

Roger Dilts

ADMINISTRATIVE EXPERIENCE

**Saba University
School of Medicine**

Course Director – Metabolism and Nutrition (Medical Biochemistry)
*directed substantive changes that significantly improved NBME
Biochemistry and Genetics Shelf scores and student evaluations*

**Southwest College of
Naturopathic Medicine**

Division Director, Human Studies - Coordinating with
the Dean and Director of Clinical Studies: Envision and facilitate the
revision and administration of the curriculum. *Program advanced
to over 95% passing rate from approximately 65% passing rate on Step 1
board examinations during my tenure.*

Chair, Department of Basic Sciences - manage budgets, faculty
(including evaluations) and facilities - department included 7 full-time
faculty and over 15 adjunct faculty, as well as numerous teaching
assistants

SCNM Board of Directors - voting member and faculty liaison

**Course Director - Medical Biochemistry and Genetics
- Pharmacology**

ACADEMIC POSITIONS

06/17 – **Professor - Biochemistry** Saba University School of Medicine
Saba, Netherlands Antilles

Faculty Excellence Award – *elected the “best professor” by students*

Courses taught: MED 611 – Metabolism and Nutrition
MED 511 – Scientific Foundations
MED 918 – Foundations in Clinical Medicine

09/16- 06/17 **Professor - Biochemistry** - Southwest College of Naturopathic Medicine
Tempe, AZ

12/14 – 02/17 **Associate Professor**

Courses taught: PHAR 6010, 6020 - Pharmacology I & II - medical pharmacology
BIOC 5014/5024/5034 - Biochemistry I, II & III
MGEN 5034 – Medical Genetics – created this course that included Mendelian
genetics, medical genetics, molecular biology, as well as cell cycle regulation
HUBI 5014/15, HUBI 5024, HUBI 5034 - Human Physiology -general
principles taught with Team Based Learning.
MICRO 5024 - Microbiology I & II - medical microbiology and immunology.
RSCH 5024 - Research II - an introduction to evaluating research articles and
their presentation.

- Service: Voting faculty representative to the Board of Trustees, Curriculum committee, Faculty Development committee, Vice-Chair of the Academic Policy and Procedures (APPC) Committee. Additional time spent on Admissions, interviewing and screening medical school applicants.
- 08/14 - 12/14 **Visiting Faculty** Colorado State University-Pueblo
Pueblo, CO Dept. of Biology
- Courses taught: BIOL 206 & BIOL 206L - Introduction to Microbiology - an introductory course with integrated laboratory for nursing and biomedical students
BIO 181 - College Biology I-Organismal Biology - an introductory course
BIO 223L - Human Physiology and Anatomy I Lab - laboratory with cadaver
- 01/14 - 07/14 **Adjunct Faculty** The College of New Jersey
Ewing, NJ Dept. of Biology
- Course taught: BIO 211 - Biology of the Eukaryotic Cell - cell biology for majors
BIO 171 - Human Structure and Function - a non-majors introductory course that included an integrated laboratory
- 09/12 - 04/13 **Visiting Faculty** Fort Lewis College
Durango, CO Dept. of Biology
- Course taught: BIO 260 - Genetics - required course for biology majors with laboratory
BIO 113 - Intro to Cell and Molecular Biology
- 06/09 - 06/12 **Faculty** Salish Kootenai College
Pablo, MT Dept. of Nursing
- Courses taught: NSGD 323 - Genetics, Genomics and Epidemiology
NSGD 318/328 - Pharmacology I/II
NSGD 209 - Infectious Disease & Epidemiology
BIOS 234 - Biochemistry of the Cell
BIOS 215, 217 & 219 - Human Anatomy and Physiology
- Service: Served on the Curriculum, Safety and Benefits Committees
- 09/06 - 06/09 **Faculty** Salish Kootenai College,
Pablo, MT Dept. of Life Sciences.
- Courses taught: LFSC 420/422/424 - Cellular Biology I, II & II
LFSC 330 - Genetics and Adaptation
LFSC 320 - Mammalian Physiology - comparative physiology
SCWK 363 - Pharmacology of Psychoactive Substances
PSYC 315 - Biological Psychology
BIOS 230 & 232 - Molecular and Cellular Biology I & II
CHEM 150, 151, 152, 153, 154 & 155 - General Chemistry w/ lab
- Service: *Collaborated on the creation of the Dept. of Life Sciences and developed curriculum for the first in-kind 4-yr program at Tribal College*

Committees: Faculty evaluation, Safety, Curriculum, and Benefits committees, as well as President’s Advisory Council

03/92 - 08/94 **Asst. Professor** Medical College of Virginia,
Richmond, VA Dept. of Physiology

Courses taught: PMC 691 Survey of Neuroscience
PIO 615 Advanced Neurophysiology

09/92 - 06/94 **Adjunct Faculty** J. Sergeant Reynolds Community College
Richmond, VA Dept. of Biology

Courses taught: BIO 141 & 142 Human Anatomy and Physiology I & II

EDUCATION

Ph.D. Pharmacology Washington State University 1989 Pullman, WA
B.S. Biochemistry Virginia Tech 1980 Blacksburg, VA

OTHER PROFESSIONAL EXPERIENCE

2006-2007 **Co-Founder** Epitait
San Diego, CA

Created a biotechnology company based on novel proprietary property and discoveries in obesity and other behavioral disorders; as well as acquisition

1994-1998 **Senior Scientist** Amylin Pharmaceuticals
La Jolla, CA Dept. of Physiology and Pharmacology

Team member on research teams that **produced TWO new commercial drugs and drug classes; Symlin (IAPP) and Byetta(GLP-1).**

Service: Benefits Committee, IACUC Committee and created a Scientific Seminar Series

GRANTS, FELLOWSHIPS and AWARDS

2013	Fort Lewis Foundation	Prevalence of Irlen Syndrome in STEM	
	Fort Lewis College, Durango, CO		\$1,500
2013	Faculty Award	Training for Irlen Syndrome Screening	
	Fort Lewis College, Durango, CO		\$2,500
2011-2009	Montana INBRE	Biological Source Tracking Flathead Lake	
	Salish Kootenai College, Pablo, MT		\$110,000
2010-2006	NIH-NIGMS	RISE Training Grant	
	Salish Kootenai College, Pablo, MT		\$1,337,000
2001-2000	Sierra Club	Water Quality Monitoring	
	Captain Cook, HI		\$50,000
1990	Brody School of Medicine	Biomedical Research Support Grant	

	East Carolina University, Greenville, NC	\$2,500
1989	NIH-NIMH National Research Service Award	
	University of California, Irvine, CA	\$100,000
1988	Washington State University Graduate Studies Travel Award	
	Washington State University, Pullman, WA	\$500

INVITED PRESENTATIONS

2014 – 2007	Quiz Master	Annual AIHEC Science Bowl, Indian Country, USA
2010	Facilitator	Continuing Education for Secondary Science Teachers, MT
2010	Lecturer	Montana Tech, Butte, MT

CONFERENCE ACTIVITY

Organized Activities

2021	Diabetes Update 2021 - Boston, MA	
2019	Detection, Prevention and Management of Diabetes Complications- Boston, MA	
2019	Society of Endocrinology Annual Meeting – New Orleans, LA	
2016	Society for Neuroscience Annual Meeting - San Diego, CA	
2015	Society for Advancement of Chicanos & Native Americans in Science (SACNAS) Washington, DC	
	Team Leader - Judging Presentations in Medical Science and Pharmacology	
2015	Irlen Conference – Houston, TX	
2013	Irlen Syndrome Education Outreach and Training, Durango, CO	
2009	Continuing Education Course for Secondary Science Teachers, Pablo, MT	
1998 – 1996	Scientific Seminar Series	Amylin Pharmaceuticals, San Diego, CA

Participation

2013 - 2016	Society for Advancement of Chicanos & Native Americans in Science (SACNAS) Abstract Review	
2011	Professional Education within Multi-cultural Environments, Bozeman, MT	
2011	Assessment for the Changing Learning Environment, Minneapolis, MN	
2010 – 2007	American Indian Research Organization (AIRO),	Bozeman, MT
2009	Advancement of Genomic Education, NIH-NHGRI,	Bethesda, MD
2007	Joint NASA-NSF Research and Education Opportunities Conference for Principal Investigators, Faculty and Partners Chantilly, VA	

PROFESSIONAL SOCIETIES

Endocrine Society	1995-/2019-
Society for Neuroscience	1985-/2016-
Society for the Advancement of Chicanos & Native Americans in Science (SACNAS)	2009 – 2016
American Association for the Advancement of Science (AAAS)	1990 -1998
Serotonin Club	1991-1994

Other Service and Experience:

- 2019- **Hyberbaric Chamber Training and Response Team**
The Bottom, Saba
- 1998-2007 **Creator, Owner & Host** - Aloha Farms Bed & Breakfast
Kealekakua, Hawaii
- 2001-2007 **Director**- Plan to Protect - local 501-3(c) organization
Kailua-Kona, HI
- 2003-2006 **President & Director**- Kona Coffee Council
Captain Cook, HI
- 2003-2006 **Officer & Director**- Kona Soil and Water Conservation District

PUBLICATIONS

Conference Proceedings and Presentations

Cahoon, J. L and Dilts, R.P. (2010) Multiplexing Gull and Geese *Escherichia coli* DNA using Box-1AR and Beta-galactosidase (UID) PCR in Order to Fingerprint Flathead Lake Water Samples. F106 Annual Biomedical Research Conference for Minority Students (**ABRCMS**) 2010.

Villegas, C., Cahoon, J., Higgins, N., Dickson, J., Rutledge, E., Dilts, R.P. (2010) Discovering the source of *Escherichia coli* in Flathead Lake using PCR and Bioinformatics. SAT-4-953. **SACNAS** 2010.

Cahoon, J., Villegas, C., Higgins, N., Dickson, J., Rutledge, E., Dilts, R. (2010) Fingerprinting Gull and Goose DNA using Box-1AR PCR and Bioinformatics. FRI-2-953 **SACNAS**, 2010 .

Higgins, N., Villegas, C., Cahoon, J., Dickson, J., Dilts, R., Rutledge, E. Investigating *Escherichia coli* in Flathead Lake. SAT-4-260. **SACNAS**, 2010 .

Cahoon, J.L, Higgins, N, Villigas, C, and DILTS, RP: Biological Source Tracking *Escherichia coli* using the Box Genomic Element in Flathead Lake, Montana. **SACNAS** 2009.

Higgins, N, Cahoon, J, Villegas, C, Rutledge, E, and DILTS, RP, Assessment of the Public Health Risk Due to Fecal Contamination in Flathead Lake. **MT INBRE**. 2009: Big Sky Montana

Edwards, GL, Gedulin BR, Jodka C, DILTS RP, Miller CC, and Young A: Area postrema (AP)-lesions block the regulation of gastric emptying by amylin. **DDW** 1998.

DILTS, RP Gedulin B, Jodka C, Beaumont K, and Young A: Central Infusion of amylin delays gastric emptying in the rat. **ASPET - The Pharmacologist** 1997; 39:64

DILTS RP, Phelps, J, Koda, J, and Beaumont, K: Comparative distribution of amylin and calcitonin gene related peptide (CGRP) immunoreactivities in the adult rat brain. **Soc. Neurosci.** 1995; 21:440.10.

DILTS, RP, Kenney, M and Beaumont, K: Autoradiographic localization of binding sites for amylin & amylin antagonists in rat kidney. **J. Am. Soc. Nephrology**, 1995.

DILTS, RP, Boadle-Biber, MC: Identification of afferents to the serotonergic neurons of the dorsal raphe nucleus using fluorescent tract tracing in the rat. **Soc. Neurosci.** 1993; 19:589.20.

Boadle-Biber, MC, Novitzki, M, DILTS, RP: Neurotensin blocks the sound stress induced activation of the ascending serotonergic neurons of the dorsal raphe nucleus. **Soc. Neurosci.** 1993; 19:593.5

Corley, KC, DILTS, RP, Boadle-Biber, MC: Evidence for the involvement of GABA and dopamine in the sound stress induced activation of the ascending serotonergic neurons of the dorsal raphe nucleus. **Soc. Neurosci.** 1993; 19:593.4

Boadle-Biber, MC, Novitzki, M, DILTS, RP: Blockade of sound stress induced activation of tryptophan hydroxylase by neurotensin. **IUPS Glasgow**, 1993

DILTS, RP, Boadle-Biber, MC: Selective induction of Fos related antigens following the initiation of sound stress. **Soc. Neurosci.**, 1992.

Boadle-Biber, MC, Phan, T, DILTS, RP : Evidence for the activation of ascending serotonergic systems during sound stress in rats. **Soc. Neurosci.**, 1992.

Corley, KC, DILTS, RP, Phan, T-H, Boadle-Biber, MC : Corticotropin releasing factor (CRF) injected in region of the central nucleus of the amygdala (CNA) increases tryptophan hydroxylase (TrpH) activity and 5-HTP accumulation but not serotonin turnover. **Soc. Neurosci.**, 1992.

DILTS, RP, Helton, TE, McGinty, JF: Selective induction of FOS and FOS-related antigens within the mesostriatal and mesolimbic dopamine systems. **AAAS.**, Washington, D.C., 1991; 314.

DILTS, RP, Helton, TE, McGinty, JF: The Oncogene c-fos as an index of mesostriatal and mesocortical dopamine system activity. **Soc. Neurosci.** 1990; 16:54.13.

DILTS, RP, McGinty, JF: Mesencephalic and supramammillary projections to the hippocampal complex in the rat. **Soc. Neurosci.** 1989; 15:14.1.

Churchill, L, Bowker, RM, Eberhardt, H, DILTS, RP, Kalivas, PW: Ventral striatopallidal compartments revealed by combining tracer histochemistry and receptor autoradiography. **Soc. Neurosci.** 1989; 14.

DILTS, RP, Kalivas, PW: Localization of opioid receptor subtypes in the dopamine mesocorticolimbic system. **Soc. Neurosci.** 1988; 14: 314.7.

Bowker, RM, DILTS, RP: Distribution of specific opioid receptor subtypes and their correlation with enkephalin immunoreactivity in the dorsolateral pons. **Soc. Neurosci.** 1988; 14: 280.24.

Churchill, L, DILTS, RP, Kalivas, PW: Gamma-aminobutyric acid or mu-opioid receptor autoradiography in pallidum after lesions in lateral accumbens and ventral striatum. **Soc. Neurosci.** 1988; 14: 315.1.

DILTS, RP, Kalivas, PW: Localization of mu opioid receptors within the A10 region of the rat. *Soc. Neurosci.* 1987; 13:39.3.

Bowker, RM, DILTS, RP: Correlation of opioid receptor binding with ENK and 5HT immunocytochemistry in the medullary raphe and reticular nuclei. *Soc. Neurosci.* 1987; 13: 329.6.

Churchill, L, Cross, R, DILTS, RP, Pasdernik, T, Samson, F, Nelson, S, Kalivas, PW: Glucose use in the dorsal nucleus accumbens shell (an area high in mu opioid receptors) increases during kainic acid-induced limbic seizures but decreases during bicuculline seizures. *Soc. Neurosci.* 1987; 13: 376.2.

DILTS, RP, Latimer, G, Kalivas, PW: Effects of specific mu and delta opioid agonist in the A10 dopamine region. *Soc. Neurosci.* 1986; 12:279.1.

Harding, JW, Yoshida, MS, DILTS, RP, Wright, JW: Cerebroventricular and vascular metabolism of angiotensins in rat. *Soc. Neurosci.* 1985; 11: 149.4.

Journal Articles

Edwards, GL, Gedulin B, Jodka C, DILTS RP, Miller CC and Young A: Area postrema (AP)-lesions block the regulation of gastric emptying by amylin. *Gastroenterology*, 1998; Vol.114(4), pp.A748-A748

DILTS, RP, Novitzki, M., Phan, T.H., Corley, KC and Boadle-Biber, MC: Neurotensin inhibits the activation of midbrain serotonergic neurons produced by random inescapable sound. *Brain Res.* 1996; 742: 294-298.

DILTS, RP, Boadle-Biber, MC : Differential activation of the 5-hydroxytryptamine-containing neurons of the midbrain raphe of the rat in response to randomly presented inescapable sound. *Neurosci. Lett.*, 1995; 199(1): 78-80.

DILTS, RP, Helton, TE, McGinty, JF: Selective induction of Fos and Fra immunoreactivity within the mesolimbic and mesostriatal dopamine terminal fields. *Synapse*, 1993; 13: 251-263.

Boadle-Biber, MC, Singh, V, Corley, KC, Phan, T-H, DILTS, RP: Evidence that corticotropin releasing factor within the extended amygdala mediates the sound stress induced increases in tryptophan hydroxylase activity. *Brain Res.*, 1993; 628: 105-114

Churchill, L, DILTS, RP, Kalivas, PW: Autoradiographic localization of gamma-aminobutyric acid receptors within the ventral tegmental area. *Neurochemical Research*, 1992; 17: 101-106.

DILTS, RP, Kalivas, PW: Autoradiographic localization of delta opioid receptors within the mesocorticolimbic dopamine system using radioiodinated [2-D-Penicillamine, 5-D-Penicillamine]enkephalin (¹²⁵I-DPDPE). *Synapse*, 1990; 6: 121-132.

Churchill, LW, DILTS, RP, Kalivas, PW: Changes in gamma amino butyric acid, mu opioid and neurotensin receptors in the accumbens-pallidal projection after discrete quinolinic acid lesions in the nucleus accumbens. *Brain Res.* 1990; 511: 41-54.

DILTS, RP, Kalivas, PW: Autoradiographic localization of mu opioid and neurotensin receptors within the mesolimbic dopamine system. *Brain Res.* 1989; 488: 311-327.

Bowker, RM, DILTS, RP: Distribution of mu opioid receptors in the nucleus raphe magnus and nucleus gigantocellularis: a quantitative autoradiographic study. *Neurosci. Lett.* 1988; 88: 247-252.

Bowker, RM, Abbott, LC, DILTS, RP: Peptidergic neurons in the nucleus raphe magnus and the nucleus gigantocellularis: Their distributions, interrelationships, and projections to the spinal cord. *Progress in Brain Research* Vol. 77 (1988); pp. 95-127.

Harding, JW, Yoshida, MS, DILTS, RP, Woods, TM, Wright, JW: Cerebroventricular and intravascular metabolism of ¹²⁵I-angiotensins in rat. *J. Neurochem.* 1986; 46: 1292-1297.

Niehaus, WG, DILTS, RP: Purification and characterization of glucose-6-phosphate dehydrogenase from *Aspergillus parasiticus*. *Archives of Biochem. Biophys.* 1984; 228: 113-119.

Niehaus, WG, DILTS, RP: Purification and characterization of mannitol dehydrogenase from *Aspergillus parasiticus*. *J. Bacteriology* 1982; 151: 243-250.

Book Chapters

DILTS, RP: Methodologies employed using radioiodinated ligands in assays for neurotensin and enkephalin receptors. *Methods in Neurosciences Vol. 5; Peptide Technology*, P. Michael Conn Editor, 1991; pp. 493-509.

DILTS, RP, Kalivas, PW: Localization of mu opioid receptors within the A10 region of the rat, *Ann. NY. Acad. Sci.* 1988; 537: 472-474.

Kalivas, PW, DILTS, RP, Duffy, P: Enkephalin modulation of mesocorticolimbic dopamine system. *Ann. N.Y. Acad. Sci.* 1988; 537: 405-414.