

**BIOGRAPHICAL SKETCH**

Provide the following information for the key personnel and other significant contributors in the order listed on Form Page 2.  
Follow this format for each person. **DO NOT EXCEED FOUR PAGES.**

NAME Peter W. Stacpoole, PhD, MD	POSITION TITLE Professor		
eRA COMMONS USER NAME Stacpoole			
EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)</i>			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	YEAR(s)	FIELD OF STUDY
University of the South, Sewanee, TN	BA	1967	Chemistry
University of San Francisco, San Francisco, CA	MS	1968	Chemistry
University of Calif.-San Francisco, San Francisco, CA	PhD	1971	Pharmacology
Vanderbilt University, Nashville, TN	MD	1976	Medicine

**A. Positions and Honors.** List in chronological order previous positions, concluding with your present position. List any honors. Include present membership on any Federal Government public advisory committee.

- 1971-1972 Postdoctoral trainee under Dr. Peter H. Forsham, Metabolic Research Unit, Department of Medicine, Univ. of CA, San Francisco
- 1976-1977 Intern in Medicine, Vanderbilt Univ. School of Medicine, Nashville, TN
- 1977-1978 Medical Resident, Vanderbilt Univ. School of Medicine, Nashville, TN
- 1978-1980 Fellow in Endocrinology, Vanderbilt Univ. School of Medicine, Nashville, TN
- 1980-1984 Assistant Professor of Medicine, Univ. Florida College of Medicine, Gainesville, FL
- 1984-1990 Associate Professor of Medicine, Univ. Florida College of Medicine, Gainesville, FL
- 1990-present Professor of Medicine, Univ. Florida College of Medicine, Gainesville, FL
- 1983-present Advisory Board, General Clinical Research Center Shands Hospital, University of Florida, FL
- 1988-present Director, General Clinical Research Center, Shands Hospital, Univ. of Florida, Gainesville, FL
- 2006-present Associate Dean, Clinical Research and Training, Univ. of Florida, Gainesville, FL

NIH New Investigator Award, 1980-1984; Member, Committee on Research, American Diabetes Association, 1984-1987; NIH Research Career Development Award, 1984-89; Ad Hoc Reviewer, Metabolism Study Section, NIH, 1985; Member, American Society for Clinical Investigation, elected 1985; Associate Program Director, MD/PhD Program University of Florida, 1985-present; Member, Metabolism Study Section, NIH, 1986-1987; Member, Steering Committee, American Diabetes Association Research Symposium on Atherosclerosis, 1988-1989; Member, Scientific and Medical Programs, American Diabetes Association, 1988-1989; Co-Director, Postgraduate Course, American Diabetes Association, 1989; Chairman, University Committee on Large Grants and Centers, University of Florida, 1991-1993; Member, Publications Committee, Council on Nutritional Science and Metabolism (CONSAM), American Diabetes Association, 1991-1994; Member, Dean's Research Council, College of Medicine, University of Florida, 1992-1997; Chair, Plenary Session of Human Gene Therapy, GCRC Program Directors' Association meeting, 1994; Secretary-Treasurer, General Clinical Research Center Program Directors' Association, 1995-1999; Executive Committee, General Clinical Research Center Program Directors' Association, 1995-1999; Member, NIH Expert Advisory Panel on Rare Diseases, 1996-2000; Chair, Symposium on Rare Disease Research, GCRC Program Directors' Association meeting, 1998; Member, Executive Council, Department of Medicine, 1998-present; Chairman, Advisory Committee, University of Florida NIH K-30 Advanced Postgraduate Program in Clinical Investigation, 1999-present; Member, Department of Medicine Research Advisory Committee, 2000-present; Member, NIH GCRC Advisory Group, 2001-present; Member, Organizing Committee, 10th North American ISSX Meeting, October 27-31, 2002, Orlando, FL; Co-chair, Plenary Session on NCCR's Mentored Medical Student Clinical Research Program in Patient-Oriented Research, Joint meeting of GCRC Program Directors' Association, American Federation for Medical Research and Association for Patient-Oriented Research, 2002; Fellow, Royal Society of Medicine, elected 2002; President, GCRC Program Directors Association, 2003-2004, Mercy Medical Airlift National Advisory Committee, 2004.

- B. Selected peer-reviewed publications (in chronological order).** Do not include publications submitted or in preparation.
119. Stacpoole PW, Owen R, Flotte TR. The pyruvate dehydrogenase complex as a target for gene therapy. Cur Gene Therapy 3:239-245, 2003.
  120. Ammini CV, Stacpoole PW. "Biotransformation, Toxicology and Pharmacogenomics of Dichloroacetate," *In* Natural Production of Organohalogen Compounds, Ed. Gribble, G.W.; Vol. 3/P in the series *The Handbook of Environmental Chemistry*, Springer-Verlag, 2003, 215-234.
  121. Planche T, Agbenyega T, Bedu-Addo G, Ansong D, Owusu-Ofori A, Micah F, Anakwa C, Asafo-Agyei E, Hutson AD, Stacpoole PW, Krishna S. A prospective comparison of malaria with other severe diseases in African children: prognosis and optimization of management, Clin Infect Dis 37:890-897, 2003.
  122. Stacpoole PW, Nagaraja NV, Hutson AD. Efficacy of dichloroacetate as a lactate-lowering drug. J Clin Pharmacol 43:683-691, 2003.
  123. Jia M, Wu W, Yost R, Chadik P, Stacpoole PW, Henderson GN. Simultaneous determination of 9 haloacetic acids in biological samples as their pentafluorobenzyl derivatives by gas chromatography-mass spectrometry with ECNCl mode. Anal Chemistry 75:4065-4080, 2003.
  124. Ammini CV, Fernandez-Canon J, Shroads AL, Aller A, Cornett R, Cheung J, Grompe M, James MO, Henderson GN, Stacpoole PW. Pharmacologic or genetic ablation of maleylacetoacetate isomerase increases levels of toxic tyrosine catabolites in rodents. Biochem Pharmacol 66:2029-2038, 2003.
  125. Shroads AL, Henderson GN, Cheung J, Greywoode J, James MO, Stacpoole PW. Unified GC-MS method for the quantitation of tyrosine metabolites in plasma and urine. J Chromatogr B Analyt Technol Biomed Life Sci 2004, 808:153-61.
  126. Duncan GE, Perkins LA, Neiberger RE, Francis MA, Theriaque DW, Stacpoole PW. Chronic dichloroacetate improves exercise endurance in patients with congenital lactic acidosis, J Clin Endocrinol Metab 89:1733-1738, 2004.
  127. Davis, S.R., Stacpoole, P.W., Williamson, J., Quinlivan, E.P., Coats, B.S., Shane, B., Bailey, L.B., Gregory, J.F. Tracer-derived total and folate-dependent homocysteine remethylation and synthesis rates in humans indicates that serine is the main one-carbon donor. Am J Physiol Endocrinol Metab 286:E272-9, 2004.
  129. Fuehrlein BS, Ruttenberg MS, Silver JN, Warren MW, Theriaque DW, Duncan GE, Stacpoole, PW, Brantly ML. Differential metabolic effects of saturated versus polyunsaturated fats in ketogenic diets. J Clin Endocrinol Metab 89:1641-1645, 2004.
  130. Bray CL, Cahill KS, Oshier JT, Peden CS, Theriaque DW, Flotte TR, Stacpoole PW. Methylphenidate does not improve cognitive function in healthy sleep-deprived young adults. J Investig Med 52:192-201, 2004.
  131. Felitsyn NM, Henderson GN, James MO, Stacpoole PW. Liquid chromatography-tandem mass spectrometry method for the simultaneous determination of  $\delta$ -ALA, tyrosine and creatinine in urine of healthy subjects and hereditary tyrosinemia type I patients. Clinica Chimica Acta, 350:219-30, 2004.
  132. Planche T, Dzeing A, Mgou-Milama E, Kombila M, Stacpoole PW. Metabolic complications of severe malaria. *In* Current Topics in Microbiology, Eds. Krishna S. and Sullivan D., Oxford University Press, pp. 105-136, 2005.
  133. Stacpoole PW and Gilbert LR. Pyruvate dehydrogenasae complex deficiency. *In* Clinical Cases in Medical Biochemistry, Eds. Glew RH and Rosenthal MD, Oxford University Press, 2006, in press.
  134. Stickler D, Valenstein E, Neiberger RE, Perkins LA, Carney PR, Shuster JJ, Theriaque DW, Stacpoole PW. Peripheral neuropathy in genetic mitochondrial diseases. Pediatr Neurology, 34:127-31, 2006.
  135. Guo X, Dixit V, Liu H, Shroads AL, Henderson GH, James MO, Stacpoole PW. Inhibition and recovery of rat hepatic glutathione S-transferase zeta and alteration of tyrosine metabolism following dichloroacetate exposure and withdrawal. Drug Metab Dispos 34:36-42, 2006.
  136. Kauffmann P, Engelstad K, Wei Y, Jhung S, Sano MC, Shungu DC, Millar WS, Gooch CL, Mao X, Pascual JM, Hirano M, Tein I, Stacpoole PW, DiMauro S, DeVivo DC: Dichloroacetate as a treatment for MELAS: toxicity overshadows potential benefits. Neurology, 66:324-30, 2006.
  137. Stacpoole PW, Kerr DS, Barnes C, Bunch ST, Carney PR, Fennell EM, Felitsyn NM, Gilmore RL, Greer M, Henderson GN, Hutson AD, Neiberger RE, O'Brien RG, Perkins LE, Quisling RG, Shroads AL, Shuster JJ, Silverstein JH, Theriaque DW, Valenstein E: A controlled clinical trial of dichloroacetate for treatment of congenital lactic acidosis in children. Pediatrics, 2006, in press.

**C. Research Support.** List selected ongoing or completed (during the last three years) research projects (federal and non-federal support). Begin with the projects that are most relevant to the research proposed in this application. Briefly indicate the overall goals of the projects and your role (e.g. PI, Co-Investigator, Consultant) in the research project. Do not list award amounts or percent effort in projects.

### ONGOING

NIH-2M01RR0082 (Tisher, PI) General Clinical Research Center

The major goals of this project are to provide for communication and collaboration in clinical investigative work among health scientists carrying out studies on the unit. Dr. Stacpoole is Program Director.

NIH-5R01-ES07355 (Stacpoole, PI) Dichloroacetate Kinetics Metabolism and Toxicology

NIH-5P42-ES07375 (Stacpoole, PI, Project 4) Pharmacotoxicology of Trichloroethylene Metabolites

The major goals of these two projects are to investigate the human and animal pharmacology of dichloroacetate, including its study in congenital lactic acidosis. When originally awarded, these grants funded scientifically overlapping areas of clinical and non-clinical research. Subsequently, in consultation with and with approval by grant staff at NIEHS, funding for patient-oriented research and research involving human hepatocyte was shifted exclusively to the R01, while support for non-human in vivo and in vitro rodent studies was provided solely by the program project award.

NIH R01 DK56274 (Gregory, PI) Vitamin B<sub>6</sub> Effects on One-Carbon Metabolism

The major goal of this project is to investigate folate and pyridoxine metabolism in healthy subjects. Dr. Stacpoole is Co-Investigator.

NIH 1 R01 ES014617-01 (Stacpoole, PI) Pharmacotoxicology of Trichloroethylene Metabolites

The major goal of this project is to investigate the human pharmacokinetics and pharmacogenetics of dichloroacetate and chloral hydrate in relation to their potential as environmental toxicants.

### Completed in the last three years

FDA FD-R-001500 Dichloroacetate Treatment of Congenital Lactic Acidosis  
Food and Drug Administration

The major goals of this project were to investigate the human pharmacology of dichloroacetate, including its study in congenital lactic acidosis.

USDA #2000-01013 (Gregory, PI) Vitamin B<sub>6</sub> Dependence of Homocysteine Metabolism

The major goal of this project is to investigate the use of stable isotope kinetic procedures to determine the functional impact of marginal deficiency of vitamin B<sub>6</sub> on the primary pathways governing homocysteine levels in normal human subjects and rats. Dr. Stacpoole is Co-Investigator.

NIH HD032062-06 (DiMauro, PI) Mitochondrial Encephalomyopathies and Mental Retardation

The major goals of this project are to characterize the natural history of MELAS and MERRF, correlating cognitive, and behavioral deficits in probands and oligosymptomatic maternal relatives with cerebra energy metabolism assessed by functional MRI and MRSI. Taking advantage of the large cohort of genetically homogeneous patients enrolled in the past four years, it will institute a controlled clinical trial with dichloroacetate (DCA), following brain lactate and neuropsychological features.

Principal Investigator/Program Director (Last, First, Middle): Baylis, Chris

NIH R21 NS45517 (Liu, Y) Dynamic fMRI Analyses of Hypoglycemia Unawareness

The major goal is to investigate, in healthy volunteers and patients with type 1 diabetes, the central nervous system response to hypoglycemia.

FDA FD-R-002013-01 (Stacpoole, PI) Prevention of Dichloroacetate Toxicity

The major goal of this project is to determine whether the drug NTBC mitigates or prevents the toxicity of DCA in patients with congenital lactic acidosis.