personnel throughout Oregon in implementing biochemical screening procedures.
- 4) Wrote lecture notes for General Chemistry and Organic Chemistry.

B. Experience in Cancer Research

Uptake of Rb-36 by erythrocytes in certain types of malignancies--a new method of screening.

C. Experience in Hemoglobinopathies

The sickle-cell trait and anemia-prognosis.

D. Isolated and characterized the wood sugar stractan used for glue and structural purposes.

E. Discovered the method for the preparation of instant potatoes (arabogalactose).