

Curriculum Vitae, Wil Milhous, January 2008

Wilbur Kearsse Milhous

Professor and Associate Dean for Research
College of Public Health
University of South Florida
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Global Health Infectious Disease Research (GHIDR) Program, Interdisciplinary Research Building
(IDRB) 3720 Spectrum Blvd, Suite 304, Tampa, FL 33612 Phone (813) 974-3694

Personal Information:

Married: Virginia Graves Milhous
Children: Elizabeth E. Milhous and Allyson Milhous Best

Education

PhD, 1983, School of Public Health, University of North Carolina, Chapel Hill, NC.
Dissertation: Quantitative assessment of the interactions and activities of combinations of antimalarials in continuous culture of *Plasmodium falciparum*
Wellcome Scholar, Earned BG Greenberg Award for Excellence in Doctoral Research
Mentors: NF Weatherly (School of Public Health), RE Desjardins (Burroughs Wellcome) and JH Bowdre (School of Medicine)
BS, MS, College of Agriculture and Biological Sciences, Clemson University, Clemson, SC
MS Thesis: Studies on the development of Coccidia in cell culture.
Mentors: Don Turk & John Bond (Clemson) and J. Solis (Merck)

Professional Certification

Fellow, American Academy of Microbiology, 1992-
Medical & Public Health Microbiology: Diplomate, American Board of Medical Microbiology (ABMM),
1995. Certificate No. 872 with Re-Certification through December 2010
Public Health: Specialist in Public Health & Medical Laboratory Microbiology, National Registry of
Microbiologist, NRM Certificate No.1250 with Re-Certification through December 2010
Clinical Pathology: American Society for Clinical Pathology
ASCP Certificate No. S2909 with Re-Certification through December 2010

Experience:

July 2007- Professor of Global Health and Associate Dean for Research, College of Public Health, University of South Florida, Tampa, Florida. Develop strategic plans for enhancing research productivity within the College while facilitating collaboration with other colleges and programs within USF Health and the University at large. Develop and implement a comprehensive strategy for faculty development.
Affiliations: Center for Biological Defense (CBD); Center for Molecular Diversity in Drug Design, Discovery, and Delivery (CMD5); Center of Excellence for Biomolecular Identification and Targeted Therapeutics (BITT); Patel Center for Global Solutions
Joint Appointment: Professor, College of Medicine, Department of Internal Medicine, Signature Interdisciplinary Program in Allergy, Immunology and Infectious Disease

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- 2002-2007 Research Coordinator, Department of Defense Military Infectious Disease Research Program (midrp.org). Plan and direct research training, basic and translational research, patient diagnosis and clinical trials in a multidisciplinary program to develop new therapies for the prevention and treatment of tropical emerging diseases, chemical and biological threat agents. Integrate and coordinate all aspects of research and development including management of technology, process, budget, personnel, integrated product development teams and interface with human use and institutional review boards, Food and Drug Administration, collaborating agencies and global co-development partners. Write and implement strategic plans to balance research portfolios with global marketing analysis and unmet medical needs. Chief Scientific Officer for Therapeutics, Walter Reed Army Institute of Research, Silver Spring, MD, and for Army (Bangkok, Brisbane, Nairobi) and Navy (Cairo, Jakarta, Lima) overseas research labs.
- 2002-2003 Laboratory Director (College of American Pathology Approved) with principle responsibilities for diagnosis of Leishmaniasis.
- 1990-2007 Associate Professor, Department of Preventive Medicine & Biometrics with joint teaching appointments in Clinical Pharmacology and Microbiology & Immunology, Uniformed Services University, Bethesda, MD.
- 1997-2002 Director for Experimental Therapeutics, Walter Reed Army Institute of Research, Silver Spring, MD. Manage basic research efforts of Biology, Microbiology, Pharmacology, Medicinal Chemistry and Chemical Information with a total staff of 101 (10 MDs, 39 PhDs) and budget of \$14 million including \$2.2 million extramural contract program.
- 1999-2002 Additional Duties as Microbiology Consultant to the Surgeon General of the Army. Provided microbiological expertise, career management and graduate medical education opportunities for globally assigned commissioned officers in clinical or research disciplines of medical microbiology. Assisted in coordinating regional DoD medical centers with Laboratory Response Network (LRN) through local, state and CDC health authorities
- 1995-1997 Deputy Director for Experimental Therapeutics, WRAIR
- 1992-1995 Director, USA Medical Research Unit-Brazil (USAMRU-B), Special Foreign Activity, Walter Reed Army Institute of Research. Direct, support and perform basic and applied research, clinical trials and patient diagnosis in a multi-disciplinary program to develop new diagnostics and drug and vaccine candidates for emerging diseases. Successfully negotiated international health treaty entitled "*Implementing Arrangement, Relating to Health, of the Agreement Relating to Cooperation in Science and Technology Between the Government of the Federative Republic of Brazil and the Government of the United States of America, 1995.*"
- 1990-1992 Department Chair, Division of Experimental Therapeutics, Walter Reed Army Institute of Research. Direct, support and perform basic and translational research. Program and research contract manager for basic and applied research and pre-clinical efficacy testing at laboratories in the United States, India, Thailand, Panama and the United Kingdom. Member or Chair, WRAIR Human Use/Scientific Review Protocol Committees for vaccine and drug protocols.
- 1987-1990 Integrated Research Team Leader, Division of Experimental Therapeutics, WRAIR. Link basic and translational research in drug discovery and design to lead optimization.
- 1983-1987 Chief, Malaria Research Lab, Division of Experimental Therapeutics, in support of basic research in drug discovery and drug resistance.

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1980-1983 Graduate Research Assistant (Burroughs Wellcome Scholar) School of Public Health, University of North Carolina, Chapel Hill, N.C. Teaching assistant in medical mycology & medical parasitology at UNC.

Pre-Doctoral Experience (NRM Specialist in Public Health & Medical Lab Microbiology)

Clinical Microbiologist, Chief, Microbiology and Parasitology, Department of Pathology
Womack Army Hospital (500 beds), Ft. Bragg, NC, 1975-1980

Clinical Laboratory Officer, and Chief, Microbiology and Immunology, Department of
Pathology, US Army Hospital (300 beds) Ft. Polk, LA, 1973-1975

Post Graduate Training

National Institutes of Health, Bethesda, MD

Fellows Training Rotation in Medical Microbiology, 1990

Duke University Medical Center, Durham, NC, 1981

Medical Mycology

Medical Immunology

Centers for Disease Control, Atlanta, GA

Molecular Epidemiology

Clinical Microbiology in Control of Nosocomial Infections

Dark field Microscopy of *Treponema pallidum*

Microbiology of the Hospital Environment

Laboratory Methods in Intestinal Protozoa

Laboratory Methods in Medical Mycobacteriology

Laboratory Methods in Anaerobic Bacteriology

Laboratory Methods for Diagnosis of Gonorrhea

Laboratory Methods for Detection of Legionnaires Disease Agent

Laboratory Methods in Special Medical Microbiology

University of North Carolina, Chapel Hill, NC, 1977-1979 (Part-time Off-Campus MPH Program)

33 Graduate Credits in Epidemiology, Biostatistics, Environmental Science, Grantsmanship,
Health Administration, Program & Budgeting, Health Structure, Health Policy & Law declared as
minor in full time doctoral program (1980-1983).

Good Clinical Practices

FDA-Regulated Electronic Documents (FRED), 2008

Principles of Clinical Data Management (CDM), 2006

USA Medical Research & Materiel Command, Regulatory Affairs Investigator Training, 2004

National Institutes of Allergy and Infectious Disease, 2003

University of Wisconsin School of Pharmacy, 1995

Pharmaceutical Education & Research Institute

Project Management in the Research-Based Pharmaceutical Industry, 1996

Honors and Awards

Faculty Fellows Program Award, Patel Center for Global Solutions, USF, 2007

Pharmaceutical Achievement Award for Social Responsibility, presented to the Institute for
OneWorld Health, 2005, Advisory Board Member.

USA Research & Development Award for Small Business Innovative Research, 2000

USA Research & Development Achievement Award, 2000, for assisting in the development and
FDA approval of Glaxo SmithKline Malarone.

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Bailey K. Ashford Medal, 1993, the American Society of Tropical Medicine and Hygiene for distinguished work in tropical medicine for basic research contributions in drug discovery and drug resistance.

The Gorgas Medal, 1988, Association of Military Surgeons of the US (PHS, VA, DoD) for notable contributions in prevention medicine through methods development and initiation and establishment of the DoD Science and Technology Objective for Global Surveillance and Detection of Drug Resistant Malaria.

USA Research & Development Achievement Award, 1988, for discovery of resistance modulator drugs.

BG Greenberg Award for Public Health Research, 1984, UNC School of Public Health, methods development in malaria susceptibility testing for antifolate drug combinations.

Finalist, MEPHA International Prize in Malaria Chemotherapy, 1994

Directors Award, Walter Reed Army Institute of Research, 1992

Delta Omega (Honorary National Public Health)

Gamma Sigma Delta (Honorary Agriculture)

Sigma Xi (The Scientific Research Society)

Mu Beta Psi (Honorary Music)

Military Awards

USA Legion of Merit, 2002

USA Medical Department Medallion, 2002

Order of Military Medical Merit, 1992

"A" Proficiency Designator Award, Office of the Surgeon General, 1989

USA Meritorious Service Medals (4) 1997, 1995, 1991, 1979

The Expert Field Medical Badge, 1984

USA Achievement Medal, 1986

USA Commendation Medal, 1976

Armed Forces Reserve Medal, 1983

Army Service Ribbon

Overseas Service Ribbon

National Defense Service Medals (3)

Teaching Experience

2007- Rollins School of Public Health, Emory University, Atlanta, Georgia
GH 590R- Malaria: A Global Public Health Concern

1985-2007 WRAIR Formal, accredited training programs
Preventive Medicine Residency
Laboratory Animal Medicine Residency
Clinical Pharmacology Fellowship

1985-2007 WRAIR Postdoctoral programs
Medical Research Fellowship
National Research Council Post-Doctoral Associateships

1985-2007 WRAIR Community Outreach Programs
Gains in the Education of Mathematics and Science, ages 13-18
Science and Engineering Apprenticeship Program-SEAP for high school students
College Student Leadership Program-CQL for college students
Science for Elementary Teachers Program for teachers of grades 3 through 6

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- 1990-2007 Adjunct Associate Professor (Assistant 1984-1990) Uniformed Services University of the Health Sciences, Bethesda.
Medical Microbiology/Parasitology for Medical Students (16 semesters)
Chemotherapy/Pharmacology for MPH/PhD Students (5 semesters)
Scientific Mentor, Clinical Pharmacology Fellowship Training Program
- 1993-1996 Visiting Scientist, Foundation of the Institute of Oswaldo Cruz, Rio de Janeiro
- 1989-present Adjunct Assistant Professor, University of North Carolina, Department of Parasitology & Laboratory Practice (Epidemiology), School of Public Health
- 1991-1992 Adjunct Assistant Professor, Bowling Green State University, Bowling Green, OH.
Allied Health Research Advisor
- 1991-present Visiting Professor, Tropical Infectious Diseases, Central Military Hospital, Bogotá, Columbia
- 1984-1992 Walter Reed Army Institute of Research, WRAIR Postgraduate Course in Tropical Medicine
- 1988-1991 Montgomery College, Takoma Park, MD (evenings part time) Microbiology 203 for Nursing & Medical Technology Students (3 semesters)
- 1982 University of North Carolina, School of Public Health, Medical Mycology Laboratory
- 1981-1982 UNC and Duke Schools of Medicine, Medical Parasitology Laboratory (2 semesters)

Fellows/Graduate Students/Research Training

Fogarty Foundation

Christian Happi, PhD, 2005-

Infectious Disease Fellows

Cindy Tamminga, MD, 2006-

Peter J. Weina, MD, PhD, 2001-2002

Clinical Pharmacology Fellows

Colin Ohrt, MD, MPH 1995-1997

Mike Riel, MD 2000-2002

Kevin Canard, MD, 2004-

David Sanders, MD, 2005-

National Research Council Postdoctoral Fellows

Malcolm Gardner, PhD, 1991-1993

Dibyendu De, PhD, 1991-1993

David Wesche, MD, PhD, 1988-1990

World Health Organization Postdoctoral Fellows

Mariano Zalis, PhD, 1994-1997

Xiuhong Li, MD, 1992-1994

Jun Li, MD, 1987-89

Graduate Students

Julia C. Mead, MPH, 2007. Funding Drugs Used to Combat Global Health Diseases. (Columbia University Mailman School of Public Health, Thesis Advisor)

Adaymee Cofresi, MS, 2007. Increasing Parasitemia Modulates In Vitro Concentration Response to Artemisinin Drugs: Can Parasite Burden Alter Treatment Outcomes in Severe and Complicated Malaria? (George Washington University, Washington, DC. Thesis Advisor).

Cindy Tamminga, MD, MPH, 2007, *Plasmodium falciparum* infection among US Marines deployed to Liberia: comparison of mefloquine resistance patterns to archived Liberia isolates and previous studies (Uniformed Services University, Bethesda, MD. Thesis Advisor).

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- Glorimar Alvarado, MS, 2003. Investigation of the antimalarial activity of *Cissampelos pareira* L. (Menispermaceae) (University of Puerto Rico, Committee Member)
- Lyndale Emerson, PhD, 2001. Genetic and Transcriptional Profile Analyses in *Saccharomyces cerevisiae* Reveal Role for Quinoline-Ring Antimalarial Drugs in Iron Uptake. (Harvard School of Public Health Dissertation Examination Committee)
- Michael Libby, MS, 1991. Erythrocyte Age and Dose Response. (Bowling Green University, Advisor for Blood Bank Fellowship)
- Sheila Peel, PhD, 1991. Mefloquine Resistance in Multidrug Resistant *Plasmodium falciparum* *in vitro*. (University of North Carolina, Committee Member)

Member, Professional Education and Training Committee for Graduate Medical Education
Walter Reed Army Institute of Research (1999-2003):
Preventive Medicine Residency Program
Clinical Pharmacology Fellowship
Laboratory Animal Medicine Residency Program
Military Medicine Fellowship Program

Research Support Pending:

PI: RFA-TW-08-001 Framework Programs for Global Health (R25) Global Health Innovations
Co-PI RFA-AI-07-025 Pharmacological Approaches to Combating Antimicrobial Resistance (R01)
2008 Florida Centers of Excellence Competition, Advisory Board Member & Collaborator
The Comprehensive Drug Development Center (CDDC)
Florida Center of Computational Biology (FCCB)

Research Support:

Co-PI: Drug Resistance Networks in Kenya, Peru, Thailand, Ghana. DoD-GEIS GM0056_07WR \$800K, 2002-08.

Co-PI: Development of safer drugs for malaria and leishmaniasis in US troops, civilian personnel and travelers 12 Sep-11 Oct 2009. \$1,916,303. ERMS # 07213002. PR: W23RYX7226N601

Senior Advisor: Antimalarial Drug Resistance Workshops. Bill & Melinda Gates Foundation Global Health Program Conference Grant, Cambridge, UK and Amsterdam, Netherlands. 3/15/2006-\$158,173

Senior Advisor: Worldwide Antimalarial Drug Resistance Network (WARN). Bill & Melinda Gates Foundation Global Health Program, 6/22/07- \$998,100

Advisory Board: 1 D43 TW007990-01 IPF:513807 Program in Adolescent HIV/AIDS Research Training (PAHRT) PI: Emmanuel, Patricia J. 09/11/2007 – 06/30/2012 \$1.4 million

Consultant: Harvard School of Public Health
Fogarty International Research Training Grant. "Training in Malaria Pathogenesis and Diversity in Africa" D43 TW001503 4/1/07 - 3/31/2010 \$133,950.
Fogarty International Research Collaboration Award (FIRCA). "Molecular determinants of drug resistant malaria in Nigeria" NIH R03 TW006298. 1/15/2004-12/31/2006 (extended through 12/31/07).

Senior Advisor and Co-PI: Optimization of Radical Curative and Causal Prophylactic Drugs, Medicines for Malaria Venture, Geneva, Switzerland; \$3 Million, 2006-7.

Senior Advisor: Development of Third Generation Macrolides, Pliva Pharmaceutical, Zagreb, Croatia, and Medicines for Malaria Venture, Geneva, Switzerland; Funding and Agreement TBA, 2007.

Senior Advisor: Lead Optimization and Pre-Clinical Studies of Imidazolidinedione Derivatives, Peer Reviewed Medical Research Program (PRMRP), \$3 Million, 2005-2007

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Previously Funded:

Research Coordinator, Senior Advisor, Military Infectious Disease Research Program, \$48 Million, 2002-2007

Senior Advisor: NIAID Challenge Grant: Joint Ventures in Biomedicine and Biotechnology IRC AI48874-01; WRAIR-SmithKline Beecham: Tafenoquine, new drug for malaria treatment and control; \$7.3 million, 2001-2006

Senior Advisor: NIAID Challenge Grant: Joint Ventures in Biomedicine and Biotechnology IRC AI48859-01. WRAIR-Pfizer: Azithromycin Combination Treatments; \$600K, 2001-2006.

Co-PI: Artesunate for Severe and Complicated Malaria, Medicines for Malaria Venture, Geneva, Switzerland; 2003 (\$800K), 2004 (\$620K)

Associate Program Leader: NIAID/Fogarty International Cooperative Biodiversity Group (ICBG) Program for West and Central Africa TW00327, \$3 million, 2000-2005

Principal Investigator (PI): World Health Organization, Special Program for Research and Training in Tropical Diseases (TDR), Chemotherapy of Malaria (CHEMAL), 1984-87 (\$101K), 1988-91(\$140K), 1991-93(\$230K), 1994-(\$82K), Co-PI 1996-2002 (\$382K)

PI: Human metabolism of arteether, WHO TDR CHEMAL 1997-2000 (\$178K).

PI: Analysis of arteether and related drugs in clinical samples WHO TDR CHEMAL, 1997-2001 (\$320K).

Co-PI: Harvard University School of Public Health; Surveillance & Detection of Drug Resistant Malaria, NIAID International Center for Tropical Disease Research (ICIDR), 1995-2000.

Co-PI: Optimization of Sequencing Strategies for the Malaria Genome, Joint NIAID and DOD Sponsored, 1997-2002 (\$3 million).

PI: WRAIR Independent Research Awards, 1993-94 (\$68K), Co-PI 1986-92 (\$220K).

Sponsor: Rockefeller Foundation Biotechnology Fellowship, 1990-1992 (\$60K).

Sponsor: Molecular Basis of Resistance in Falciparum Malaria. WHO TDR, 1994-6 (\$50K).

Co-PI: Characterization of West African Isolates of Falciparum Malaria WHO TDR, 1986-92 (\$240K).

Co-PI: Drug Combinations in Chemotherapy, WHO TDR CHEMAL, 1992-95(\$200K).

Co-PI: Pharmacokinetics and metabolism of arteether. WHO TDR CHEMAL, 1988-92 (\$130K).

Co-PI: Sporontocidal Properties of WR238605, WHO TDR CHEMAL, 1989-92 (\$120K).

Editorial Positions and Appointments

Editorial Board

Experimental Parasitology, 2005-

Recent Patents on Anti-Infective Drug Discovery, 2006-

Memorias do Instituto Oswaldo Cruz, 1993-1996

Journal of Military Medical Laboratory Science, 1989-1992

Reviewer

American Journal of Tropical Medicine and Hygiene

Antimicrobial Agents & Chemotherapy

Biochemical Pharmacology

Experimental Parasitology

Journal of Clinical Microbiology

Journal of Infectious Disease

Journal of Medicinal Chemistry

Journal of Natural Products

Journal of Parasitology

Molecular and Biochemical Parasitology

Nature

Nature Reviews

New England Journal of Medicine

Proceeding of National Academy of Sciences

PLoS Medicine

Science

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Committee Assignments and Administrative Experience

- 2007- Executive Scientific Advisory Committee, Medicines for Malaria Venture, Geneva, Switzerland
- 2004- National Institutes of Allergy and Infectious Diseases (NIAID)
Infectious Diseases and Microbiology
Drug Discovery and Mechanisms of Antimicrobial Resistance ZRG1 DDR 01
Novel HIV Therapies: Integrated Pre-clinical/Clinical Program ZAI1-HSD-A-JI
Special Emphasis Panel/Scientific Review Group 2006/05 ZRG1 IDM-M (02), Feb 13
Special Emphasis Panel/Scientific Review Group 2006/05 ZAI1-AC-M-C1, May 4
Special Emphasis Panel/Scientific Review Group 2005/04 ZRG1 IDM-M (03), Mar 18
- 2006- Stakeholder, Ten Years Strategy & Vision, Strategic and Discovery Research (SDR)
UNICEF/UNDP/World Bank/WHO Special Programme for Research & Training in Tropical Diseases (TDR), World Health Organization, Geneva, Switzerland
- 2005- Malaria Global R&D Alliance: Advisory Board Member and expert in malaria and global tracking. Guided the development of survey instrument and reviewed final report for the following funding recommendations from the Bill and Melinda Gates Foundation:
- \$107.6 million to the PATH Malaria Vaccine Initiative (MVI) to work with GlaxoSmithKline Biologicals and African investigators to complete testing and apply for licensure of the most advanced malaria vaccine candidate
 - \$100 million to the Medicines for Malaria Venture (MMV) to work with public and private sector partners to accelerate the development of several promising new drugs through regulatory approval
 - \$50.7 million to the Innovative Vector Control Consortium (IVCC), led by the Liverpool School of Tropical Medicine, to fast-track development of improved insecticides and other mosquito control methods
- 2005- Advisory Committee, Novel Macrolides, Pliva Research Institute, Zagreb, Croatia
- 2004- National Institutes of Allergy and Infectious Diseases (NIAID). Summits on Infectious Disease Therapeutics, DoD representative, 2000, 2004
- 2004 National Academies, Board on Global Health, July 21-22, Washington, DC. Opinion Leader for Malaria Control: A Reconsideration of the Role of DDT
- 2004 National Academies, Institute of Medicine. Contributor: Research and Development for New Antimalarial Drugs. In: Saving Lives, Buying Time: Economics of Malaria Drugs in an Age of Resistance, 2004
- 2003-present Advisory Board, National Center for Natural Products Research, University of Mississippi, School of Pharmacy
- 2003-present Key Opinion Leader (KOL), Glaxo SmithKline Pharmaceuticals, Immune Status and Causality of 8-Aminoquinolines
- 2000-present Expert Advisory Panel, US Pharmacopoeia
- 1998-present Chair (2006) International Board of Directors, the Malaria Foundation International

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- 2000-02 Board of Advisors, American Type Culture Collection (ATCC)
- 1999-present Tafenoquine Steering Committee and Global Advisory Panel, Glaxo SmithKline Pharmaceuticals
- 1999-present Advisory Committee, Food and Drug Administration, FDA-CBER, Biological Therapeutics
- 2001-present Advisory Committee, Institute for One World Health (IOWH), San Francisco, CA,
- 1997-02 Steering Committee, Drug Discovery Research (DDR) for Malaria, Tuberculosis, Leishmania, and African Trypanosomiasis, Chagas Disease, Filariasis, Tropical Disease Research (TDR) World Health Organization
- 2002-05 Screeners Committee, WHO-TDR
- 1998-04 Associate Program Leader: NIAID/Fogarty International Cooperative Biodiversity Group (ICBG) Program for West and Central Africa
- 1987-present Senior Research Advisor, National Research Council
- 1998-present Rockefeller Foundation, Medicines for Malaria Venture (MMV) Planning Group, 1999 Organizer or Participant, Rockefeller Foundation Interdisciplinary, Intercultural Working Groups, Bellagio, Italy
Lactate Dehydrogenase in Malaria, 1994
Public Health Applications of Improved Diagnostics, 2001
Applications of Genomics in Discovery of Drugs for Tropical Diseases, 2005
- 1997- Multilateral Initiative on Malaria (MIM) Working Groups: Dakar, Senegal; The Hague, Netherlands; Durban, South Africa; Arusha, Tanzania; Stockholm, Sweden; Yaoundé, Cameroon. Participants: Pasteur Institute; Commission of the European Communities; the Wellcome Trust; Medical Research Council; World Health Organization; Centers for Disease Control and Prevention; Netherlands Organization for Scientific Research
- 1990-1992 National Academy of Sciences, Institute of Medicine, Washington, DC. Member, United States Committee on Malaria Prevention and Control.
- 1987- Member & Co-Founder, US Interagency (WRAIR, Department of State, Peace Corps, CDC & FDA) Chemoprophylaxis Working Group
- 1990-1992 Member, Preventive Medicine Problem Definition & Assessment Team, Operation Desert Storm
- 1987- National Institutes Allergy and Infectious Disease, Study Section Special Member Tropical Medicine & Parasitology 1987, 1989, 2004
Opportunistic Infections, 1997
- 2004- Reviewer, US-Israel Binational Science Foundation.
- 1985-1992 Member, Biotechnology/Parasitology Study Panel, Program for Science & Technology Cooperation, Agency for International Development, Chairman, 1987

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Research Compliance and Regulatory Affairs for Investigational New Drug/New Drug Applications

(*Discussion or pre-clinical efficacy leader for FDA-Special Pathogens type A,B,C meetings)

WR= Walter Reed Number)

WR006026 (GSK-Sitamoqiune) Program Director and Co-PI, Phase II Clinical Trials in Brazil

WR100553 (Doxycycline-Pfizer-Vibramycin) Pre-Clinical Efficacy, Support Phase II and Phase III in Thailand

WR149240 (Mefloquine-HLR-Lariam) Pre-Clinical Efficacy/Resistance/Support Clinical Trials, Post Marketing Surveillance and Adverse Events

WR171669 (Halofantrine-GSK-Halfan) Pre-Clinical Efficacy/Resistance/Support Clinical Trials

*WR238605 (GSK-Tafenoquine) Pre-Clinical Efficacy and Supporting Phase I, Program Director Phase II, for Indonesia, East Timor, and Kenya

WR245567 (Sulfadoxine/Pyrimethamine-Roche-Fansidar) Post Marketing Surveillance, Resistance, Adverse Events.

*WR255131 (Arteether-Artecef-Artemotil) PI, Pre-Clinical Efficacy and Phase III PK Analysis

WR255663 (Artelinic Acid) Co-Inventor, Pre-Clinical Efficacy, FDA Consultations on Neurotoxicity, Program Director

*WR256343 (IND 64769), Intravenous Arteusnate for Severe Malaria, Pre-Clinical Efficacy Integrated Product Development Team

WR279277 (Pfizer-Azithromycin-Zithromax combinations) Co-Inventor, Pre-Clinical Efficacy, Program Director for Phase III in Indonesia, Peru and Thailand.

WR279396 Topical Antileishmanial, Program Director

WR279825/WR003091 (Atovaquone/Proguanil GSK-Malarone) Pre-Clinical Efficacy/Resistance and Co-PI for Phase III Clinical Trial in Brazil

Malaria Rapid Diagnostic Device (MRDD), Lead Optimization, Platform Selection, Support Clinical Trials for 510K Application.

Membership in Societies:

American Society for Microbiology

American Society for Clinical Pharmacology and Therapeutics

American Society for Clinical Pathology

American Society for Microbiology

Invited Symposium: Managing R&D Portfolios in Antimicrobials and Diagnostics, 2008

Invited Symposium: Careers in Microbiology; Opportunities in Government, 2002.

American Academy of Microbiology

Tellers Committee, 1998-2002

Chair, Scherago-Rubin Award Committee, 2007; Member 2006

American Board of Medical Microbiology, Examination and Standards Committee, 1998-Present

International Congress of Pharmacology: Chairman, Symposium on new approaches to the treatment of malaria, 2002

American Society of Pharmacognosy, Invited Symposia, 1991, 1995

American Society of Tropical Medicine and Hygiene, 1982-present

Co-Organizer, Symposium Bridging Pathogenesis and Pathology in Malaria: Addressing Drug Resistance and Tolerance in Malaria Parasites, 2007

Co-Organizer, Symposium on Severe Malaria & Anemia in Children, 2006

Sponsor, Honorary Member Award, Dr. John Horton, 2006

Co-Organizer, Symposium on 8-aminoquinolines, Past, Present and Future, 2005

Co-Organizer, Symposium on Parasite and Host Gene Expression in Malaria, 2005

Co-Organizer, Symposium for Surveillance of Drug Resistance Malaria, 2005

Sponsor, Honorary Member Award, Professor Karl Rieckmann, 2004

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Sponsor, Austin LePrince Prize in Malariology, Dr. Craig Canfield, 2003
Organizer, Symposium on Public Private Partnerships for Infectious Disease
Therapeutics, 2003
Chairman, Symposium on Drug Combinations, 2000-
Chairman, Symposium on Malarone® (Atovaquone and Proguanil), 1996
Organizer, Symposium on Methods for Diagnosis of Malaria, 1996
Co-Organizer, Symposium on Malaria Prophylaxis, 1999
Chairman, Scientific Sessions on Antimalarial Chemotherapy, 1985, 1989
Chairman, Symposium on Multidrug Resistant Falciparum Malaria, 1987
Chairman, Symposium on Artemisinin Drugs, 1990

Royal Society of Tropical Medicine and Hygiene, 1988-present

Grants Management, Small Business Innovative Research & Contracts

High-Throughput Proteomics Strategy for Detection and Identification of Biomarkers of Exposure, SBIR
II, Sun BioMedical, 2005-
Novel Routes of Drug Administration, SBIR II, Advanced Sensor Technologies, 2005
Analytical and stability Studies of Chemicals, Stanford Research International, 1995-
Analytical methodology development and analysis of drugs in biological fluids, University of California
at San Francisco, 1995-
Chemical and drug repository, McKesson Associates, Rockville, MD, 1995-
Drug Evaluation in Primates, Gorgas Memorial Laboratory, Panama, 1985-90; 1996-
Evaluation of Chemotherapeutic Agents, University of Miami, School of Medicine, 1990 -1992.
Malaria Chemotherapy, London School of Tropical Medicine & Hygiene, London, UK 1987-90.
Methods for Diagnosis of Falciparum Malaria, SBIR I & II, 1998-2001
New Drugs for Malaria and African Trypanosomiasis, USUHS, 1985-90
Pharmacodynamics and pharmacokinetics and acute toxicology studies, Southern Research
Institutes, Birmingham Alabama, 1995-2002
Pre-formulation studies and formulation production, University of Iowa, Ames, Iowa, 1995-2004
Preparation of chemicals and bulk drugs, Starks Associates, Buffalo, NY, 1995-2005
Preparation of radio-labeled compounds, Research Triangle Institute, RTP, NC, 1995-2004
Radical curative testing in primates, AFRIMS, Bangkok, Thailand, 1984-
Synthesis and Screening of Antimalarial Drugs, Central Drug Research Institute, Lucknow, India, 1985-
1998 (Department of State US India Fund)

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Patents and Invention Disclosures **US Patent Office -15** **European Patent Office-4** **World Intellectual Property Organization (WIPO)-6**

1. Serial No. 11/644,494 filed 12/21/2006. Synthetic artemisinins in the clinical and veterinary management of kinetoplastid infections.
2. 7,101,902. September 5, 2006. 2-guanidinylimidazolidinedione compounds and methods of making and using thereof. 2004038909. European 04821254. 2-2107.
3. 7,084,132. August 1, 2006. Artemisinins with improved stability and bioavailability for therapeutic drug development and application.
4. 20040019200. January 29, 2004. Mixed steroidal 1,2,4,5-tetraoxane compounds and methods of making and using thereof. Serial No. 359584, February 7, 2003.
5. 20030171424. September 11, 2003. Intravenous formulation of artelinic acid for treatment of severe and complicated malaria. Serial No. 376420, February 27, 2003.
6. 20040137446. July 15, 2004. Fab I and inhibition of apicomplexan parasites. PCT/US01/49738 filed 12/20/2001; and U.S. Patent Application No. 10/465,527 filed 06/18/2003
7. 20040053950. March 18, 2004. Antimalarial activities and therapeutic properties of febrifugine analogues. Serial No. 600446, Filed June 20, 2003.
8. 20030032801. February 13, 2003. Chemosensitizing agents against chloroquine resistant Plasmodium falciparum and methods of making and using thereof. Serial No. 849400, May 7, 2002.PCT/US01/14574.
9. 4,791,135. December 13, 1988. Novel antimalarial dihydroartemisinin derivatives. Serial No. 087365, August 29, 1987.
10. 4,897,403. January 30, 1990. Antimalarial Compositions and Methods. Serial No. 936677, filed November 18, 1986. European No. 8900622.7
11. Synergistic Combinations of Azithromycin for Malaria Treatment, Filed May 2001
12. Prophylaxis Against Transfusion Acquired Chagas Disease, Filed June 1996
13. Treatment & Prophylaxis of Toxoplasmosis, Filed June 1997
14. Treatment & Prophylaxis of Puumonocystis Pneumonia Using 8-Aminoquinolines
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