

## **CURRICULUM VITAE**

### **John R. Raymond MD**

**President, CEO, Professor  
Department of President**

#### **OFFICE ADDRESS:**

Hub for Collaborative Medicine  
8701 Watertown Plank Road  
Milwaukee, WI 53226

#### **EDUCATION:**

09/1974 - 06/1978 B.S., The Ohio State University, Columbus, Ohio  
07/1978 - 06/1982 M.D., The Ohio State University, Columbus, Ohio

#### **POSTGRADUATE TRAINING AND FELLOWSHIP APPOINTMENTS:**

07/1982 - 06/1983 Internship in Medicine, Duke University Medical Center, Durham, NC  
07/1983 - 06/1985 Residency in Medicine, Duke University Medical Center, Durham, NC  
07/1985 - 06/1986 Fellowship in Nephrology, Duke University Medical Center, Durham, NC  
07/1986 - 06/1987 Chief Medical Residency, Durham VA Medical Center, Durham, NC  
07/1987 - 06/1988 Fellowship in Nephrology, Duke University Medical Center, Durham, NC

#### **FACULTY APPOINTMENTS:**

07/1986 - 06/1987 Associate in Medicine, Duke University Medical Center, Durham, NC  
07/1989 - 06/1989 Associate in Medicine, Duke University Medical Center, Durham, NC  
07/1989 - 06/1994 Assistant Professor of Medicine, Duke University Medical Center, Durham, NC  
07/1994 - 06/1996 Associate Professor of Medicine, Duke University Medical Center, Durham, NC  
08/1995 Tenure granted, Duke University Medical Center, Durham, NC  
07/1996 - 06/2010 Dialysis Clinics Incorporated, Professor of Medicine with tenure, Medical University of South Carolina, Charleston, SC  
07/19/2010 - Present Graduate Faculty, MUSC, Charleston, SC  
07/2010 - Present Adjunct Professor of Medicine, MUSC, Charleston, SC

#### **ADMINISTRATIVE APPOINTMENTS:**

08/1991 - 11/2006 Associate Provost for Research, Medical University of South Carolina, Charleston, SC  
07/1998 - 06/2002 Associate Chief of Staff for Research, Ralph H. Johnson VA Medical Ctr., Charleston, SC  
07/2002 - 12/2002 Interim Vice President for Academic Affairs, and Provost, MUSC, Charleston, SC  
01/2003 - 06/2010 Vice President for Academic Affairs, and Provost, MUSC, Charleston, SC  
07/2010 - Present President and CEO, Medical College of Wisconsin, Milwaukee, WI

#### **EDUCATIONAL ADMINISTRATIVE APPOINTMENTS:**

07/1996 - 06/2010 Executive Committee, Nephrology Fellowship Program, MUSC, Charleston, SC

#### **HOSPITAL AND CLINICAL ADMINISTRATIVE APPOINTMENTS:**

07/1991 - 06/1993 Director of Dialysis, Durham VA Medical Center, Durham, NC  
07/1991 - 06/1993 Renal Clinic Director, Durham VA Medical Center, Durham, NC  
07/1991 - 06/1996 Chief, Nephrology Section, Durham VA Medical Center, Durham, NC  
07/1992 - 06/1996 Coordinator, Hypertension Detection and Screening Program, Durham VA Medical Center, Durham, NC

#### **HOSPITAL STAFF PRIVILEGES:**

07/1986 - 06/1987 Duke University Medical Center, Durham, NC  
 07/1986 - 06/1987 Durham VA Medical Center, Durham, NC  
 07/1988 - 06/1996 Duke University Medical Center, Durham, NC  
 07/1988 - 06/1996 Durham VA Medical Center, Durham, NC  
 07/1996 - 06/2010 Ralph H. Johnson VA Medical Ctr., Charleston, SC  
 07/1996 - 06/2010 Medical University Hospital Authority, Medical University of South Carolina, Charleston, SC  
 07/1996 - 06/2003 Charleston Memorial Hospital and Specialty Hospital, Charleston, SC  
 07/1996 - 06/2010 Medical University Hospital Authority, Medical University of South Carolina, Charleston, SC  
 07/1998 - 06/2004 Hampton Regional Medical Center, Hampton, SC  
 07/2003 - 06/2010 Kindred Hospital of Charleston, Charleston, SC  
 11/2010 - Present Clement J. Zablocki VA Med. Center, Milwaukee, WI

**SPECIALTY BOARDS AND CERTIFICATION:**

<u>Board Certified</u>	<u>Issue Date</u>	<u>Expiration</u>
American Board of Internal Medicine:Medicine	09/10/1986	None
ABI: Nephrology	11/01/1988	None
American Heart Assn:Cardiopulmonary Resuscitation	10/19/2009	11/01/2011

<u>Licensure</u>	<u>Number</u>	<u>Issue Date</u>	<u>Expiration</u>
Ohio License(INACTIVE)	479660	07/01/1982	12/31/1982
North Carolina Training License(INACTIVE)		07/01/1982	06/30/1986
North Carolina Permanent License	30459	07/01/1986	None
South Carolina Permanent License	18867	07/01/1996	None

**AWARDS AND HONORS:**

1975 - Present Phi Kappa Phi Honor Society, Ohio State University  
 1982 Individual Service Award, Ohio Commission on Aging  
 1984 - 1985 Haskell Schiff Housestaff Award(most outstanding house officer), Duke University Medical Center, Department of Medicine  
 1987 Finalist, Golden Apple Award, Duke University School of Medicine  
 1987 Alpha Omega Alpha Honor Society Duke University School of Medicine  
 1991 Henry Christian Award for Excellence in Research, American Federation for Clinical Research  
 1994 Finalist, Eugene Stead Teaching Award from Medicine Housestaff, Duke University Medical Center, Department of Medicine  
 1995 Henry Christian Award for Excellence in Research, American Federation for Medical Research  
 1996 DCI Endowed Professorship, Medical University of South Carolina  
 1996 - 2000 Who's Who in Medicine/Healthcare, Marquis Who's Who  
 1996 - 2000 Who's Who in the World, Marquis Who's Who  
 1998 - 2002 Who's Who in Science/Engineering, Marquis Who's Who  
 2000 Strathmore's Who's Who, Millenium Edition  
 2000 Marquis Who's Who, Millenium Edition  
 2000 International Who's Who, International Who's Who of Professionals  
 2001 Federal Employee of the Year, Federal Executive Association, Greater Charleston Area  
 2001 - 2002 Distinguished Alumnus, Archbishop Hoban High School, Akron, Ohio  
 2001 - 2002 Outstanding Professional, America's Registry of Outstanding Professionals  
 2001 - 2002 Who's Who, National Registry of Who's Who

2001 - 2002 Strathmore's Who's Who, Strathmore's Who's Who  
2002 Who's Who in America, Marquis Who's Who in America  
2004 Diversity Advocate of the Year, South Carolina Commission on Higher Education  
2005 Henry Middleton Award for Research Excellence, Department of Veterans Affairs, VISN7  
2007 Presidential Service Citation for Service, South Carolina Dental Association  
2009 Best Doctors™ citation Best Doctors in America-Nephrology  
2009 Marcy Speer Outstanding Reviewer Award, NIH Center for Scientific Review  
2010 Citation for Service, College of Nursing, Medical University of South Carolina  
2010 Citation for Service, University of South Carolina-Columbia School of Medicine  
2010 Citation for Service, Health Sciences South Carolina  
2010 Doctor of Medical Science Honoris Causa, Medical University of South Carolina (Honorary degree)  
2010 John R. Raymond, M.D. Scholarship created, Medical University of South Carolina  
2010 Annual John R. Raymond Mentorship Award created, Medical University of South Carolina  
2010 Citation for Service, Office of Student Diversity, Medical University of South Carolina  
2010 Best Doctors™ citation Best Doctors in America-Nephrology  
2010 Honorary Nurse designation, College of Nursing, Medical University of South Carolina

**MEMBERSHIPS IN HONORARY AND PROFESSIONAL SOCIETIES:**

1975 - Present Phi Kappa Phi (Member)  
1981 - Present American Medical Association (Member)  
1986 - Present American College of Physicians (Member)  
1987 - Present Alpha Omega Alpha (Member)  
1988 - Present American Society of Nephrology Member  
1989 - Present American Federation for Medical Research (Member)  
1990 - Present American Heart Association (Member)  
1990 - Present National Kidney Foundation (Member)  
1991 - Present American Society of Nephrology (Session Chair)  
1994 - 2000 New York Academy of Sciences (Member)  
1995 - 1998 Annals of Internal Medicine (Readership Advisory Group)  
1995 - Present American Society for Clinical Investigation (Member)  
1995 - 2004 Molecular Medicine Society (Member)  
1996 - Present Hypertension Council of the American Heart Association (Member)  
1996 - 2010 Southern Society for Clinical Investigation (Member)  
1996 - 2010 Southern Salt, Water and Kidney Club (Member)  
1996 - Present Hypertension Council of the American Heart Association (Fellow)  
1997 - Present American Society of Nephrology (Session Chair)  
1997 - 2004 Molecular Medicine Society (Fellow)  
1998 - Present Association of American Physicians (Member)  
1999 - Present American Society of Pharmacology Experimental Therapeutics (Member)  
2003 - 2008 American Society for Biochemistry Molecular Biology (Member)  
2004 - Present American Society of Nephrology (Session Chair)  
2007 - Present American Society of Nephrology (Session Chair)  
2009 - Present American Heart Association (Fellow)  
2009 - Present American College of Physicians (Fellow)  
2009 - Present American Society of Nephrology (Fellow)

**EDITORSHIPS/EDITORIAL BOARDS/JOURNAL REVIEWS:**

Editorial Board

07/2001 - 06/2010 American Journal of Physiology Renal Physiology  
07/2003 - 06/2008 Journal of Biological Chemistry  
07/2004 - Present ASSAY and Drug Development Technology

Journal Review

American Journal of Pharmacogenomics  
American Journal of Physiology: Cell  
American Journal of Physiology: Endocrine  
American Journal of Physiology: Integrative  
Am. J. Resp. Cell Mol. Biol.

Annals of Internal Medicine  
Biochem Biophys Acta  
Biochemical Pharmacology  
Biochemistry  
Biological Psychiatry  
Biophysical Journal  
Brain Research  
British Journal of Pharmacology  
Cellular and Molecular Cardiology  
Circulation  
Circulation Research  
Current Medicinal Chemistry  
Diabetes  
FASEB Journal  
FEBS Letters  
Geriatrics  
Tissue and Cell  
International Journal of Neuropsychopharmacology  
Journal of the Am. Society of Nephrology  
Journal of Applied Physiology  
Journal of Cell Science  
Journal of Clinical Investigation  
Journal of Immunology  
Journal of Investigative Dermatology  
Journal of Molecular and Cellular Cardiology  
Journal of Neurochemistry  
Journal of Neuroimmunology  
Journal of Neuroscience  
Journal of Pharmacology & Experimental Therapeutics  
Journal of Vascular Research  
Kidney International  
Life Sciences  
Molecular Membrane Biology  
Molecular Pharmacology  
Nature Molecule Pages  
Neuropsychimmunology  
Neuropsychimmunology  
New England Journal of Medicine  
New England Journal of Medicine  
North Carolina Medical Journal  
Pharmacogenomics  
Physiological Genomics  
Physiological Journal  
Proc. Natl. Acad. Sci. U.S.A.  
American Journal of Pathology  
American Journal of Kidney Diseases  
American Heart Journal  
Hypertension

**LOCAL/REGIONAL APPOINTED LEADERSHIP AND COMMITTEE POSITIONS:**

1999 - 2002 Charleston Research Institute, Secretary-Treasurer, Board of Directors, Directors  
2001 - 2010 Foundation for Research Development, MUSC, Vice-Chair, Board of Directors  
2001 - 2009 Hollings Marine Laboratory, South Carolina, Board of Directors (Chair 2001-2006)  
2001 - 2010 University Medical Associates (Affiliated Physicians' Practice of MUSC), Executive Committee, Board of Directors  
2002 - 2006 Charleston Research Institute, Member, Board of Directors  
2002 - 2010 SC State EPSCOR/IDEA Committee Executive Board (Chair, South Carolina University)

Research and Education Foundation, Member, Board of Trustees, Chair (2005-2006)  
 2002 - 2010 Lowcountry Graduate Center, Board of Directors, Chair, Executive Committee  
 2003 - 2010 Governor's School for Science and Mathematics, State of South Carolina, Member, Board of Trustees  
 2003 - 2010 South Carolina Bio, State of South Carolina, Member, Board of Directors  
 2003 - 2010 University Center at Greenville, Board of Directors, Executive Committee  
 2004 - 2010 Health Sciences South Carolina, Member, Scientific Committee (VPs of six partners)  
 2006 - 2007 Charleston Regional Development Alliance, Member, Board of Directors  
 2007 - 2010 South Carolina BioEngineering Alliance, Member, Board of Directors  
 2007 - 2010 South Carolina College of Pharmacy, Member, Board of Trustees  
 2010 - Present Greater Milwaukee Committee, Member  
 2010 - Present National Kidney Foundation of Wisconsin, Member, Board of Directors  
 2010 - Present American Heart Association of Wisconsin, Member, Board of Directors  
 2010 - Present Consortium on Community and Public Health, Member, Executive Committee  
 2010 - Present Milwaukee Health Care Partnership, Member, Board of Directors  
 2010 - Present Milwaukee Regional Medical Center, Member, Board of Directors  
 2011 - Present Milwaukee County Research Park Member, Board of Directors  
 2011 - Present Milwaukee Academy of Science, Member, Board of Directors,  
<http://milwaukeeacademyofscience.org/>  
 2011 - Present Center for International Health Milwaukee, Member, Board of Directors,  
[\(http://centerforinternationalhealth.org/\)](http://centerforinternationalhealth.org/)  
 2011 United Way of Greater Milwaukee, Member, Campaign Cabinet Co-Chair, Healthcare  
 2011 American Heart Association of Wisconsin, Chair, Heart Walk

**NATIONAL ELECTED/APPOINTED LEADERSHIP AND COMMITTEE POSITIONS:**

1989 Medical Research Council of Canada, Ad hoc grant referee  
 1990 Department of Veterans Affairs Gastroenterology Study Section, Ad hoc grant referee  
 1991 Department of Veterans Affairs, Basic Sciences Study Section, Ad hoc grant referee  
 1991 - 2001 Department of Veterans Affairs Nephrology Study Section, Ad hoc grant referee  
 1992 - 1995 National Kidney Foundation Young Investigator Grants, Study section member  
 1992 National Institutes of Health Experimental Cardiovascular Sciences Study Section, NHLBI Ad hoc grant referee  
 1992 - 2001 Wellcome Trust Individual Investigator Awards, Ad hoc grant referee  
 1993 - 2003 Jewish Foundation of Louisville Biomedical Research Awards, Ad hoc grant referee  
 1993 - 1996 National Institutes of Health Neurological Sciences 2 Study Section, Ad hoc grant referee  
 1994 - 1996 National Science Foundation Neural & Glial Mechanisms, Ad hoc grant referee  
 1996 - 1997 National Institutes of Health Neurological Sciences 1 Study Section, NINDS Ad hoc grant referee  
 1997 National Institutes of Health Mt. Sinai Pharmacology PPG, NIA Special Emphasis Panel  
 1997 National Institutes of Health New York University Neuroscience PPG, NIA Special Emphasis Panel  
 1997 - 1998 National Institutes of Health Neurological Sciences 1 Study Section, NINDS Study section member (disbanded due to reorganization)  
 1997 National Institutes of Health Signaling Laboratory, NIMH Intramural Review Panel  
 1997 National Science Foundation Signal Transduction and Molecular Biochemistry, Ad hoc grant referee  
 1998 - 2002 American Heart Association, Cardio-Renal Study Section member; co-Chair, 2000 & 2001  
 1998 - 1999 National Institutes of Health Molecular Developmental Cellular Neurosciences 5 Study Section (MDCN-5), NINDS Ad hoc grant referee  
 1998 National Institutes of Health Yale Physiology PPG, NIDDK Special Emphasis Panel  
 1998 National Institutes of Health Vanderbilt Nephrology PPG, NIDDK Special Emphasis Panel  
 1998 National Institutes of Health General Medicine B Study Section, NIDDK Ad hoc grant referee  
 1999 National Institutes of Health Physiological Sciences Study Section, Ad hoc grant referee  
 1999 - 2004 National Institutes of Health MDCN-5, NINDS Study section member  
 1999 Department of Veterans Affairs Central Office, R & D Service, Member, Research Career, Scientist Program Task Force  
 1999 Department of Veterans Affairs Pulmonary, Renal and Gastrointestinal, Adjudicator, Merit Review Appeal  
 1999 Department of Veterans Affairs Pulmonary, Renal and Gastrointestinal, Chair, Research Enhancement

Area Program, Special Emphasis Panel  
2000 - 2001 Department of Veterans Affairs Office of Research Compliance and Assurance, Chair, Animal Welfare Task Force  
2000 Department of Veterans Affairs Central Office, R & D Service, Chair, San Diego VA/JDFI Diabetes Research Center Site Visit  
2000 National Institutes of Health, NHLBI Special Emphasis Panel  
2000 - 2001 Department of Veterans Affairs Office of Research Compliance and Assurance Multi-Assessment Program, Member, Task Force  
2000 Department of Veterans Affairs Central Office, R & D Service, Chair, Iowa City VA/JDFI Diabetes Research Center Site Visit  
2000 Department of Veterans Affairs Central Office, R & D Service, Chair, Nashville VA/JDFI Diabetes Research Center Site Visit  
2000 Department of Veterans Affairs Central Office, R & D Service, Member, Middleton Award Selection Committee  
2001 National Institutes of Health Emory University PPG site visit, NIDDK Special Emphasis Panel  
2001 Department of Veterans Affairs Central Office, R & D Service, Merit Review Advisory Council  
2001 National Institutes of Health, NINDS Special Emphasis Panel  
2001 National Institutes of Health NIDDK, NIDDK Special Emphasis Panel, Centers of Excellence in Pediatric Nephrology  
2001 National Institutes of Health, NIGMS Special Emphasis Panel  
2001 Medical Research Council, United Kingdom, Ad hoc grant referee  
2002 National Institutes of Health NIDDK, NIDDK Special Emphasis Panel, Loan Repayment Program  
2003 National Institutes of Health NIDDK, NIDDK Special Emphasis Panel, Loan Repayment Program  
2003 Department of Veterans Affairs Central Office, R & D Service, Research Enhancement Award, Program Advisory Council  
2003 National Institutes of Health, Center for Scientific Review, ZRG1 MDCN-1 Special Emphasis Panel, Functional and Cognitive Neuroscience 1 Study Section (IFCN1)  
2003 National Institutes of Health, Center for Scientific Review, ZRG1 UROL Special Emphasis Panel, Urology Study Section (NIDDK)  
2003 National Institutes of Health, Center for Scientific Review, ZRG1 MDCN-1 Special Emphasis Panel (SYN)  
2003 National Institutes of Health NIDDK, NIDDK Special Emphasis Panel, Loan Repayment Program  
2003 National Institutes of Health Center for Scientific Review, ZRG1 MDCN-5 Special Emphasis Panel  
2003 - 2007 Department of Veterans Affairs Central Office, R & D Service, Renal Study Section member  
2004 - 2007 National Institutes of Health NINDS, MNPS Study section member, Chair(2005-2007)  
2004 National Institutes of Health Center for Scientific Review/NIDDK, ZRG1 RUSD (04) Special Emphasis panel, Calcitropic Hormones & Renal Transport  
2004 National Institutes of Health Center for Scientific Review/NIDDK, Co-Chair ZRG4 UROL Special Emphasis Panel, Roadmap T-90 Grants  
2004 National Institutes of Health NIDDK, ZDK GRB-3 Special Emphasis Panel, Loan Repayment Program  
2004 National Institutes of Health NIDDK, ZDK GRB-3 Special Emphasis Panel, Loan Repayment Program  
2004 National Institutes of Health NIDDK - Emory and Colorado PPGs, ZDK1 GRB-1 (02) Special Emphasis Panel, PPG Review  
2004 National Institutes of Health NIDDK, Chair, ZDK GRB-R (J1) Special, Emphasis Panel, Training grants  
2004 National Institutes of Health Center for Scientific Review/NIDDK, ZRG3 UROL Special Emphasis Panel; Emphasis Panel, Novel Technologies  
2005 National Institutes of Health NIDDK, ZDK GRB-C (M1) Special Emphasis Panel, Neph. Ancillary Clinical Trials  
2005 National Institutes of Health NIDDK, Chair, ZDK GRB-R (02) Special Emphasis Panel, Nephrology K awards  
2005 National Institutes of Health NIDDK, ZRG1 ZRG1 F10-H 20L Special Emphasis Panel, F31 and F32 proposals  
2005 National Institutes of Health NINDS, ZNS1 SRB-G (01) Special Emphasis Panel, High Throughput Screening  
2005 National Institutes of Health NIDDK, ZRG1 RUS-D (02) (M) Special Emphasis Panel, Collaborative R01 proposals  
2005 National Institutes of Health NIDDK, ZDK GRB-4 (01) Angiogenesis in Diabetes, Special Emphasis

Panel

2006 National Institutes of Health NINDS, ZNS1 SRB-G (01) Special Emphasis Panel, High Throughput Screening - Roadmap

2006 National Institutes of Health NIDDK, Chair, ZDK1 GRB-R (02) Special Emphasis Panel, Nephrology Ancillary Clinical Trials

2006 National Institutes of Health NIDDK, ZRG1 F10-H 21L-2 Special Emphasis Panel, F31 and F32 proposals

2006 National Institutes of Health NIDDK, ZRG1 ZRG1 F10-H 21L-1, Special Emphasis Panel, F31 and F32 proposals

2006 National Institutes of Health NIDDK, ZDK GRB-5 Special Emphasis Panel, Loan Repayment Program

2007 National Institutes of Health NIMH, ZMH1 ERB-Y (06) S, Special Emphasis Panel, Molecular Libraries Screening Assays

2007 National Institutes of Health NIMH, Chair, ZMH1 ERB-Y (07) S, Special Emphasis Panel, Molecular Libraries Screening Assays

2007 National Institutes of Health NIDDK, ZDK GRB-6 Special Emphasis Panel, Loan Repayment Program

2007 National Institutes of Health NIDDK, ZRG1 F10-H 22 Special Emphasis Panel, F31 and F32 proposals

2007 National Institutes of Health NIDDK, ZDK GRB- W (M1) Special Emphasis Panel, Research Centers of Excellence in Pediatric Nephrology

2007 National Institutes of Health NCRR, 2007/10 ZRR1 CR-1 (01) CTSA Special Emphasis Panel 2007 (#1)

2007 National Institutes of Health NIDDK, ZDK GRB-9 M2 1 Special Emphasis Panel, Clinical Research Studies

02/2008 National Institutes of Health NIDDK, PBKD Study Section, ad hoc reviewer

03/2008 National Institutes of Health NIDDK, ZRG1 F10-H 20L Special Emphasis Panel, F31 and F32 proposals

06/2008 National Institutes of Health NIDDK, PBKD Study Section, ad hoc reviewer

10/2008 National Institutes of Health NIDDK, Chair, ZRG1 F10-H 20 Special Emphasis Panel, F31 and F32 proposals

2008 National Institutes of Health NIDDK, ZDK GRB-7 Special Emphasis Panel, Loan Repayment Program

2008 National Institutes of Health NIDDK, Kidney, Urologic and Hematologic Diseases Sub-Committee D, ad hoc

2008 Institute of Medicine Workshop on Safety Biomarkers, Member

2008 National Institutes of Health NIDDK, Prospective Study of Chronic Kidney Disease (CRIC) Special Emphasis Panel

2008 National Institutes of Health NIDDK/NHLBI, Chair, ZDK GRB-6 (J2) 1; Ancillary Studies to Major Ongoing NIDDK and NHLBI Clinical Research Studies Special Emphasis Panel

2008 National Institutes of Health NIDDK, RUS-C 02M Special Emphasis Panel, CMBK Member Conflicts

2008 National Institutes of Health NIDDK, ZRG1 F10-H 23 Special Emphasis Panel, F31 and F32 proposals

2009 - Present National Institutes of Health NIDDK, Chair, ZDK1 GRB-G (M1) L KUH F30/32 award Study Section

2009 National Institutes of Health Center for Scientific Review, Chair, ZRG1 EMNR-H (52) R ARRA AREA Award Review SEP

2009 National Institutes of Health NIDDK, Chair, ZDK1 GRB-G (M4) 1 Special Emphasis Panel, CMBK Member, Conflicts Study Section

2009 National Institutes of Health NIDDK, ZDK GRB-N (M1) Special Emphasis Panel, Loan Repayment Program

2009 National Institutes of Health NIDDK, Chair, ZRG1 DKUS-B02M DKUS (PBKD and UKGD) Member, Conflicts Special Emphasis Panel

2009 National Institutes of Health Special Center for Scientific Review, ZRG1 MDCN-A (58) R ARRA Special Emphasis Panel for NIH Challenge Grants - Stage 1

2009 National Institutes of Health Center for Scientific Review, ZRG1 BST-J (51) S Roadmap HTS Assay Development

2009 National Institutes of Health NIDDK, ZDK1 GRB-S (O2) 2 Emory Physiology, PPG Special Emphasis Panel

2009 National Institutes of Health Center for Scientific Review, ZRG1 DKUS A 58 (R) ARRA Special Emphasis Panel for NIH Challenge

2009 National Institutes of Health Center for Scientific Review, ZRG1 BDAL A 58 (E) ARRA Special Emphasis Panel for NIH Challenge Grants - Stage 2

2009 - 2013 National Institutes of Health NIDDK, Member, PBKD Study Section Chair (2011-2013)  
 2009 National Institutes of Health NIDDK, ZDK1 GRB-S (O4) 2 NIDDK-P50 PKD ARRA Supplement review  
 2009 National Institutes of Health Center for Scientific Review, ZRG1 BST-J (50) R Roadmap HTS Assay for MLPCN  
 2009 National Institutes of Health NIDDK, ZDK1 GRB-G (J2) 1 HUKD SEP Training and Mentored Awards  
 2009 National Institutes of Health NIDDK, Chair, ZDK1 GRB-G (J1) 1, KUH Fellowship Review Committee  
 2009 National Institutes of Health Center for Scientific Review, ZRG1 BST-J (51) R Roadmap HTS Assay Development  
 02/23/2010 U.S. House of Representatives Committee on Science and Technology. Subcommittee on Research and Science Education. Invited testimony  
 2010 National Institutes of Health Chair NIDDK, ZDK1 GRB-G (M1) 1 KUH Fellowship Review Committee  
 2010 National Institutes of Health NIDDK, Chair, ZDK1 GRB-G (M2) 1, K-Award SEP for conflicts  
 2010 - 2013 National Institutes of Health Center for Scientific Review, Inaugural Cohort, College of Scientific Reviewers  
 2010 National Institutes of Health NIDDK, Chair, ZDK1 GRB-G (O1) L, KUH-Fellowship Review  
 2010 National Institutes of Health NIDDK, ZDK1 GRB-9 (O1), Cellular Signaling and Kidney Function  
 2010 National Institutes of Health NIDDK, ZDK1 GRB-N (M3), Loan Repayment Program  
 2010 National Institutes of Health NIDDK, Chair, ZDK1 GRB-G (J1), KUH-Fellowship Review  
 2010 National Institutes of Health Center for Scientific Review, Review Committee, Marcy Speer Outstanding Reviewer Award  
 2010 National Institutes of Health NIDDK, Chair, ZDK1 GRB-G (J2) 1, KUH-Fellowship Review (conflicts SEP)  
 2010 National Institutes of Health Center for Scientific Review, ZRG1 BST-J (50) R Roadmap HTS Assay for MLPC  
 2010 National Institutes of Health NIDDK, Chair, ZDK1 GRB-G (O2) 1, KUH-Fellowship Review (conflicts)  
 2011 National Institutes of Health NIDDK, Chair, ZDK1 GRB-G (M1) 1, KUH-Fellowship Review  
 2011 National Institutes of Health NIDDK, ZRR1 CR-3 (01), CTSA Review  
 2011 - 2014 American Society of Nephrology, Finance Committee  
 2011 - 2013 National Institutes of Health Center for Scientific Review, Chair, PBKD Pathobiology of Kidney Disease Study Section  
 2011 National Institutes of Health NIDDK, ZDK1 GRB-N (M6) Loan Repayment Program

**RESEARCH GRANTS/AWARDS/CONTRACTS/PROJECTS:**

**Active**

**Peer Review**

Title:	G Protein-Regulation of NHE Activity
Source:	National Institutes of Health R01 DK52448-11
Role:	Principal Investigator (2008-2013)
Dates:	1996 - 2013
Direct Funds:	\$1,175,000
Title:	G Protein-Regulation of NHE Activity (ARRA supplement)
Source:	National Institutes of Health R01 DK52448-11
Role:	Principal Investigator
Dates:	2009 - 2011
Direct Funds:	\$100,000
Title:	Roles for Cbl and ESCRT Proteins in 5-HT Receptor Function
Source:	Veterans Affairs Merit Award
Role:	Principal Investigator

Dates: 2009 - 2013  
Direct Funds: \$623,000 (Transfer to Zablocki VA Medical Center has been requested)

**Prior**

**Peer Review**

Title: Regulation of Phosphate Transport in Transfected Cells  
Source: American Heart Association (National Grant-In-Aid 900767)  
Role: Principal Investigator  
Dates: 1990 - 1993  
Direct Funds: \$105,000

Title: Cell Biology and Biochemistry of the Human 5-HT1A Receptor  
Source: Veterans Administration Merit Award  
Role: Principal Investigator  
Dates: 1990 - 1993  
Direct Funds: \$123,000

Title: Electron Paramagnetic Spin Resonance Facility  
Source: Shared Equipment Grant NIH S10 RR13656  
Role: Principal Investigator  
Dates: 1991  
Direct Funds: \$306,000

Title: Regulation of Signaling of the Human 5-HT1A Receptor  
Source: National Institutes of Health R01 NS30927  
Role: Principal Investigator  
Dates: 1992 - 1995  
Direct Funds: \$351,000

Title: Heterologous Expression, Purification and Reconstitution of the 5-HT1A Receptor  
Source: Veterans Administration Merit Award  
Role: Principal Investigator  
Dates: 1993 - 1998  
Direct Funds: \$367,000

Title: Characterization of Novel Derivatives of (S) UH-301 for the Study of the 5-HT1A Receptor  
Source: National Institutes of Health SBIR Grant  
Role: Co-investigator (subcontract)  
PI: Yigong Gao, Research Biochemicals International  
Dates: 1994 - 1995  
Direct Funds: \$12,000

Title: Determinants of Polarity in Type IIIb

Source:	Membrane Proteins American Heart Association (National) Grant-In-Aid 940507
Role:	Principal Investigator
Dates:	1994 - 1997
Direct Funds:	\$120,000
Title:	Cytosensor® Microphysiometer
Source:	Department of Veterans Affairs Equipment Grants Program
Role:	Ombudsman
Dates:	1995
Direct Funds:	\$50,000
Title:	Cytosensor® Microphysiometer Academic Grant
Source:	Molecular Devices Corporation
Role:	Ombudsman
Dates:	1995
Direct Funds:	\$47,500
Title:	Gi Regulation of NHE Activity in Renal and Fibroblast Cells
Source:	National Institutes of Health R01 DK52448
Role:	Principal Investigator
Dates:	1996 - 2001
Direct Funds:	\$650,000
Title:	Role of Aldosterone in Renal Glomerular Cell Growth and Matrix Production
Source:	Mentored NIH K01 HL96012
Role:	Sponsor
PI:	Eddie L. Greene
Dates:	1997 - 2002
Direct Funds:	\$450,000
Title:	Charleston Inflammatory Mediators of Glomerular Diseases REAP Award
Source:	Veterans Affairs Research Enhancement Award Program
Role:	Program Director (Relinquished to new PI Dr. Gary Gilkeson upon move to MCW 7/1/2010)
Dates:	1998 - 2010
Direct Funds:	\$3,100,000
Title:	Differential Signaling of Serotonin Receptors
Source:	Veterans Administration Merit Award
Role:	Principal Invest
Dates:	1998 - 2003
Direct Funds:	\$533,000
Title:	MUSC Multidisciplinary Training Grant in Glomerular Function and Disease

Source:	Training Grant in Glomerular Function and Disease NIH T32 DK07752-11
Role:	Program Director (Relinquished to new PI Dr.P.Darwin Bell upon move to MCW 7/1/2010)
Dates:	1998 - 2014
Direct Funds:	\$1,880,000
Title:	Pathways of Hypertonic Activation of Sodium-Proton Exchange
Source:	Mentored Department of Veterans Affairs Merit Award (MREP)
Role:	Sponsor
PI:	Maria N. Garnovskaya PhD
Dates:	1998 - 2001
Direct Funds:	\$300,000
Title:	Live Cell Fluorescence Microscopy Facility
Source:	Department of Veterans Affairs Equipment Grants Program
Role:	Principal Investigator
Dates:	1998
Direct Funds:	\$209,000
Title:	MUSC Integrated Cellular Fluorescence Facility
Source:	Shared Equipment Grant NIH S10 RR13005
Role:	Principal Investigator (effort N/A)
Dates:	1998
Direct Funds:	\$281,000
Title:	Minority Faculty Development Award
Source:	Mentored Robert Wood Johnson Minority Faculty Development Award
Role:	Sponsor
PI:	Eddie L. Greene
Dates:	1998 - 2002
Direct Funds:	\$325,000
Title:	NAD(P)H Oxidase & Mesangial Cell Proliferation and Fibrosis
Source:	National Institutes of Health R01 DK54720-04
Role:	Principal Investigator
Dates:	2000 - 2005
Direct Funds:	\$700,000
Title:	Bradykinin Regulation of Inner Medullary Collecting Duct Proton Flux
Source:	Mentored NIH K01 DK02694-02
Role:	Sponsor
PI:	Yurii V. Mukhin PhD
Dates:	2000 - 2003
Direct Funds:	\$210,000

Title: Cellular Actions of Indoxyl Sulfate - a Uremic Toxin  
Source: Mentored NIH K25 DK59950-05  
Role: Sponsor  
PI: Andrew Gelasco PhD  
Dates: 2001 - 2007  
Direct Funds: \$675,000

Title: Down-regulation of EGF Receptors by GPCR Activation  
Source: National Institutes of Health R01 GM-63909-04  
Role: Principal Investigator  
Dates: 2001 - 2007  
Direct Funds: \$700,000

Title: Homocysteinemia in Chronic Renal Failure- Cooperative Trial  
Source: CSP #453 Department of Veterans Affairs  
Role: Local Principal Investigator  
Dates: 2001 - 2005  
Direct Funds: \$250,000

Title: Gi Regulation of NHE Activity in Renal and Fibroblast Cells  
Source: Supplement National Institutes of Health R01 DK52448-06  
Role: Principal Investigator  
Dates: 2001 - 2002  
Direct Funds: \$25,000

Title: Research Security Enhancement Award  
Source: Veterans Affairs RFA  
Role: Program Director  
Dates: 2002  
Direct Funds: \$20,000

Title: Angiotensin Receptor Interacting Proteins  
Source: Mentored K01 DK063252-02  
Role: Sponsor  
PI: Qing Yang MD  
Dates: 2002 - 2006  
Direct Funds: \$250,000

Title: Human Subjects Research Enhancement Program at MUSC  
Source: National Institutes of Health 1 S07 RR018244  
Role: Principal Investigator  
Dates: 2002 - 2004  
Direct Funds: \$300,000

Title: Sensory Neuroscience Facility Renovation  
Source: NIH/NCRR 1C06RR014516

Role: Principal Investigator (as institutional official)  
Dates: 2002 - 2003  
Direct Funds: \$1,000,000

Title: NHE-1 Interacting Proteins  
Source: Mentored Minority supplement to NIH R01 DK52448-07

Role: Sponsor  
PI: Henry Ayiku MD  
Dates: 2002 - 2005  
Direct Funds: \$200,000

Title: Proteomics of NHE-1 Activation  
Source: Mentored Minority supplement to NIH R01 DK52448-07

Role: Sponsor  
PI: Sonya Coaxum PhD  
Dates: 2003 - 2005  
Direct Funds: \$115,000

Title: Children's Research Institute Animal Facility  
Source: NIH/NCRR 1C06 RR015455-01A1  
Role: Principal Investigator (as institutional official)  
Dates: 2003 - 2005  
Direct Funds: \$2,000,000

Title: Children's Research Institute Developmental Neurogenetics And Cardiovascular Biology Floors  
Source: NIH/NCRR 1C06 RR018823  
Role: Principal Investigator (as institutional official)  
Dates: 2003 - 2005  
Direct Funds: \$2,854,000

Title: Role of Calmodulin in 5-HT Receptor Function  
Source: NIH R01 NS049515  
Role: Principal Investigator (Declined in lieu of VA Merit Award)  
Dates: 2004 - 2009  
Direct Funds: \$1,125,000

Title: Novel 5-HT Receptor-interacting Proteins  
Source: Veterans Affairs Merit Award  
Role: Principal Investigator  
Dates: 2004 - 2009  
Direct Funds: \$715,000

Title: MUSC Multidisciplinary Training Grant in Glomerular Function and Disease  
Minority Training Supplement for Keidre Corbett, M.D.

Source: Training Grant in Glomerular Function and Disease NIH T32 DK07752-07S1  
Role: Program Director  
Dates: 2005 - 2007  
Direct Funds: \$125,000

Title: Crosstalk Among Growth Factors, ADAMs and Integrins  
Source: Mentored NIH 1 K01 DK070054  
Role: Sponsor  
PI: Monika Gooz MD PhD  
Dates: 2005 - 2010  
Direct Funds: \$520,000

Title: G Protein-Regulation of NHE Activity  
Source: National Institutes of Health R56 DK052448-10A1 (Shannon Award)  
Role: Principal Investigator  
Dates: 2007 - 2008  
Direct Funds: \$283,500

Title: MUSC Multidisciplinary Training Grant in Glomerular Function and Disease  
Minority Training Supplement for Evelyn Lewis M.D.  
Source: Training Grant in Glomerular Function and Disease NIH T32 DK07752-09S1  
Role: Program Director  
Dates: 2007 - 2009  
Direct Funds: \$126,000

Title: Role of c-Cbl in Trafficking and Signaling of EGF Receptors Induced by Various Growth Factors  
Source: American Heart Association Mid-Atlantic Affiliate 0725358U  
Role: Mentor  
PI: Alex Baldys PhD(Fellowship)  
Dates: 2007 - 2010  
Direct Funds: \$105,000

Title: Implications in Glomerular Injury  
Source: Mentored NIH 1 K08 DK080944-01  
Role: Sponsor (relinquished to Dr.P.Darwin Bell upon move to MCW 7/1/2010-Dr. Raymond remains member of mentorship committee)  
PI: Juan Carlos Velez MD  
Dates: 2008 - 2013  
Direct Funds: \$646,920

Title: Renal Biomarkers Center of Excellence  
Source: South Carolina Centers of Economic Development  
Role: Principal Investigator (Relinquished to Dr. John M. Arthur upon move to MCW 7/1/2010)

Dates: 2008 - 2013  
Direct Funds: \$5,000,000

Title: Role of Ceramide in Aging-related Diseases  
Source: Mentored VA Career Development-2 Award  
Role: Co-sponsor (relinquished upon move to MCW 7/1/2010-Dr. Raymond remains member of mentorship committee-Lina Obeid is primary sponsor)  
PI: Leah Siskind, PhD  
Dates: 2008 - 2011  
Direct Funds: \$400,000 (\$35,000 first year)

Title: Regulation of 5-HT1A Receptor by Calmodulin  
Source: Mentored NIH 1 K01 HL  
Role: Sponsor (relinquished to Dr.Louis Luttrell upon move to MCW 7/1/2010-Dr. Raymond remains member of mentorship committee)  
PI: Sonya Coaxum PhD  
Dates: 2008 - 2013  
Direct Funds: \$567,867

Title: Discovery of Urine Biomarkers in Patients with Glomerular Disease  
Source: Mentored VA Career Development-2 Award  
Role: Sponsor (relinquished to Dr.John M.Arthur upon move to MCW 7/1/2010-Dr. Raymond remains member of mentorship committee)  
PI: Michael Janech PhD  
Dates: 2008 - 2011  
Direct Funds: \$350,000

Title: Basic Science Building  
Source: NIH/NCRR 1C06 RR020609  
Role: Principal Investigator  
Dates: 2010 - 2012  
Direct Funds: \$6,616,774

**Non-Peer Review**

Title: National Kidney Foundation Fellowship, Frank J. Albers MD  
Dates: 1991 - 1993  
Direct Funds: \$50,000

Title: National Kidney Foundation Fellowship, John M. Arthur MD PhD  
Dates: 1995 - 1996  
Direct Funds: \$25,000

Title: American Heart Association(SC Affiliate) Yurii Mukhin PhD

Dates: 1997 - 1999  
Direct Funds: \$40,000

Title: National Kidney Foundation  
Fellowship(SC Affiliate), John C. Andy  
MD

Dates: 1998 - 1999  
Direct Funds: \$25,000

Title: National Kidney Foundation  
Fellowship(National), John C. Andy MD

Dates: 1998 - 1999  
Direct Funds: \$12,500

Title: American Heart Association(SC  
Affiliate), Jasjit Grewal PhD

Dates: 1998 - 2000  
Direct Funds: \$50,000

Title: Department of Veterans Affairs  
Associate Investigator, Andrew Gelasco  
PhD

Dates: 2000 - 2001  
Direct Funds: \$60,000

Title: Department of Veterans Affairs  
Associate Investigator, David Lefler DO

Dates: 2000 - 2001  
Direct Funds: \$50,000

Title: American Heart Association Pre-  
doctoral fellowship, Justin Turner(MSTP  
student)

Dates: 2002 - 2004  
Direct Funds: \$17,000

Title: NIH Minority Supplement for post-  
doctoral fellowship, Henry Ayiku MD

Dates: 2003 - 2005  
Direct Funds: \$100,000

Title: NIH Minority Supplement for post-  
doctoral fellowship, Sonya Coaxum PhD

Dates: 2004 - 2006  
Direct Funds: \$110,000

Title: American Heart Association Mid-  
Atlantic Affiliate Post-doctoral  
fellowship, Aleksander Baldys PhD

Dates: 2005 - 2010  
Direct Funds: \$120,000

Title: NIH Minority Supplement for post-  
doctoral fellowship, Keidre Jenkins  
Corbett MD

Dates: 2005 - 2007  
Direct Funds: \$105,000

Title: Department of Veterans Affairs  
Associate Investigator, Juan Carlos  
Velez MD  
Dates: 2005 - 2007  
Direct Funds: \$120,000

Title: NIH Minority Supplement for post-  
doctoral fellowship, Evelyn Lewis MD  
Dates: 2005 - 2007  
Direct Funds: \$62,000

#### **INVITED LECTURES/WORKSHOPS/PRESENTATIONS:**

##### **National**

- Pathways of Signal Initiation and Termination through a Prototypical Gi-linked Receptor. Research Conference, University of Florida Division of Nephrology, Hypertension and Transplantation, Gainesville, Florida, 1994
- Acquired and Genetic Diseases of G proteins and their Receptors. Clinical Conference, University of Florida Division of Nephrology, Hypertension and Transplantation, Gainesville, Florida, 1994
- Promiscuous Signal Initiation and Termination through a Prototypical Gi-linked Receptor. University of Cincinnati Division of Pulmonary Medicine, Cincinnati, OH, 1994
- Microphysiometry as a Tool to Study Receptors and Sodium-Proton Antiporters. Satellite Conference, FASEB Meeting, Atlanta, Georgia, 1994
- Multiple Pathways of Signal Initiation and Termination through a Prototypical Gi-linked Receptor. Research Conference, University of Louisville Kidney Disease Program, 1994
- Acquired and Genetic Diseases of G proteins and their Receptors. Clinical Conference, University of Louisville Kidney Disease Program, 1994
- Microphysiometry, a New Tool for the Study of Signal Transduction. University of Florida Division of Nephrology, Hypertension and Transplantation, and Department of Pharmacology, Gainesville, Florida, 1995
- Strategies to Slow the Progression of Diabetic Renal Disease. Medical Grand Rounds, Marshall University, Huntington, W.Va, 1995
- Acquired and Hereditary Diseases of G Proteins and their Receptors. Medical Grand Rounds, Duke University Medical Center, 1995
- Microphysiometry, a New Tool for the Study of Signal Transduction. The Society for Neuroscience Annual Meeting, San Diego, CA, 1995
- Microphysiometry to Study Orphan Receptors and Signal Transduction. Pathways Satellite Symposium, Society for Neuroscience Annual Meeting, San Diego, CA, 1995
- Strategies to Slow the Progression of Diabetic Renal Disease. Medical Grand Rounds, Duke University Medical Center, 1995
- Chair, Signal Transduction Session. American Society of Nephrology Meeting, San Antonio, Texas, 1997
- Signal Transduction Session (Session Chair) 2nd International Symposium on Microphysiometry and FLIPR Technology, Hilton Head, SC, 1998
- The Study of Sodium-Proton Exchange using Microphysiometry. 2nd International Symposium on Microphysiometry and FLIPR Technology, Hilton Head, SC, 1998
- Probing Cellular Metabolic Pathways with Noninvasive Methods. 3rd International Symposium on Microphysiometry and FLIPR Technology, Monterey, California, 1999
- Molecular and Clinical Aspects of Diabetes Insipidus. Clinical Conference, University of Louisville Kidney Disease Program, 1999
- Signal Transduction Session (Session Chair) 3rd International Symposium on Microphysiometry and FLIPR Technology, Monterey, California, 1999
- Reactive Oxygen Species as Second Messengers in the Kidney. Case Western Reserve University-Metro Health Medical Center, Division of Nephrology and Department of Physiology, 1999
- G protein Signaling in Polarized Epithelial Cells. Invited Speaker, American Society of Nephrology Meeting, Miami Beach, Fla, 1999
- Redox Signaling in the Kidney. University of Pittsburgh, Departments of Medicine and Physiology, 1999

Redox Signaling in the Kidney. Research Conference, The University of Louisville Kidney Disease Program, 1999

Role of Glomerular Mesangial Cells in Chronic Renal Failure. Invited Speaker, American Society of Nephrology Meeting, Montreal, Canada, 2000

Molecular and Clinical Aspects of Diabetes Insipidus. Case Western Reserve University-University Hospital Medical Center, Division of Nephrology and Department of Physiology, 2000

Role of Reactive Oxygen Species as Second Messengers. Symposium Organizer, American Society of Pharmacology and Experimental Therapeutics Meeting, Orlando, Florida, 2001

Unusual Signal Transduction Linkages of Serotonin Receptors. Vanderbilt University Department of Pharmacology, 2001

A Novel Pathway of Activation for Type I Sodium-Proton Exchangers. University of Minnesota Departments of Pharmacology and Psychiatry, 2002

CaM is a Modulator of GPCR Function. Case Western Reserve University Department of Biochemistry, 2005

Unexpected Roles for ESCRT Proteins in Receptor Recycling. Northwestern University Department of Pathology, 2011

### **International**

The Study of Orphan Receptors Using Microphysiometry. British Pharmacological Society Symposium on Microphysiometry, London, England, 1995

Signal Transduction Session (Session Chair) 1st International Symposium on Microphysiometry and FLIPR Technology, Paris, France, 1997

The Study of G Protein Function using Microphysiometry. 1st International Symposium on Microphysiometry and FLIPR Technology, Paris, France, 1997

Unusual Signal Transduction Pathways of Serotonin Receptors. Invited Symposium Speaker and Session Chair, International Union of Pharmacologists Meeting, Rotterdam, the Netherlands, 1998

Free Radicals as Second Messengers in Chronic Renal Failure. Invited Speaker, International Society of Free Radical Biologists, Kyoto, Japan, 2000

Free Radical Scavengers as Possible Therapeutics for Chronic Renal Failure. Invited Speaker, Nippon Zoki Pharma, Osaka, Japan, 2000

Proteomic Methods in Signal Transduction. Invited Speaker, P. Universidad Católica de Chile, Santiago, Chile, 2001

Reactive Oxygen Intermediates as Signals in Kidney Cells. Invited Speaker, FONDAPE Center for Cell Regulation and Physiology, Pucón, Chile, 2001

Regulation of 5-HT Function by Receptor Accessory Proteins. Serotonin Club Meeting, Kyoto, Japan, 2006

### **PEER REVIEWED WORKSHOPS/PRESENTATIONS:**

#### **National**

RAYMOND, J.R., Regan, J.W., Beach, R.E., et al. (1987) Enrichment of alpha2-adrenergic receptors of rabbit proximal tubule basolateral membranes. Presented at the 19th Annual Meeting of the American Society of Nephrology, *Kidney Int.* 31:160, 12/1986

Beach, R.E., RAYMOND, J.R., Dennis V.W. (1987)., Mechanisms for adrenergic receptor stimulation of Na<sup>+</sup>-K<sup>+</sup>-ATPase activity in renal basolateral membranes. Presented at the 19th Annual Meeting of the American Society of Nephrology, *Kidney Int.* 31:178., 12/1986

RAYMOND, J.R., Saeed, M., Schwab, S.J. (1988) Enhancement of hemodialysis fistula patency: role of elective transluminal angioplasty. Proceedings of the 17th Scientific Session of the National Kidney Foundation, Washington D.C., 13A, 12/1987

RAYMOND, J.R., Saeed, M., Schwab, S.J. (1988), Prospective detection and early treatment of venous stenoses in hemodialysis fistulas: a method of improving fistula patency., Proceedings of the 18th Scientific Session of the National Kidney Foundation, Washington D.C., 18A, 12/1987

O'Connor, C.M., RAYMOND, J.R. (1988) Whipple's disease presenting as pulmonary hypertension: resolution of echocardiographic abnormalities with antibiotic therapy. Winning Clinical Vignette, Session of the American College of Physicians, New York, NY, 03/1988

RAYMOND, J.R., Fargin, A., Lohse, M., et al. (1989) The genomic clone G-21 encodes the human 5-HT1A receptor. Presented at the 21st Annual Meeting of the American Society of Nephrology, Dec. 1988. *Kidney Int.* 35:163, 12/1988

RAYMOND, J.R., Fargin, A.F., Caron, M.G., et al. (1989) Human 5-HT1A receptor stimulates Na<sup>+</sup>-PO<sub>4</sub>

- transport in transfected HeLa cells. Presented at the Annual Meeting of the American Society for Clinical Investigation, Washington, D.C. Clin. Res. 37:584A, 04/1989
- Fargin, A., RAYMOND, J.R., Regan, J.W., et al. (1989) Effector coupling mechanisms of the serotonin (5-HT<sub>1A</sub>) receptor. Presented at the Annual Meeting of the Association of American Physicians, Washington, D.C. Clin. Res. 37:586A, 04/1989
- Dennis, V.W., Albers, F.J., Middleton, J.P., RAYMOND, J.R., (1990) PKA and PKC have opposite effects on phosphate transport in HeLa cells. Presented at the 22nd Annual Meeting of the American Society of Nephrology, Washington D.C., Kidney Int. 37:456, 12/1989
- Albers, F.J., Dennis, V.W., Middleton, J.P., RAYMOND J.R. (1990), Histamine H<sub>1</sub> and serotonin 5-HT<sub>1A</sub> receptors expressed in HeLa cells stimulate phosphatidylinositol hydrolysis and phosphate uptake through distinct G proteins., Presented at the 22nd Annual Meeting of the American Society of Nephrology, Washington D.C., Kidney Int. 37:453, 12/1989
- Middleton, J.P., RAYMOND, J.R., Fargin, A., et al. (1990) Recombinant 5-HT<sub>1A</sub> receptors stimulate Na<sup>+</sup>/K<sup>+</sup>-ATPase by a Ca<sup>2+</sup>-dependent pathway in HeLa cells. Presented at the 22nd Annual Meeting of the American Society of Nephrology, Washington D.C., Kidney Int. 37:567, 12/1989
- RAYMOND, J.R., Fargin, A., Middleton, J.P. et al. (1990), The cloned human 5-HT<sub>1A</sub> receptor expressed in HeLa cells stimulates sodium-dependent phosphate transport via protein kinase C. Presented at 22nd Annual Meeting of the American Society of Nephrology, Washington D.C., Kidney Int. 37:202, 12/1989
- Albers, F.J., Middleton, J.P., Dennis, V.W., RAYMOND, J.R. (1990), Somatostatin stimulates sodium-dependent phosphate uptake in HeLa cells: Evidence for a regulatory pathway independent of the inhibition of adenylate cyclase., Presented at the Annual meeting of the American Federation for Clinical Research, Washington, D.C. Clin. Res. 38:370A, 05/1990
- RAYMOND, J.R., Middleton, J.P., Albers, F.J., Dennis, V.W. (1990) Thapsigargin stimulates sodium-dependent phosphate uptake in HeLa cells: evidence for a role of Ca<sup>2+</sup>, which is independent of PKC. Presented at the Annual meeting of the American Federation for Clinical Research, Washington, D.C. Clin. Res.38:244A, 05/1990
- Middleton, J.P., RAYMOND, J.R., Whorton, A.R., Dennis V.W. (1990), The cloned human 5-HT<sub>1A</sub> receptor stimulates Na<sup>+</sup>/K<sup>+</sup>-ATPase via activation of voltage sensitive calcium channels. Presented at the Annual meeting of the American Federation for Clinical Research, Washington, D.C. Clin. Res. 38:442A, 05/1990
- Bates, M.D., Caron, M.G., RAYMOND, J.R. (1990), Characterization and regulation of DA<sub>1</sub> dopamine receptors in opossum kidney (OK) cells., Presented at the 20th Annual Meeting of the Society for Neuroscience, St. Louis. Proceedings of the Society for Neuroscience 20:1., 11/1990
- Albers, F.J., RAYMOND, J.R. (1990), Serotonin "5-HT<sub>1D</sub>-like" Receptors inhibit cAMP generation in MDCK cells through a pertussis toxin-sensitive G protein. Presented at the 23rd Annual Meeting of the American Society of Nephrology, Washington D.C., J. Am. Soc. Nephrol. 1:465A, 12/1990
- Bates, M.D., Caron, M.G., RAYMOND, J.R. (1990) Dynamic regulation of adenylyl cyclase-linked DA<sub>1</sub> dopamine receptors in OK cells. Presented at the 23rd Annual Meeting of the American Society of Nephrology, Washington D.C., J. Am. Soc. Nephrol. 1:435, 12/1990
- RAYMOND, J.R., Tisher, C.C. (1990), Antipeptide antibodies to the human (serotonin) 5-HT<sub>1A</sub> receptor recognize renal receptors in thick ascending limb and distal convoluted tubule cells of rat and human kidney., Presented at the 23rd Annual Meeting of the American Society of Nephrology, Washington D.C., J. Am. Soc. Nephrol. 1 :729, 12/1990
- Dennis, V.W., Albers, F.J., Collinsworth, G.G., Cotecchia, S., RAYMOND, J.R., Middleton, J.P. (1990), Recombinant alpha<sub>1B</sub> adrenergic receptors increase Na<sup>+</sup>-PO<sub>4</sub> co-transport by PKC- dependent & -independent pathways in HeLa cells., Presented at the 23rd Annual Meeting of the American Society of Nephrology, Washington D.C., J. Am. Soc. Nephrol. 1:468, 12/1990
- RAYMOND, J.R., Middleton, J.P. (1991) Recombinant human 5-HT<sub>1A</sub> receptors in CHO cells couple to multiple signal transduction pathways. Presented at the Annual meeting of the American Federation for Clinical Research, Seattle, Washington, Clin. Res 39:358, 05/1991
- RAYMOND, J.R. (1990) Phorbol 12-myristate, 13-acetate induces rapid phosphorylation and desensitization of recombinant 5-HT<sub>1A</sub> receptors expressed in CHO cells. Presented at the Annual meeting of the American Federation for Clinical Research, Seattle, Washington, Clin. Res 39:343. Winner of Henry Christian Award for Research Excellence, 05/1991
- Liggett, S.B., RAYMOND, J.R., Chesnut, L.C., Caron, M.G., Lefkowitz, R.J. (1991) Role of the beta-adrenergic receptor kinase in desensitization of the alpha<sub>2</sub>-adrenoceptor. Presented at the Annual meeting

- of the American Federation for Clinical Research, Seattle, Washington, Clin.Res 39:342A, 05/1991
- Albers, F.J., RAYMOND, J.R., Dennis, V.W., Middleton, J.P. (1991) Amplification of cAMP signaling cascade in opossum kidney cells. Presented at the Annual meeting of the American Federation for Clinical Research, Seattle, Washington, Clin. Res 39:180A, 05/1991
- Nash, S.R., Fornaretto, M.G., Bates, M.D., RAYMOND, J.R., Caron, M.G. (1991), Cloning and sequence of a dopamine receptor from opossum kidney cells that is expressed in kidney and brain. Presented at 21st Annual meeting of Society for Neuroscience, New Orleans., Proceedings of the Society for Neuroscience 21:551A., 11/1991
- Liu, J., RAYMOND, J.R., Tamir, H., Millhorn, D., Lauder, J.M. (1991), Embryonic glial cells express 5-HT receptors and exhibit regional differences in neuronotrophic activity in response to 5-HT. Presented at 21st Annual meeting of Society for Neuroscience, New Orleans, 11/1991
- Mangell, A., RAYMOND, J.R., Fitz, J.G. (1991) Recombinant 5-HT<sub>1A</sub> receptor provides evidence for Gi modulation of Gs-stimulated large-conductance Cl<sup>-</sup> current in CHO cells: A regulatory system analogous to adenylyl cyclase., Presented at the 24th Annual Meeting of the American Society of Nephrology, Baltimore, MD, J. Am. Soc. Nephrol. 2:458A, 11/1991
- Becker, B.N., Lee, S.-J., Fanburg, B.L. RAYMOND, J.R. (1992), Bovine pulmonary artery smooth muscle cells express 5-HT<sub>4</sub> receptors which stimulate adenylyl cyclase., Presented at the Annual Meeting of the Southern Section of the American Federation for Clinical Research, New Orleans. Clin. Res 39:831A., 01/1992
- RAYMOND, J.R., Albers, F.J., Middleton, J.P., Becker, B.N., Bates, M.D. (1992), Stable functional expression of rat phosphodiesterase type 3 cDNA in OK cells does not alter short-term homologous desensitization of native DA<sub>1</sub> dopamine receptors., Presented at the Annual meeting of the American Federation for Clinical Research, Baltimore, Maryland, Clin. Res 40:217A., 05/1992
- RAYMOND, J.R., Albers, F.J., Middleton, J.P., Becker, B.N., Bates, M.D. (1992) Stable expression of rat phosphodiesterase 3 cDNA in OK cells does not alter short-term homologous desensitization of DA<sub>1</sub> dopamine receptors., Presented at the Annual meeting of the American Federation for Clinical Research, Baltimore, Maryland, Clin. Res 40:217A, 05/1992
- Becker, B.N., Mulheron, J., Gettys, T.W., Lee, S.-L., Fanburg, B.L., RAYMOND, J.R. (1992) Differential phenotypic expression of 5-HT-coupled adenylyl cyclase activity in vascular smooth muscle cells. Presented at 23rd Annual Meeting of American Society of Nephrology, Baltimore, J. Am. Soc. Nephrol. 3:485A, 11/1992
- RAYMOND, J.R., Olsen, C.L., Gettys, T.W. (1992) Physical & functional coupling of recombinant human 5-HT<sub>1A</sub> receptors to multiple subtypes of Gi in mammalian cells. Presented at 25th Annual Meeting of the American Society of Nephrology, Baltimore, J. Am. Soc. Nephrol. 3:485A, 11/1992
- Becker, B.N., Lee, S.-L., Fanburg, B.L., Raymond, J.R. (1992) Becker, B.N., Lee, S.-L., Fanburg, B.L., RAYMOND, J.R. (1992) Gs Coupled vascular smooth muscle 5-HT<sub>4</sub>-like receptors rapidly desensitize. Presented at 23rd Annual Meeting of American Society of Nephrology, Baltimore, J. Am. Soc. Nephrol. 3:485A, 11/1992
- Gettys, T.W., Fields, T.A., RAYMOND, J.R. (1993), Partial agonists of the human 5-HT<sub>1A</sub> receptor selectively activate Gia-2 and Gia-3 with less efficacy than full agonists., Presented at the 23rd Annual Meeting of the American Society for Biochemistry and Molecular Biology, San Diego, FASEB J. 7:A1138, 06/1993
- Kirchgessner, A.L., Liu, M.-T., RAYMOND, J.R., Gershon, M.D. (1993), Immunohistochemical detection of 5-HT<sub>1A</sub> receptors in rat bowel and pancreas. Presented at 23rd Annual meeting of Society for Neuroscience, New Orleans., Proceedings of the Society for Neuroscience 23:523A., 11/1993
- RAYMOND, J.R., Casañas, S.J., Mulheron, J.G., Garnovskaya, M.N., Arthur, J.M. Gettys, T.W. (1993), Human Serotonin 5-HT<sub>1A</sub> receptors activate endogenous Go-like GTP binding protein(s) when heterologously expressed in insect cells., Presented at 26th Annual Meeting of American Society of Nephrology, Boston, J.Am.Soc. Nephrol. 4:497A, 11/1993
- Arthur, J.M., Gettys, T.W., RAYMOND, J.R. (1994) Cell specific partial agonism of a 5-HT<sub>1A</sub> receptor ligand. Presented at the Annual FASEB meeting, San Diego, Cal. FASEB J.:A87 1994, 03/1994
- Nebigil, C., RAYMOND, J.R., Spurney, R.F., Garnovskaya, M.N. (1994) Molecular cloning and multiple second messenger pathways of a 5-HT<sub>2</sub> receptor expressed in rat mesangial cells. Presented at the Annual FASEB Meeting, San Diego, Cal. FASEB J. 8:A87, 03/1994
- RAYMOND, J.R., Nebigil, C.G., Gettys, T.W., Arthur, J.M., Garnovskaya, M.N. (1994) Interaction of an endogenous receptor kinase with human 5-HT<sub>1A</sub> receptors in insect cells. Presented at the Annual Meeting of the American Federation for Clinical Research, Baltimore, Maryland, Clin. Res, 05/1994

- Gettys, T.W., Arthur, J., RAYMOND, J.R., Taylor, I.L., Olah, M. (1994) Physical and functional coupling of transfected A1-adenosine receptors to inhibitory G proteins in Chinese hamster ovary cells. Presented at the 5th Annual Adenosine Symposium, Washington, D.C., 05/1994
- Arthur, J.M., Collinsworth, G.P., Quarles, L.D., Raymond, J.R. (1995) MDCK cells possess a polycation receptor that activates G proteins from the Gi-alpha & Gq-alpha families. Presented at Annual Meeting of the American Federation for Clinical Research, San Diego, J. Invest. Med. 43:263A, 1995. Winner of Henry Christian Award for Research Excellence, 05/06/1995
- Liu, X., Gao, Y., Garnovskaya, M.N., RAYMOND, J.R., Kebabian, J.W. (1995) Novel molecular probes for the 5-HT1A receptor. Presented at the 210th Annual Meeting of the American Chemical Society, Chicago, IL, 08/1995
- Prpic, V., Garnovskaya, M.N., Fitz, J.G., Gettys, T.W., Collinsworth, G.P., RAYMOND, J.R., Liddle, R.A. (1995) Bombesin stimulates proton efflux and CCK secretion in STC-1 cells. Presented at 9th International Conference on Second Messengers and Phosphoproteins, Nashville, Tennessee. Abstract 371, page 132 of Conference Proceedings, 10/1995
- Gao, Y., Liu, X., RAYMOND, J.R., Garnovskaya, M.N., Kebabian, J.W. (1995) Interactions of (S)-UH-301 derivatives with recombinant 5-HT1A receptors. Presented at the Annual Meeting of the Society for Neuroscience, San Diego, 11/1995
- Arthur, J.M., Collinsworth, G.P., Ramos, S.J.C., Gettys, T.W., RAYMOND, J.R. (1995) Bradykinin causes translocation of G-alpha-q from membrane to cytosol in Madin-Darby canine kidney cells. Presented at 68th Annual Scientific Sessions of the American Heart Association, Anaheim, Circulation 92(suppl 1):I-573 1995, 11/1995
- Arthur, J.M., Collinsworth, G.P., Ramos, S.J.C., Gettys, T.W., RAYMOND, J.R. (1995) ., Stimulation of a polycation sensing receptor in MDCK cells causes translocation from the membrane of G-alpha-q but not G proteins of the Gi-alpha family., Presented at the 28th Annual Meeting of the American Society of Nephrology, San Diego, J. Am. Soc. Nephrol. 6:783 1995, 11/1995
- Mannon, R.B., Mannon, P.J., Lindman, B., RAYMOND, J.R., Platt, J.L., Coffman, T.M. (1995) Thromboxane receptor expression and signaling in thymus. Presented at the 28th Annual Meeting of the American Society of Nephrology, San Diego, J. Am. Soc. Nephrol. 6:841, 11/1995
- Garnovskaya, MN, van Biesen, T., Hawes, B., Lefkowitz, R.J., RAYMOND, J.R. (1996) Specific alpha subunits derived from the Gi/o/z family mediate acute agonist-induced activation of NHE. Presented at the 29th Annual Meeting of the American Society of Nephrology, New Orle, 11/1996
- Mannon, R.B., Mannon, P.J., Ferri, K., RAYMOND, J.R., Coffman, T.M. (1996) Thromboxane receptors are expressed and mediate apoptosis in EL4 thymoma cells. Presented at the 29th Annual Meeting of the American Society of Nephrology, New Orleans, 11/1996
- Garnovskaya, MN, van Biesen, T., Hawes, B., Lefkowitz, R.J., RAYMOND, J.R. (1996) Divergent pertussis toxin-sensitive pathways for 5-HT1A receptor activation of NHE and ERK. Presented at the 29th Annual Meeting of the American Society of Nephrology, New Orleans, 11/1996
- RAYMOND, J.R., Garnovskaya, M.N. (1996) Regulation of NHE-1 activity via Gi proteins. Presented at the 1996 Annual Meeting of the Southern Kidney, Salt and Water Club, Longboat Key, Florida., 12/1996
- Wang, Y., Roman, R. RAYMOND, J.R., Fitz, J.G. (1996) Metabolic stress opens K+ channels in biliary cells through activation of protein kinase C alpha. Presented at the Annual Hepatology Meeting, 1996
- Greene, E.L., Collinsworth, G., Garnovskaya, M.N., Grewal, J., Sajjad, T., RAYMOND, J.R. (1997) Receptor activation of MAP kinases ERK1/ERK2 occurs by an anti-oxidant-sensitive mechanism. Presented at the 1997 Annual Meeting of the California Oxidant Society, 02/1997
- Greene, E.L., Collinsworth, G., Garnovskaya, M.N., RAYMOND, J.R. (1997) Renal mesangial cell 5-HT2A receptor activates mitogen-activated protein kinases ERK1/ERK2 by an anti-oxidant-sensitive pathway., Presented at the Annual meeting of the American Society for Clinical Investigation, Washington, DC, J. Investigative. Med. 45:232S, 04/1997
- Paul, R.V., Wackym, P.S., RAYMOND, J.R., Ullian, M.E. (1997), Angiotensin II shortens natriuretic peptide C-receptor mRNA half-life in vascular smooth muscle cells through a transcription-dependent mechanism., Presented at 30th Annual Meeting of the American Society of Nephrology, 1997
- Lauder, J.M., Lubin, D., Meter, K., Wilkie, M., RAYMOND, J.R., Grayson, D.R., Liu, J., Johns, J.J. (1997) Prenatal cocaine alters postnatal expression of 5-HT1A receptors in developing rat brain. Presented at the Annual Meeting of the Society for Neuroscience, 1997
- Mukhin Y., Della Rocca G., RAYMOND J.R., Garnovskaya M.N. (1998) Involvement of calmodulin in 5-HT1A receptor-activation of mitogen activated protein kinase and Na+/H+ exchange in fibroblasts. Presented at Annual FASEB Meeting, San Francisco, FASEB J. 12: A745, 03/1998

- Garnovskaya M.N., Mukhin Y.V., Ullian M.E., RAYMOND J.R. (1998) Mitogen-induced activation of Na<sup>+</sup>/H<sup>+</sup> exchange in vascular smooth muscle cells involves Janus kinase. Presented at the Annual FASEB Meeting, San Francisco, FASEB J. 12:A744, 03/1998
- RAYMOND J.R., Collinsworth G.P., Mukhin Y.V., Garnovskaya M.N. (1998) Evaluating unusual G protein-coupled signals with the Cytosensor™. Presented at the Second International Cell Analysis Products Users Meeting, Hilton Head, S.C., 05/1998
- Garnovskaya M.N., Collinsworth G.P., RAYMOND J.R., Ploth D.W. (1998) Multiple receptors activate Na<sup>+</sup>/H<sup>+</sup> exchange in mIMCD-3 cells. Presented at the Second International Cell Analysis Products Users Meeting, Hilton Head, S.C., 05/1998
- Mukhin Y.V., Ullian M.E., RAYMOND J.R., Garnovskaya M.N. (1998) Mitogens use different pathways to activate Na<sup>+</sup>/H<sup>+</sup> exchange in vascular smooth muscle cells. Presented at the Second International Cell Analysis Products Users Meeting, Hilton Head, S.C., 05/1998
- Garnovskaya, M.N., Collinsworth, G., RAYMOND, J.R., Fitzgibbon, W., Paul, R.V., and Ploth, D.W. (1998) Bradykinin B2 receptor activation increases Na<sup>+</sup>/H<sup>+</sup> exchange in mIMCD-3 cells. Presented at 31st Annual Meeting of the American Society of Nephrology. J. Am. Soc. Nephrol. 9:6A, 1998
- Chen, R., Greene, E.L., Collinsworth, G., Grewal, J., Houghton, O., Zeng, H., Paul, R.V., RAYMOND, J.R. (1998) Enrichment of transiently transfected mesangial cells by co-transfection with GFP. Presented at 31st Annual Meeting of the American Society of Nephrology. J. Am. Soc. Nephrol. 9:436A, 1998
- Grewal, J., RAYMOND, J.R., Greene, E.L. (1998), Serotonin 5-HT<sub>2A</sub> receptor induces TGF-β1 mRNA and protein in rat mesangial cells via ERK. Linkage between proliferative and fibrotic signals. Am. J. Physiol. 276:F922-F930., Presented at the 31st Annual Meeting of the American Society of Nephrology. J. Am. Soc. Nephrol. 9:422A., 1998
- Jaffa, A.A., Kappler, C.S., Collinsworth, G., Raymond, J.R., Fitzgibbon, W.R., and Ploth, D.W. (1998) Bradykinin activates ERK1/2 in mIMCD3 cells through B2 receptors. Presented at 31st Annual Meeting of the American Society of Nephrology. J. Am. Soc. Nephrol. 9:425A, 1998
- Garnovskaya M.N., Mukhin Y.V., RAYMOND J.R. (1999) Role for Janus kinase in the activation of sodium-hydrogen exchange by osmotic shock. Presented at the Miami Nature Biotechnology Winter Symposia, Miami, FL, MNB Short Reports 10:37, 02/06/1999 - 02/10/1999
- Mukhin Y.V., Garnovskaya M.N., Collinsworth G.P., Greene E.L., and RAYMOND J.R. (1999) 5-HT<sub>1A</sub> receptor stimulate extracellular signal-regulated protein kinase via NAD(P)H oxidase and reactive oxygen species upstream of Src in CHO-K1 fibroblasts., Presented at the Miami Nature Biotechnology Winter Symposia, Miami, FL, MNB Short Reports 10:43, 02/06/1999 - 02/10/1999
- Mukhin Y.V., Collinsworth G.P., Fitzgibbon, W., Ploth, D.W., RAYMOND J.R. Garnovskaya M.N. (1999) Bradykinin B2 receptor activation increase Na<sup>+</sup>/H<sup>+</sup> exchange in mIMCD-3 cells. Presented at the Annual FASEB Meeting, Washington, DC, FASEB J. 13:A135, 03/1999
- RAYMOND J.R., Mukhin Y.V., Reilly C., Collinsworth G.P., and Garnovskaya M.N. (1999) Use of the Cytosensor and FLIPR to probe metabolic pathways. Presented at the Third International Cell Analysis Products Users Meeting, Monterey, CA., 05/1999
- Garnovskaya M.N., Mukhin Y.V., Collinsworth G.P., Fitzgibbon, W., RAYMOND J.R., and Ploth, D.W., Characterization of bradykinin B2 receptors in inner medullary collecting duct cells with FLIPR and Cytosensor™ microphysiometer. Presented at 3rd International Cell Analysis Products Users Meeting, Monterey, CA., 05/1999
- Mukhin Y.V., Bell J., Collinsworth G.P., RAYMOND J.R., Ploth, D.W., and Garnovskaya M.N. (1999) The use of FLIPR and Cytosensor to study bradykinin-induced cellular responses in M-1 cortical collecting duct cells. Presented at 3rd International Cell Analysis Products, Monterey, CA., 05/1999
- Chen R., Paul R.V., Garnovskaya M.N., Mukhin Y.V. RAYMOND J.R., and Ullian M.E. (1999), A functional angiotensin type 1 receptor-GFP fusion protein. Presented at 53rd Annual Fall Conference and Scientific Sessions of the Council for High Blood Pressure Research, 09/13/1999 - 09/16/1999
- Chen, R., Huang, C., RAYMOND, J.R., and Paul, R.V. (1999) Blockade of TGF-β effects on mesangial cells by overexpression of Smad7. Presented at 32nd Annual Meeting of the American Society of Nephrology. Miami, J. Am. Soc. Nephrol. 10:452A, 11/1999
- Budisavljevic, M.N., Fullmer, J.R., Self, S.E., RAYMOND, J.R., Kuhlmann, M.K., and Greene, E.L. (1999) The antioxidant, alpha-lipoic acid ameliorates cellular proliferation and ERK phosphorylation in anti-Thy1 nephritis. Presented at 32nd Annual Meeting of the American Society of Nephrology. Miami, FL, J. Am. Soc. Nephrol. 10:543-544A, 11/1999
- Andy, J.C., Grewal, J.S., Greene, E.L., Garnovskaya, M.N., Mukhin, Y.V., Collinsworth, G., and RAYMOND, J.R. (1999) Indoxyl sulfate stimulates phosphorylation of ERK in cultured rat mesangial

- cells. Presented at 32nd Annual Meeting of the American Society of Nephrology. Miami, FL, J. Am. Soc. Nephrol. 10:543-544A, 11/1999
- Garnovskaya M.N., Mukhin Y.V., RAYMOND J.R. (1999) Angiotensin II and serotonin induce the phosphorylation of serine 727 of STAT3 in vascular smooth muscle cells. Presented at Annual FASEB Meeting, Washington, DC, FASEB J. 13:A468, 1999
- Garnovskaya, M., Mukhin, Y., Collinsworth, G., Ulian, M., RAYMOND, J.R.(2000) The role of the Na<sup>+</sup>/H<sup>+</sup> exchanger in the mitogen-induced activation of extracellular signal regulated protein kinase in vascular smooth muscle cells. Presented at Annual FASEB Meeting, San Diego, FASEB J. 14:A592(442.29), 04/2000
- Mukhin, Y., Garnovskaya, M., Collinsworth, G., Fitzgibbon, W., RAYMOND, J.R., Ploth, D.W.(2000) Bradykinin Stimulates a complex formation between calmodulin and Janus kinase in mIMCD-3 cells. Presented at Annual FASEB Meeting, San Diego, CA, FASEB J. 14:A589 (442.16), 04/2000
- Chen, R., Mukhin, Y.V., Garnovskaya, M.N., RAYMOND, J.R., and Paul RV(2000) Use of rhodamine-angiotensin II conjugate to trace the angiotensin receptor. Presented at the Annual FASEB Meeting, San Diego, CA, FASEB J.14:A724 (499.18), 04/2000
- Turner, J.H., Mukhin, Y.V., Garnovskaya, M., Collinsworth, G., RAYMOND, J.R. (2000) Hyperosmotic-induced mechanisms of pH recovery in the inner medullary collecting duct. Presented at the 4th Annual Symposium on Cellular Fluorescence, Napa, CA, 05/2000
- Mukhin, Y., Garnovskaya, M., Collinsworth, G., Fitzgibbon, W., RAYMOND, J.R., Ploth, D.(2000) Bradykinin stimulates NHE through calmodulin and jak2 in mIMCD-3 cells. Presented at 4th Annual Symposium on Cellular Fluorescence, Napa, CA, 05/2000
- Garnovskaya M., Mukhin Y., Collinsworth G., Ulian M., RAYMOND J.R. (2000), Na<sup>+</sup>/H<sup>+</sup> exchanger is required for activation of the mitogen and extracellular signal regulated protein kinase in vascular smooth muscle cells., Presented at the 4th Annual Symposium on Cellular Fluorescence, Napa, CA, 05/2000
- Mukhin Y., Vlasova T., Grewal J., Ulian M., Tholanikunnel B., RAYMOND, J.R., and Garnovskaya M. (2001) ERK is an Intermediate for Rapid Phosphorylation of Serine795 of the Retinoblastoma Gene Product in Vascular Smooth Muscle Cells. Presented at Annual FASEB Meeting, Orlando, FL; FASEB J. 15:A205 (193.10), 04/2001
- Grewal. J., RAYMOND, J.R. (2001) GPCRs desensitize and down regulate EGF receptors in renal mesangial cells. Presented at Annual FASEB Meeting, Orlando, FL; FASEB J. 15:A180 (180.11), 04/2001
- Turner, J., Gelasco, A., RAYMOND, J.R.(2001) Use of Tryptic Fingerprinting to Identify NHE-1-associated Proteins. Genomics and Proteomics in Kidney and Urologic Diseases sponsored by NIDDK; Washington, DC, 07/08/2001 - 07/10/2001
- Lefler, D.M., Collinsworth, G., Mukhin, Y.V., Garnovskaya, M.N., RAYMOND, J.R. (2001) Jak2 and calmodulin are critical mediators of bradykinin 2 receptor activation of Na<sup>+</sup>/H<sup>+</sup> exchange in three cell lines. Presented at the ASN/ISN World Congress of Nephrology, San Francisco., 10/2001
- Mukhin, Y.V., Garnovsky, E.A., RAYMOND, J.R, Garnovskaya, M.N. (2002) Bradykinin B2 receptor activates ERK in mIMCD3 cells via epidermal growth factor transactivation. Presented at annual FASEB Meeting, New Orleans; FASEB J 16:A171 (158.19), 04/2002
- Mukhin, Y.V., Garnovsky, E.A., Raymond, J.R., Garnovskaya MN.(2002) Bradykinin B2 receptor activates ERK in renal cells via EGFR transactivation. Presented at 16th International Conference KININ 2002, Charleston, SC; MUSC: Program and Abstracts, 2002; 63 (P-21), 05/2002
- Garnovskaya, M.N., Mukhin, Y.V., RAYMOND, J.R.(2002) The mechanism of Epidermal Growth Factor receptor transactivation by bradykinin B2 receptor in mIMCD-3 cells. Presented at 16th International Conference KININ 2002, Charleston, SC; MUSC: Program and Abstracts, 2002; 62 (P-20), 05/2002
- Mukhin, Y.V., RAYMOND, J.R, Garnovskaya M.N. (2003) Novel mechanism of EGF receptor transactivation by bradykinin B2 receptor in kidney cells. Presented at annual FASEB Meeting, San Diego, CA. FASEB J 17: A1013 (635.04), 04/2003
- Turner, J.H., Garnovskaya, M.N., Mukhin, Y.V., RAYMOND, J.R.(2003) Regulation of the type 1 Na<sup>+</sup>/H<sup>+</sup> exchanger by Janus kinase and Ca<sup>2+</sup>/calmodulin. Presented at annual FASEB Meeting, San Diego; FASEB J 17: A1029 (647.10), 04/2003
- Garnovskaya, M.N., Mukhin, Y.V., RAYMOND, J.R. (2003) The Na<sup>+</sup>/H<sup>+</sup> exchanger regulates mitogen-activated protein kinase upstream of Ras in vascular smooth muscle cells. Presented at annual FASEB Meeting, San Diego. FASEB J 17:A1016 (635.20), 04/2003
- Nazeer, K., Kandasamy, K., Self, S., Smith, A., Fitzgibbon, W., RAYMOND, J.R. (2003) Treatment with the anti-oxidant, alpha-lipoic acid, attenuates fibrosis in unilateral ureteral obstruction. American Society

- of Nephrology Renal Week, San Diego. JASN 14:118A (F-PO249), 10/2003
- Göoz, M., Mukhin, Y., RAYMOND, J.R., Garnovskaya, M.N.(2003) Involvement of TACE in 5-HT induced ERK phosphorylation and HB-EGF shedding in mesangial cells: possible role in kidney fibrosis and cancer. Presented at 44th Annual Meeting of Southern Salt, Water, and Kidney Club, Sarasota, FL, 12/03/2003 - 12/07/2003
- Turner, J.H., RAYMOND, J.R. (2003) Interaction of calmodulin with G protein-coupled receptors. Presented at 44th Annual Meeting of Southern Salt, Water, and Kidney Club. Sarasota, FL, 12/03/2003 - 12/07/2003
- Mukhin, Y., RAYMOND, J.R., Garnovskaya, MN.(2003) Bradykinin activates two distinct proton efflux pathways in M-1 cells. Presented at 44th Annual Meeting of Southern Salt, Water, and Kidney Club. Sarasota, FL, 12/03/2003 - 12/07/2003
- Turner, J.H., RAYMOND, J.R.(2004), Interaction of Ca<sup>2+</sup>/calmodulin with the third intracellular loop of the serotonin 5-HT<sub>1A</sub> receptor modulates receptor phosphorylation by protein kinase C. Presented at the annual FASEB Meeting, Washington, DC; FASEB J 18: (639.2), 04/2004
- Ayiku, H., Bland, A., D'Engenio, L., Arthur, J., RAYMOND, J.R., Turner, J.(2004) A proteomic approach for the identification of sodium/proton exchanger (NHE-1) Interacting Proteins. American Society of Nephrology Regional Meeting. Louisville, KY, 10/31/2004 - 11/01/2004
- Ayiku, H., Bland, A., D'Eugenio, L., Arthur, J., Turner, J.H., RAYMOND, J.R.(2004) Identification of sodium proton exchanger (NHE-1) interacting proteins. American Society of Nephrology Renal Week October, 2004, St. Louis, MO. JASN 15 (SU-PO038), 10/2004
- Morinelli, T.A., RAYMOND, J.R., Göoz, M., Ullian, M.E.(2004) Internalization of the angiotensin II type 1a receptor (AT<sub>1</sub>aR) is mediated by calmodulin (CaM). American Society of Nephrology Renal Week, St. Louis, MO. JASN 15 (SA-PO462), 10/2004
- Ayiku, H., Bland, A., D'Eugenio, L., Turner, J.H., RAYMOND, J.R., Arthur, J. (2005) Use of proteomic methods to identify sodium proton exchanger (NHE-1) interacting proteins. Southern Society of Clinical Investigation. New Orleans, LA, 02/2005
- Mukhin, Y.V., RAYMOND, J.R., Ploth, D.W., Garnovskaya, M.N.(2005) Small GTP-binding proteins differentially regulate bradykinin-induced H<sup>+</sup> effluxes in mIMCD-3 and M-1 cells. Presented at the annual FASEB Meeting, San Diego; FASEB J 19: (314.11), 04/2005
- Garnovskaya, M.N., Gooz, M., Mukhin, Y.V., RAYMOND, J.R.(2005) Bradykinin B<sub>2</sub> receptor-induced ERK activation in kidney cells involves integrins. Presented at the annual FASEB Meeting, San Diego; FASEB J 19:(876.6), 04/2005
- Morinelli, T.A., RAYMOND, J.R., Ullian, M.E.(2005) Potential nuclear localization motif within Angiotensin II type 1a receptor. American Society of Nephrology Renal Week, Philadelphia, PA. JASN 16:379A (F-PO193), 11/2005
- Varghese, S.A., Powell, T.B., Budisavljevic, M.N., Oates, J.C., RAYMOND, J.R., Almeida, J.S., Arthur, J.M.(2006) Identification of Glomerular Diseases Based on the Pattern of Charge and Size of Urinary Proteins. Presented at US HUPO meeting, Boston, MA, 03/13/2006
- Baldys, A., RAYMOND, J.R.(2006) Role of protein kinase C in epidermal growth factor receptor trafficking in HEK293 cells. Presented at the annual FASEB Meeting, San Francisco; FASEB J 20:A115 (102.13), 04/2006
- Coaxum, S.D., Gooz, M., Baldys, A., Garnovskaya, M.N., RAYMOND, J.R.(2006) Epidermal growth factor activates Na<sup>+</sup>/H<sup>+</sup> exchanger in podocytes through a mechanism that involves janus kinase 2 and calmodulin. Presented at the annual FASEB Meeting, San Francisco; FASEB J 20: A764, (472.25), 04/2006
- Gooz, M., Gooz, P., RAYMOND, J.R.(2006) Crosstalk between 5-HT<sub>2A</sub> receptor and EGFR involves integrins. Presented at the annual FASEB Meeting, San Francisco; FASEB J 20:A247 (171.7), 04/2006
- Göoz M, Göoz P, RAYMOND, J.R., Luttrell L.M.(2006) alpha-V and beta-1 integrins mediate 5-HT<sub>2A</sub> receptor-EGFR cross-talk. Presented at the American Society for Matrix Biology Biennial National Meeting, Nashville, Tennessee, 11/01/2006 - 11/04/2006
- Velez, J.C.Q., Bland, A.M., RAYMOND, J.R., Janech, M.G.(2006) Differential pattern of peptide generation from Angiotensin substrates in resident glomerular cells. American Society of Nephrology Renal Week, San Diego. JASN 17:SA-PO783, 11/2006
- Idkowiak-Baldys, J., Baldys, A., RAYMOND, J.R., Hannun, Y.A.(2006), Agonist activation of G-protein coupled Receptors (GPCRs) induces formation of the protein kinase C (PKC)-dependent pericentriole. 41st Annual Southeastern Regional Lipid Conference. Cashier NC, 11/2006
- Gooz, M, Gooz, P, Twal, W.O., Rocha, C.L., Luttrell, L.M., RAYMOND, J.R.(2007) Fibronectin activates

- ADAM17/TACE by competing with alpha-5-beta-1 integrin binding. 3rd Annual GPCR Colloquium, Washington DC, 04/27/2007 - 04/28/2007
- Morinelli, T.A., Baldys, A., RAYMOND, J.R. and Ullian M.E.(2007), The role of angiotensin II (AII) AT1AR internalization in the angiotensin II-induced expression of cyclooxygenase 2 COX-2) in rat aortic vascular smooth muscle cells., 3rd Annual GPCR Colloquium, Washington DC, 04/27/2007 - 04/28/2007
- Gooz, M., Gooz, P., Twal, W.O., Luttrell, L.M., RAYMOND, J.R.(2007) 5-HT induces disassembly of TACE/beta-one integrin complex and promotes co-immunoprecipitation of EGFR/beta3?integrin during 5-HT2A receptor-EGFR cross-talk. FASEB Meeting, Washington, DC, 04/28/2007 - 05/02/2007
- Rocha, C.L., RAYMOND, J.R., Gooz, M.B.(2007) ADAM-17-dependent transactivation of EGFR by 5-HT2 is mediated by Src and PI3K in rat mesangial cells. FASEB Meeting, Washington DC, 04/28/2007 - 05/02/2007
- Kramarenko, I., Bunni, M., RAYMOND, J.R., Garnovskaya M.N. (2007), Bradykinin B2 receptor interacts with integrin alpha-5/beta-1 to transactivate epidermal growth factor receptor in kidney cells., Presented at the Scientific Session of the American Heart Association, Orlando FL, 11/04/2007 - 11/07/2007
- Bunni, M., Kramarenko, I., RAYMOND, J.R., Garnovskaya M.N.(2007) Role of integrins in angiotensin II-induced proliferation of vascular smooth muscle cells. Presented at the Scientific Session of the American Heart Association, Orlando FL, 11/04/2007 - 11/07/2007
- Velez, J.C.Q., Bunni, M., Janech, M.G., RAYMOND, J.R.(2007) Angiotensin-(1-7) and angiotensin-(1-9) oppose angiotensin-II effects in human mesangial cells. Presented at the American Society of Nephrology Renal Week, San Francisco, 11/2007
- Velez, J.C.Q., Arthur, J.M., Bland, A., Budisavljevic, M., Fitzgibbon, W.R., Amani, Z., RAYMOND, J.R., Janech, M.G.(2007) Angiotensin metabolite formation identified by mass spectrometry in isolated glomeruli. Presented at the American Society of Nephrology Renal Week, San Francisco, 11/2007
- Idkowiak-Baldys, J., Baldys, A., Chu, W., Zhang, Z.-R., Bell, P.D., RAYMOND, J.R., Hannun, Y.A. (2007) Serotonin induces classical protein kinase C (cPKC)-dependent formation of pericentriole. Presented at 42nd Annual Southeastern Regional Lipid Conference, Cashiers NC, 11/2007
- Garnovskaya, M.N., Bunni, M., Kramarenko, I., RAYMOND, J.R., Morinelli, T.A.(2008) Bradykinin B2 receptor induces multiple cellular responses leading to proliferation of renal carcinoma cells. Presented at the Experimental Biology Meeting, San Diego, 04/05/2008 - 04/09/2008
- Kramarenko, I., Bunni, M., RAYMOND, J.R., Garnovskaya, M.N.(2008) Identification of a functional bradykinin B2 receptor expressed in HEK293 cells. Presented at the Experimental Biology Meeting, San Diego, 04/05/2008 - 04/09/2008
- Coaxum, S.D., RAYMOND, J.R.(2008) Mutations in the i3N loop calmodulin-binding of the 5-HT1A receptor attenuates Erk activation. Presented at the Experimental Biology Meeting, San Diego, 04/05/2008 - 04/09/2008
- Zhang, Z-R., Chu, W.-F., Komlosi, P., Baldys, A., Haycraft, C.J., RAYMOND, J.R., Bell, P.D. (2008) Altered regulation of ion channel activity by EGF in polycystic kidney disease. Presented at the Experimental Biology Meeting, San Diego, 04/05/2008 - 04/09/2008
- Gooz, M., Rocha, C.L., Bell, L.H., Gooz, P., Luttrell, L., RAYMOND, J.R.(2008) 5-HT induces threonine (T735) phosphorylation of ADAM17/TACE cytoplasmic tail. FASEB Meeting, San Diego, 04/05/2008 - 04/09/2008
- Gooz, M., Gooz, P., Twal, W.O., Luttrell, L.M., RAYMOND, J.R.(2007) 5-HT induces disassembly of TACE/?integrin complex and promotes co-immunoprecipitation of EGFR/beta3-integrin during 5-HT2A receptor-EGFR cross-talk. Presented at NIDDK symposium:, "Career Development Symposium: Life after K", Washington DC, 06/2008
- Velez, J.C., Ryan, K., Bland, A., Budisavljevic, M.N., Fitzgibbon, W.R., RAYMOND, J.R., Arthur, J.A., Janech, M.G. (2008) Generation of Angiotensin-(1-7) and Angiotensin-(2-10) in Intact Rat glomeruli analyzed by MALDI-TOF MS. Presented at 62nd High Blood Pressure Research Conference, Atlanta, 09/17/2008 - 09/20/2008
- Velez, J.C., Morinelli, T.A., Walker, L.A., Bunni, M., Arthur, J.M., RAYMOND, J.R., Ullian, M.E., Janech, M.G.(2008) Angiotensin-(2-10) is actively formed by glomerular cells and signals through the AT1a receptor. Presented at the American Society of Nephrology Renal Week, Philadelphia, 11/04/2008 - 11/09/2008
- Dey, M., RAYMOND, J.R., Gooz, M.(2009) Role of ADAM17 in bradykinin-induced EGF receptor

- activation in glomerular podocytes. Presented at the Experimental Biology Meeting, New Orleans, 04/18/2009 - 04/22/2009
- Zhang, Z.-R., Chu, W.-F., Song, B., Gooz, M., Baldys, A., Kolb, R.J., Steele, S., Houston, A., Haycraft, C.J., Owsianik, G., Nilius, B., RAYMOND, J.R., Komlosi, P., Bell, P.D.(2009) EGFR augments cell proliferation in polycystic kidney disease through activation of a novel ion channel. Presented at Experimental Biology Meeting, New Orleans, 04/18/2009 - 04/22/2009
- Zhang, Z.-R., Chu, W.-F., Song, B., Gooz, M., Baldys, A., Kolb, R.J., Steele, S., Houston, A., Haycraft, C.J., Owsianik, G., Nilius, B., RAYMOND, J.R., Komlosi, P., Bell, P.D.(2009) EGFR augments cell proliferation in polycystic kidney disease through activation of a novel ion channel. Presented at the Experimental Biology Meeting, New Orleans, 04/18/2009 - 04/22/2009
- Bunni, M.A., Morinelli, T.A., Bell, P.D., RAYMOND, J.R.Sr., and Garnovskaya, M.B. (2010) Bradykinin B2 receptor activates extracellular signal regulated kinase in renal cells from a mouse model of polycystic kidney disease. Presented at the Experimental Biology Meeting, Anaheim CA, FASEB J April 6, 2010 24:1b703, 04/24/2010 - 04/28/2010
- Liu, M., Idkowiak-Baldys, J., Roddy, P., RAYMOND, J.R.Sr., and Hannun, Y.A.(2011) Sustained treatment of PMA affects trafficking and signaling of EGFR. Presented at the Experimental Biology Meeting, Washington DC.FASEB J March 17, 2011 25:549.7, 04/09/2011 - 04/13/2011
- Garnovskaya, M.N., Bunni, M.A., Bell, P.D., RAYMOND, J.R.Sr, and Coaxum, S.D. (2011) Different signaling mechanisms are involved in vasopressin-induced proliferation of orpk cilia(+)and orpk cilia(-)renal cells derived from a mouse model of polycystic kidney disease. Presented at the Experimental Biology Meeting, Washington, DC, FASEB J March 17, 2011 25:1b503, 04/09/2011 - 04/13/2011
- Coaxum, S.D., Blanton, M.G., Bunni, M.A., Akter, T., Bell, P.D., RAYMOND, J.R.Sr. and Garnovskaya, M.N. (2011), Epidermal growth factor-induced proliferation of renal cells from a mouse model of polycystic kidney disease involves multiple signaling pathways. Presented at the Experimental Biology Meeting, Washington DC. FASEB J March 17, 2011 25:1b505, 04/09/2011 - 04/13/2011
- Velez, J.C.Q., Janech, M.G., Arthur J.M.and RAYMOND J.R.Sr. (2011), Cultured Human Glomerular Endothelial Cells Display ACE-Mediated Angiotensin-II-Generating Capacity and Limited Angiotensin-II-Degrading Activity., Presented at the American Society of Nephrology Renal Week, Denver, CO, 11/16/2011 - 11/21/2011

### **International**

- Regan, J.W., RAYMOND, J.R., Li, J. et al. (1986). Covalent labeling of alpha2-adrenergic receptors with the photoaffinity ligand [3H]-SKF102229., Proceedings of the Congress on Biosynthesis and Regulation of Membrane-Bound Receptors. Cap d'Gade, France., 09/1986
- Caron, M.G., Fargin, A., RAYMOND, J.R., et al. (1989) Structure and function of G protein coupled receptors. Presented at the International Symposium on Serotonin: from Cell Biology to Pharmacology and Therapeutics, Florence, Italy, 03/1989
- Nebigil, C.G, Garnovskaya, M.N., Casañas, S.J., Parker, E., RAYMOND, J.R. (1994) Agonist-induced phosphorylation and desensitization of 5-HT1A receptors expressed in baculovirus-infected insect cells. Presented at the International Congress of Pharmacology meeting, Montreal, Canada, 07/1994
- RAYMOND, J.R., Garnovskaya, M.N. (1996) Regulation of NHE-1 activity via Gi proteins. Presented at the First Annual Meeting of Microphysiometer and FLIPR Users Group, Paris, France, 04/1997
- Garnovskaya, M.N., Mukhin, Y., RAYMOND, J.R. (1997), Shrinkage induced activation of Na<sup>+</sup>/H<sup>+</sup> exchange: in search of signaling intermediates involved in regulatory volume increases in fibroblasts., Presented at the Annual Meeting of the International Union of Physical Scientists, St. Petersburg, Russia, 07/1997
- Mukhin Y.V., Bell J., Collinsworth G.P., RAYMOND J.R., Ploth, D.W., Garnovskaya M.N. (1999) Bradykinin B2 receptor activation induces multiple cellular responses in M-1 cortical collecting duct cells. Presented at the International Society of Nephrology Meeting, Buenos Aires, Argentina, Kidney Int., 05/1999
- Foster, S. Fitzgibbon, W. Hazen-Martin, D. Gore, E. Grotendorst, G. Trojanowska, M., RAYMOND, J.R., Greene, E.L.(2000) Angiotensin II antagonism reduces CTGF immunostaining in the UUO model of chronic nephropathy. Presented at 33rd annual meeting of the American Society of Nephrology, Toronto, Canada, JASN 11:618A (A3260), 10/10/2000 - 10/16/2000
- Gooz, M., RAYMOND, J.R, Garnovskaya, M.N.(2003), Cross talk between serotonin(5HT2A)and epidermal growth factor receptors (EGFR) involves heparin-binding EGF-like growth factor(HB-EGF)and

- activation of metalloproteinase-like enzyme(s), in rat mesangial cells. Presented at the World Congress of Nephrology, Berlin, Germany., 06/2003
- Garnovskaya, M.N., Mukhin, Y.V., Gooz, M., RAYMOND, J.R. (2003) Matrix metalloproteinases are involved in bradykinin B2 receptor-induced epidermal growth factor receptor transactivation in kidney cells. Presented at the HUPO 2nd Annual&IUBMB XIX Joint World Congress, Montreal, Canada; Mol & Cell Proteomics 2, #9, p.910 (87.10), 10/2003
- Gööz, M., RAYMOND, J.R., Garnovskaya, M.N.(2004) Cross-talk between Gq-coupled 5-HT2A and EGF receptor involves HB-EGF, ADAM17 and integrin activation in human mesangial cells. 12th International Conference on Second Messengers and Phosphoproteins, Montreal, Canada, 08/03/2004 - 08/07/2004
- Turner, J.H., RAYMOND, J.R.(2004) G protein regulation of NHE-1 through Jak2 and calmodulin. 12th International Conference on Second Messengers and Phosphoproteins, Montreal, Canada, 08/03/2004 - 08/07/2004
- Garnovskaya, M.N., Mukhin, Y.V., Gooz, M., RAYMOND, J.R.(2004), Matrix metalloproteinases 8 and 13 mediate epidermal growth factor receptor transactivation by bradykinin B2 receptor in kidney cells., Presented at 12th International Conference on Second Messengers and Phosphoproteins, Montreal, Canada; Book of Abstracts 2004, p.128 (THP037), 08/2004
- Gööz, M., Gööz, P., RAYMOND, J.R.(2005) Serotonin-induced ERK phosphorylation involves ADAM-17(TACE) activation in mesangial cells. 30th FEBS Congress- 9th IUBMB Conference, Budapest, Hungary, 07/02/2005 - 07/07/2005
- Baldys, A., Gööz, M., Raymond, J.R. Jr., RAYMOND, J.R.(2007), Role of c-Cbl in trafficking and signaling of epidermal growth factor receptor (EGFR) induced by various EGFR ligands., Presented at the 58th Mosbacher Kolloquium on Protein and Lipid Sorting in Health and Disease. Mosbach/Baden Germany, 03/29/2007 - 03/31/2007
- Idkowiak-Baldys, J., Baldys, A., RAYMOND, J.R., Hannun, Y.A.(2007), Agonist-induced G protein-coupled receptors (GPCRs) trafficking and signaling is regulated by PKC-dependent sequestration of recycling components., Presented at 58th Mosbacher Kolloquium on Protein and Lipid Sorting in Health and Disease. Mosbach/Baden Germany, 03/29/2007 - 03/31/2007
- Visconti, R., LaRue, A., Gooz, RAYMOND, J.R., Gooz, M.(2008) Bone marrow cells develop into podocyte in unilateral ureteral obstruction model of kidney fibrosis. Presented at the International Podocyte Meeting, Toronto, 06/04/2008 - 06/06/2008
- Coaxum, S.D., Garnovskaya, M.N., Gooz, M., Baldys, A., RAYMOND, J.R.(2008) Epidermal growth factor activates Na<sup>+</sup>/H<sup>+</sup> exchange in podocytes through a mechanism that involves janus kinase and calmodulin. Presented at the International Podocyte Meeting, Toronto, 06/04/2008 - 06/06/2008
- Gooz, M., Baldys, A., Morinelli, T.A, Gooz, P, RAYMOND, J.R.(2008) Bradykinin induces permeability changes possibly through matrix metalloenzyme activation and EGFR crosstalk in glomerular podocytes. Presented at the International Podocyte Meeting, Toronto, 06/04/2008 - 06/06/2008

#### **COMMITTEE SERVICE:**

##### **Medical College of Wisconsin**

- 1996 - 2010 Medical University of South Carolina, Nephrology Fellowship Training Committee
- 1996 - 1997 MUSC Search Committee for Chairman of Physiology
- 1997 - 1998 MUSC University Planning Committee, Working Group for Research Issues
- 1997 - 1998 MUSC Search Committee for University, Chief Information Officer
- 1997 - 2003 MUSC Medical Student Training Program, Steering Committee
- 1997 - 1998 MUSC, Cost Accounting Standards Working Group on Indirect Costs
- 1997 - 1999 MUSC University Research Committee
- 1998 - 1999 MUSC Provost's Office Review Committee on the Dean of College of Dental Medicine
- 1998 - Present MUSC Member, Oversight Committee, Monoclonal Antibody Facility
- 1998 - Present MUSC Member, Oversight Committee, Flow Cytometry Facility
- 1999 - 2002 MUSC University Research Council
- 1999 - 2002 MUSC Interim Funding Committee
- 1999 - 2006 MUSC College of Health Professions Member, Diversity Advisory Board
- 1999 - 2000 MUSC Department of Medicine, Chairman, Committee to Draft Strategic Research Plan, 2001-2006
- 1999 - 2002 MUSC Department of Biochemistry Member, Faculty Search Committee

2000 MUSC College of Medicine, Member, Search Committee for the Chair, Department of Pharmacology  
2000 - 2010 MUSC Hollings Cancer Center, Member, Scientific Advisory Committee  
2000 - 2001 MUSC, Member, Search Committee for the Dean, College of Medicine  
2000 MUSC College of Medicine, Member, Search Committee for the Chair, Department of Microbiology and Immunology  
2001 MUSC Department of Medicine, Chairman, Search Committee for the Director, Division of Cardiology  
2001 MUSC College of Graduate Studies Member, Strategic Planning Committee  
2001 - 2010 MUSC, Member, Steering Committee, Children's Research Institute  
2001 - 2010 MUSC, Chair, Executive Research Council  
2001 - 2010 MUSC, Chair, Executive Research Council  
2001 - 2003 MUSC, Member, CIO Search Committee  
2001 - 2010 MUSC College of Dental Medicine, Member, Steering Committee for Training grant titled "Comprehensive Training in Oral and Craniofacial Research"  
2001 - Present MUSC Department of Biochemistry, Member, Oversight Committee for PPG  
2001 - 2003 MUSC, Member, Information Management Council  
2001 - 2003 MUSC, Member, Clinical Information Management Committee  
2002 - 2010 MUSC, Member, Steering Committee, James B. Edwards College of Dental Medicine Dental School Planning and Construction project  
2002 - 2010 MUSC, Member, Academic Compliance Assurance Council  
2002 - 2010 MUSC, Member, University Medical Associates, Board of Directors  
2002 - 2010 MUSC, Member, Internal Advisory Committee for NIH PPG titled "Molecular Mechanisms of Cardiac Hypertrophy"

### **Hospital**

1996 - 2004 Veterans Affairs Medical Center, Research and Development Committee, Charleston, S.C.  
1998 - Present Department of Veterans Affairs Research Space Committee  
1999 - 2000 Department of Veterans Affairs, Laboratory Panic Values Committee  
1999 - 2010 Dept. of Veterans Affairs and MUSC, Academic Partnership Council  
2000 Ralph H. Johnson VA Medical Center Chairman, Search Committee for Chief of Staff  
2000 - 2002 Ralph H. Johnson VA Medical Center, Member, Foreign Travel Subcommittee of the Education Committee  
2000 - 2005 Ralph H. Johnson VA Medical Center, Chairman, Advisory Committee for the Charleston Heart Failure Research Enhancement Award Program  
2001 Ralph H. Johnson VA Medical Center Member, Search Committee for the Chief, Specialty Services  
2001 - 2008 Ralph H. Johnson VA Medical Center, Member, Resource Allocation Board

### **EXTRAMURAL TEACHING:**

#### **Community/Lay Public**

1996 - 2010 University of South Carolina College of Medicine  
1996 - 2001 The South Carolina Bioengineering Alliance  
1996 - 2001 Charleston School of Law  
1996 - 2010 Governor's School for Science and Mathematics  
1996 - 2010 College of Charleston  
1996 - 2010 Clemson-MUSC Bioengineering Program

#### **Medical Student Education**

1996 - 2010 MUSC, Teaching: College of Pharmacy, College of Health Professions, College of Dental Medicine  
05/1997 - 08/1997 MUSC, Supervised Medical Students  
05/1998 - 2004 MSTP, Superv: Ronald Feldman, Justin Turner  
1998 - 2007 MUSC, Pharmacology Departmental Research Conferences  
1998 - 2007 MUSC, Medicine Chair rounds at VAMC several times per month  
1998 - 2007 MUSC, Endocrinology and Medical Genetics Seminars  
1998 - 2007 MUSC, Medical Grand Rounds  
1998 - 2007 MUSC, Miscellaneous divisional research conferences, clinical conferences and journal clubs

1998 - 2007 MUSC, Nephrology Ward Lectures-every other month  
1998 - 2007 MUSC, Wednesday VA Nephrology Clinic- every week for 7 years  
1998 - 2007 MUSC, Digestive Diseases Center Grand Rounds  
1998 - 2007 MUSC, Biochemistry Seminars  
1998 - 2007 MUSC, Molecular And Cellular Biology Program Seminars  
1998 - 1999 Wake Forest University, Suprv. Pregraduate Scholar Preston Wendell  
05/1999 - 06/2001 MUSC, Suprv: Anthony Joseph

#### **Resident and Fellow Education**

1996 - 2000 MUSC, Suprv. Pre-Doctoral Fellows:Mark Reploeg,DeKisha Pendergrass, Oddette Houghton, Steven Pinckney

#### **Continuing Medical Education**

1996 - 2010 South Carolina College of Pharmacy  
1996 - 2005 MUSC, Fluid and Electrolyte and/or Acid Base Lecture(s)  
1997 - 2002 MUSC, One lecture per term in the Research Instrumentation Graduate Course (Department of Cell Biology)  
1997 - 1999 MUSC, 1997-1999 Two lectures per term in the Advanced Signal Transduction (Department of Pharmacology)  
1998 - 2006 MUSC, Chairman's teaching rounds. Round with long-call team at VA on Mondays for didactic teaching

#### **Graduate Student Education**

05/1998 - 06/2001 MUSC, Suprv Pharmacology Grad Student Tobiah Pettus

#### **Postdoctoral Fellow Education**

1991 - 2010 MUSC, Suprv Nephrology fellows:Frank J. Albers, Bryan N. Becker,John M. Arthur,Jasjit Grewal,Jack Andy,David Lefler,S. Steven Foster,Khurram Nazeer,Henry Ayiku,Sanju Varghese,Sonya Coaxum,Jeffrey Smith  
1991 - 2010 MUSC, Suprv.Biochemistry Fellows:Maria N. Garnovskaya,Aleksander Baldys  
1991 - 2010 MUSC, Suprv.Biophysics Fellow:Yurii Mukhin  
1991 - 2010 MUSC, Suprv.Pharmacology Fellows:Kurt Chuprun,Canan Nebigil,Monika Gööz

### **MCW STUDENTS, FACULTY, RESIDENTS AND CLINICAL/RESEARCH FELLOWS MENTORED:**

#### **Faculty**

Dr. Frank Park, MCW, 2010 - Present Mentorship Committee  
Dr. Kevin Regner, MCW, 2010 - Present Mentorship Committee

### **EXTRAMURAL STUDENTS, FACULTY, RESIDENTS, AND CLINICAL/RESEARCH FELLOWS MENTORED:**

#### **Graduate Students**

##### **PhD Committees**

Margaret Eason, Duke University Medical Center, 1992 - 1994  
Russell Nash, Duke University Medical Center, 1992 - 1995  
Padla M.C. Lembo, McGill University, 1996 - 1997  
Kenda L. Jameson Evans, University of Texas, San Antonio, 1997 - 1999  
Ben Pender, MUSC, 1997 - 1999  
John Yordy, MUSC, 1998 - 2005  
Scott Commins, MUSC, 1998 - 2000  
John Cleator, MUSC, 1998 - 2000  
Lauren Ball, MUSC, 1999 - 2003  
Steven Jones, MUSC, 1999 - 2006  
Jeannie Chapman, Structural Biology Program of the Ernest Hollings Cancer Center, 1999 - 2005  
Justin Turner, MUSC, 2000 - 2004 Committee Chair  
Vijay Rao, MUSC, 2000 - 2003

Kevin Becker, MUSC, 2001 - 2003

Committees

Scott Commins, MUSC, 1997 - 1998 Masters Degree

MS Committees

Tobiah Pettus, MUSC, 1998 - 2000

**Faculty**

Bryan N. Becker, M.D.; Professor of Medicine and Associate Dean, College of Medicine at UIC. Dr.

Becker is former Director for the Division of Nephrology at the University of Wisconsin., Mentor

Juan Carlos Q. Velez, M.D.; Associate Professor of Medicine at MUSC., Mentor

Monika Gooz, M.D., Ph.D.; Associate Professor of Medicine at MUSC., Mentor

Maria Garnovskaya, Ph.D.; Associate Professor of Medicine at MUSC., Mentor

Michael Janech, Ph.D.; Associate Professor of Medicine at MUSC., Mentor

Eddie L. Greene, M.D.; Associate Professor of Medicine and Director of the Office of Diversity, Mayo Clinic Rochester., Mentor

John M. Arthur, MD, PhD; DCI Professor of Medicine and Director of the South Carolina Center of Excellence in Renal Biomarkers at MUSC., Mentor

Sonya D. Coaxum, Ph.D.; Assistant Professor of Medicine at MUSC., Mentor

Canan Nebigil Desaubry, Ph.D.; Director of Research, CRNS - University of Strasbourg, France, Mentor

Hirendra Nath Banerjee, MBBS, PhD.; Associate Professor of Biology, Elizabeth City State University., Mentor

Odette Houghton, M.D.; Assistant Professor of Ophthalmology, UNC-Chapel Hill., Mentor

**PROGRAMMATIC DEVELOPMENTS:**

**Educational Programs**

**Student**

2003 - 2010 MUSC Provost and Deans' Scholarship Program

**Faculty**

2002 - 2010 MUSC Women Scholars Initiative

2005 - 2010 MUSC Trustee Leadership Academy

**Research Programs**

1998 - 2010 NIH T32 Training Grant and VA REAP Award

2002 - 2010 SC Centers of Economic Excellence Program

2005 - 2010 Research Project Grant Retreats

**COMMUNITY SERVICE ACTIVITIES:**

Dr. Raymond is a 6-gallon blood donor

**BIBLIOGRAPHY**

**Refereed Journal Publications/Original Papers**

1. RAYMOND, J.R. (1984) Nephrotoxicities of antineoplastic and immunosuppressive agents. *Current Problems in Cancer* 8:2-32.
2. Regan, J.W., RAYMOND, J.R., Lefkowitz, R.J., DeMarinis, R.M. (1986) Photoaffinity labeling of human platelet and rabbit kidney  $\alpha_2$ -adrenergic receptors with [3H]-SKF 102229. *Biochem. Biophys. Res. Comm.* 137:606-613.
3. RAYMOND, J.R. (1988) Amphotericin B nephrotoxicity. *Am. Family Physician* 38: 199-203.
4. RAYMOND, J.R., Raymond, P.A. (1988) Post-lumbar puncture headache. *West. J. Med.* 148: 551- 554.
5. RAYMOND, J.R., Yarger, W.E. (1988) Abnormal urine color; differential diagnosis. *South. Med. J.* 81:837-841.
6. RAYMOND, J.R., van den Berg, E.K. Jr., Knapp, M. (1988) Nontraumatic prehospital sudden death in young

- adults. *Arch. Intern. Med.* 148:303-308.
7. Fargin, A., RAYMOND, J.R., Lohse, M., Kobilka, B.K., Caron, M.G., Lefkowitz, R.J. (1988) A genomic clone which resembles a  $\beta$ -adrenergic receptor encodes the 5-HT<sub>1A</sub> receptor. *Nature* 335:358-360.
  8. Schwab, S.J., RAYMOND, J.R., Saeed, M., Dennis, P., Bollinger, R. (1989) Prevention of hemodialysis fistula thrombosis; early detection and elective treatment of venous stenoses. *Kidney Int.* 36:707-711.
  9. RAYMOND, J.R., Fargin, A., Lohse, M.J., Regan, J.W., Senogles, S., Lefkowitz, R.J., Caron, M.G. (1989) Identification of the ligand binding subunit of the 5-HT<sub>1A</sub> receptor with a radioiodinated probe. *Mol. Pharmacol.* 36:15-21.
  10. Fargin, A., RAYMOND, J.R., Regan, J.W., Cotecchia, S., Lefkowitz, R.J., Caron, M.G. (1989) Effector coupling mechanisms of the cloned 5-HT<sub>1A</sub> receptor. *J. Biol. Chem.* 264:14848-14852.
  11. RAYMOND, J.R., Fargin, A., Middleton, J.P., Graff, J.M., Haupt, D.M., Caron, M.G., Lefkowitz, R.J., Dennis, V.W. (1989) The human 5-HT<sub>1A</sub> receptor expressed in HeLa cells stimulates sodium-dependent phosphate transport via protein kinase C. *J. Biol. Chem.* 264:21943-21950.
  12. Thevaniau, M., RAYMOND, J.R., Rougon, G.N. (1989) Antipeptide antibodies to the beta<sub>2</sub>-adrenergic receptor confirm the extracellular orientation of the amino terminus and the putative first extracellular loop. *J. Membr. Biol.* 111:141-153.
  13. RAYMOND, J.R., Hnatowich, M.R., Lefkowitz, R.J., Caron, M.G. (1990) Adrenergic receptors: proto-types for the study of structure and function of G-protein-coupled receptors. *Hypertension* 15:119-131.
  14. RAYMOND, J.R., Middleton, J.P., Dennis, V.W. (1990) HeLa cells express cAMP-inhibitable sodium-dependent phosphate uptake. *Am. J. Physiol* 258: (Renal Fluid Electrolyte Physiol. 27) F433-F437.
  15. Middleton, J.P., Albers, F.J., Dennis, V.W., RAYMOND, J.R. (1990) Thapsigargin provides evidence for Ca<sup>2+</sup>-mediated increases in sodium-dependent phosphate uptake in HeLa cells. *Am. J. Physiol* 259: (Renal Fluid Electrolyte Physiol. 28) F727-F731.
  16. Middleton, J.P., RAYMOND, J.R., Whorton, A.R., Dennis, V.W. (1990) Recombinant 5-HT<sub>1A</sub> receptors stimulate Na<sup>+</sup>/K<sup>+</sup>-ATPase by a Ca<sup>2+</sup>-dependent pathway in HeLa cells. *J. Clin. Invest.* 86:1799-1805.
  17. RAYMOND, J.R., Albers, F.J., Middleton, J.P., Caron, M.G., Lefkowitz, R.J., Dennis, V.W. (1991) Serotonin 5-HT<sub>1A</sub> and histamine H<sub>1</sub> receptors expressed in HeLa cells stimulate phosphatidylinositol hydrolysis and phosphate uptake through distinct G protein pools. *J. Biol. Chem.* 266:372-379.
  18. Bates, M.D., Caron, M.G., RAYMOND, J.R. (1991) Desensitization of DA<sub>1</sub> dopamine receptors coupled to adenylate cyclase in opossum kidney (OK) cells. *Am. J. Physiol* 260: (Renal Fluid Electrolyte Physiol. 29) F937-F945.
  19. RAYMOND, J.R. (1991) Protein kinase C induces phosphorylation and desensitization of the human 5-HT<sub>1A</sub> receptor. *J. Biol. Chem.* 266:14747-14753.
  20. El Mestikawy, S., Fargin, A., RAYMOND, J.R., Gozlan, H., Hnatowich, M. (1991) The 5-HT<sub>1A</sub> receptor: an overview of recent advances. *Neurochemical Res.* 16:1-10.
  21. Jose, P.A., RAYMOND, J.R., Bates, M.D., Aperia, A., Felder, R.A., Carey, R.M. (1992) The renal dopamine receptors. *J. Am. Soc. Nephrol.* 2:1265-1278.
  22. Liggett, S.B., Ostrowski, J., Chesnut, L.C., Kurose, H., RAYMOND, J.R., Caron, M.G., Lefkowitz, R.J. (1992) Sites in the third intracellular loop of the alpha<sub>2</sub>-adrenergic receptor confer short-term agonist-promoted desensitization: evidence for a receptor kinase mediated mechanism. *J. Biol. Chem.* 267:4740-4746.
  23. Boddeke, H.W.G.M., Fargin, A., RAYMOND, J.R., Schoeffter, P., Hoyer, D. (1992) Agonist/antagonist interactions with cloned human 5-HT<sub>1A</sub> receptors: variations in intrinsic activity in HeLa cells. *Naunyn-Schmied. Arch. Pharmacol.* 345:257-263.
  24. Ho, B.Y., Karschin, A., RAYMOND, J.R., Branchek, T., Lester, H.A., Davidson, N. (1992) Expression in animal cells of the 5-HT<sub>1A</sub> receptor by a vaccinia virus vector system. *FEBS Lett.* 301:303-306.
  25. Mangel, A.W., Basavappa, S., Gabriel, S., RAYMOND, J.R., Stutts, M.J., Fitz, J.G. (1992) cAMP-regulated chloride currents in CHO cells. *Biochem. Biophys. Res. Commun.* 186:251-255.
  26. Eason, M., Kurose, H., Holt, B., RAYMOND, J.R., Liggett, S.B. (1992) Simultaneous coupling of alpha<sub>2</sub>-adrenergic receptors to two G-proteins with opposing effects. *J. Biol. Chem.* 267:15795-15801.
  27. RAYMOND, J.R., Albers, F.J., Middleton, J.P. (1992) Functional expression of human 5-HT<sub>1A</sub> receptors and differential coupling in CHO cells. *Naunyn-Schmied. Arch. Pharmacol.* 346:127-137.
  28. Becker, B.B., Gettys, T.W., Albers, F.J., Middleton, J.P., Lee, S.-L., Fanburg, B., RAYMOND, J.R. (1992) 8-OH-DPAT-responsive 5-HT<sub>4</sub>-like receptor expressed in bovine pulmonary artery smooth muscle cells. *Mol. Pharmacol.* 42:817-825.
  29. RAYMOND, J.R., Kim, J.L., Beach, R.E., and Tisher, C.C. (1993) Immunohistochemical mapping of the cellular & subcellular distribution of 5-HT<sub>1A</sub> receptors in rat and human kidney. *Am. J. Physiol.* 264:

- (Renal Fluid Electrolyte Physiol. 33) F9-F19.
30. Mangell, A., RAYMOND, J.R., Fitz, J.G. (1993) Regulation of high-conductance anion channels by G proteins and 5-HT<sub>1A</sub> receptors in CHO cells. *Am. J. Physiol.* 264: (Renal Fluid Electrolyte Physiol. 33) F490-F495.
  31. Arthur, J.M., Casañas, S.J., RAYMOND, J.R. (1993) Partial agonist properties of rauwolscine and yohimbine for the inhibition of adenylyl cyclase by recombinant human 5-HT<sub>1A</sub> receptors. *Biochem. Pharmacol.* 45: 2337-2341.
  32. Bates, M.D., Olsen, C.L., Becker, B.N., Albers, F.J., Middleton, J.P., Mulheron, J.G., Jin, C., Conti, M., RAYMOND, J.R. (1993) Elevation of cAMP is required for down-regulation, but not agonist-induced desensitization of dopamine D<sub>1</sub> receptors. Studies in opossum kidney cells that stably express a rat phosphodiesterase 3 cDNA. *J. Biol. Chem.* 269:14757-14763.
  33. Bian, X., Seidler, F., Olsen, C.L., RAYMOND, J.R., Slotkin, T. (1993) Effects of fetal dexamethasone exposure on postnatal control of cardiac adenylyl cyclase:  $\beta$ -adrenergic receptor coupling to Gs regulatory protein. *Teratology* 48:169-177.
  34. RAYMOND, J.R., Olsen, C.L., Gettys, T.W. (1993) Cell-specific physical and functional coupling of human 5-HT<sub>1A</sub> receptors to inhibitory G protein  $\beta$ -subunits and lack of coupling to Gs- $\alpha$ ?. *Biochemistry* 32:11064-11073.
  35. Gettys, T.W., Fields, T.A., RAYMOND, J.R. (1994) Selective activation of inhibitory G protein  $\alpha$ -subunits by partial agonists of the human 5-HT<sub>1A</sub> receptor. *Biochemistry* 33:4283-4290.
  36. Mulheron, J.G., Casañas, S.J., Arthur, J.M., Garnovskaya, M.N., Gettys, T.W., RAYMOND, J.R. (1994) Human 5-HT<sub>1A</sub> receptors expressed in insect cells activate endogenous Go-like G proteins. *J. Biol. Chem.* 269:12954-12962.
  37. RAYMOND, J.R., Arthur, J.M., Olsen, C.L., Gettys, T.W., Mortensen, R.M. (1994)  $\beta$ 2A Adrenergic receptors inhibit cAMP accumulation in embryonic stem cells which lack Gi- $\alpha$ . *J. Biol. Chem.* 269:13073-13075.
  38. Spurney, R.F., Middleton, J.P., RAYMOND, J.R., Coffman, T.M. (1994) Modulation of thromboxane receptor activation in rat glomerular mesangial cells. *Am. J. Physiol.* 267: (Renal Fluid Electrolyte Physiol. 36) F467-F478.
  39. Quarles, L.D., Middleton, J.P., Zhang, J., Arthur, J.M., RAYMOND, J.R. (1994) Aluminum-induced DNA synthesis in MC3T3-E1 osteoblasts: mediation by G-protein and protein kinase C dependent pathways. *J. Cell. Biochem.* 56:106-117.
  40. Gettys, T.W., Sheriff-Carter, K., Moomaw, J., Taylor, I.L., RAYMOND, J.R. (1994) Characterization and use of crude  $\alpha$ -subunit preparations for quantitative immunoblotting of G proteins. *Anal. Biochem.* 220:82-91.
  41. RAYMOND, J.R., Olsen, C.L. (1994) PKA induces phosphorylation of the human 5-HT<sub>1A</sub> receptor and augments its desensitization by protein kinase C in CHO-K1 cells. *Biochemistry* 33:11264-11269.
  42. RAYMOND, J.R., Arthur, J.M., Mannon, R. (1994) Practical management of hypertensive urgencies and emergencies. *N. Carolina Med. J.* 55:295-303.
  43. RAYMOND, J.R., Arthur, J.M., Kovalik, E. (1994) Strategies for preventing diabetic nephropathy. *N. Carolina Med. J.* 55:362-369.
  44. RAYMOND, J.R. (1994) Hereditary and acquired defects in signaling through the hormone-receptor-G protein complex. *Am. J. Physiol.* 266: (Renal Fluid Electrolyte Physiol. 35) F163-F174.
  45. RAYMOND, J.R. (1995) Multiple mechanisms of receptor/G protein signaling specificity. *Am. J. Physiol.* 268: (Renal Fluid Electrolyte Physiol. 37) F141-F158.
  46. Nebigil, C.G., Garnovskaya, M.N., Spurney, R.F., RAYMOND, J.R. (1995) Identification of a rat glomerular mesangial cell mitogenic 5-HT<sub>2A</sub> receptor. *Am. J. Physiol.* 268: (Renal Fluid Electrolyte Physiol. 37) F122-F127.
  47. Garnovskaya, M.N., Nebigil C.G., Arthur, J.M., Spurney, R.F., RAYMOND, J.R. (1995) 5-HT<sub>2A</sub> receptors expressed in rat mesangial cells inhibit cAMP accumulation. *Mol. Pharmacol.* 48:230-237.
  48. Nebigil, C.G., Garnovskaya, M.N., Casañas, S.J., Mulheron, J.G., Parker, E.M., Gettys, T.W., RAYMOND, J.R. (1995) Agonist-induced phosphorylation and desensitization of 5-HT<sub>1A</sub> receptor expressed in Sf9 insect cells. *Biochemistry* 34:11954-11962.
  49. van Biesen, T., Hawes, B.E., RAYMOND, J.R., Luttrell, L.M., Koch, W.J., Lefkowitz, R.J. (1996) G-protein  $\alpha$ -subunits mediate Ras-independent MAP kinase activation. *J. Biol. Chem.* 271:1266-1269.
  50. Wang, Y., Sostman, A., Roman, R., Vigna, S., RAYMOND, J.R., Fitz, J.G. (1996) Metabolic stress activates K<sup>+</sup> channels through a Ca<sup>2+</sup> and protein kinase C- $\alpha$ -dependent mechanism. *J. Biol. Chem.*

271:18107-18113.

51. Kovalik, E.C., RAYMOND, J.R., Berkoben, M.S., Butterly, D.W., Montello, B.J., Conlon, P.J. (1996) A cluster of epidural abscesses in chronic hemodialysis patients. *J. Am. Soc. Nephrol.* 7:2264-2267.
52. Kirchgessner, A.L., Liu, M.-T., RAYMOND, J.R., Gershon, M.D. (1996) Identification of cells that epsilon-xi-pi-rho-epsilon-sigma-sigma 5-HT1A receptors in the nervous systems of the bowel and pancreas. *J. Comp. Neurol.* 364:439-455.
53. Garnovskaya, M.N., van Biesen, T., Hawes, B.E., Canañas Ramos, S.J., Lefkowitz, R.J., RAYMOND, J.R. (1996) Ras-dependent activation of mitogen-activated protein kinase by 5-HT1A receptor. *Biochemistry* 35:13716-13722.
54. Chuprun, J.K., RAYMOND, J.R., Blackshear, P.J. (1997) Heterotrimeric G protein Gi-alpha2 mediates LPA-stimulated mitogenic signalling in mouse fibroblasts. *J. Biol. Chem.* 272:773-780.
55. Garnovskaya, M.N., Gettys, T.W., van Biesen, T., Chuprun, J.K., Prpic, V., RAYMOND, J.R. (1997) G protein-coupled 5-HT1A receptor activates Na<sup>+</sup>/H<sup>+</sup> exchange in CHO-K1 cells through Gi-alpha2 and Gi-alpha3. *J. Biol. Chem.* 272: 7770-7776.
56. Wang, Y., Roman, R., Hannun, Y., RAYMOND, J.R., Fitz, J.G. (1997) Activation of protein kinase C-alpha couples cellular metabolism to membrane K<sup>+</sup> in a human biliary cell line. *J. Clin. Invest.* 99:2890-2897.
57. Arthur, J.M., Collinsworth, G.P., Quarles, L.D., Gettys, T.W., RAYMOND, J.R. (1997) Specific coupling of a cation-sensing receptor to G protein  $\alpha$ -subunits in MDCK cells. *Am. J. Physiol.* 273: (Renal Fluid Electrolyte Physiol. 42) F129-F135.
58. Ullian, M.E., RAYMOND, J.R., Paul, R.V. (1997) Regulation of vascular angiotensin II receptors by EGF. *Am. J. Physiol.* 273: (Cell Physiol. 42) C1241-C1249.
59. Garnovskaya, M.N., Mukhin, Y., RAYMOND, J.R. (1998) Rapid activation of sodium-proton exchange and extracellular signal-regulated protein kinase in fibroblasts by G protein-coupled 5-HT1A receptor involves distinct signaling cascades. *Biochem. J.* 330:489-495.
60. Mannon, P.J., RAYMOND, J.R. (1998) The neuropeptide Y/peptide YY Y1 receptor is coupled to MAP kinase via PKC and Ras in CHO cells. *Biochem. Biophys. Res. Comm.* 246:91-94.
61. Prpic, V.J., Fitz, J.G., RAYMOND, J.R., Garnovskaya, M.N., Liddle, R.A. (1998) Inhibition of Na<sup>+</sup>/H<sup>+</sup> exchange stimulates cholecystokinin secretion in STC-1 cells. *Am. J. Physiol.* 275:G689-95
62. Moiseiwitsch, J.R.D., RAYMOND, J.R., Tamir, H, Lauder, J.M. (1998) Serotonin regulates tooth germ morphogenesis and gene expression in mouse mandibular explant cultures. *Arch. Oral Biol.* 43:789-800.
63. Roman, R., Bodily, K.O., Wang, Y., RAYMOND, J.R., Fitz, J.G. (1998) Activation of protein kinase C-alpha couples increases in cell volume to membrane Cl<sup>-</sup> permeability in HTC hepatoma and Mz-ChA-1 cells. *Hepatology.* 28:1073-1080.
64. Della Rocca, G.J., Mukhin, Y.V., Garnovskaya, M.N., Daaka, Y., Clark, G., Luttrell, L.M., Lefkowitz, R.J., RAYMOND, J.R. (1999) Serotonin 5-HT1A receptor-mediated MAP kinase activation requires calcium/calmodulin-mediated receptor endocytosis. *J. Biol. Chem.* 274:4749-4753.
65. Pahan, K., RAYMOND, J.R., Singh, I. (1999) Inhibition of phosphatidylinositol 3-kinase induces nitric oxide synthase in LPS or cytokine stimulated C6 glial cells. *J. Biol. Chem.* 274:7528-7536.
66. Chen, R., Greene, E.L., Collinsworth, G., Grewal, J., Houghton, O., Wackym, P., Zang, H., Paul, R.V., RAYMOND, J.R. (1999) A method for efficient expression of cDNA constructs in primary cultures of rat renal mesangial cells. *Am. J. Physiol.* 276:F777-F785.
67. Grewal, J., Mukhin, Y.V., Garnovskaya, M.N., RAYMOND, J.R., Greene, E.L. (1999) Serotonin 5-HT2A receptor induces TGF- $\beta$ 1 mRNA and protein in rat mesangial cells via ERK. Linkage between proliferative and fibrotic signals. *Am. J. Physiol.* 276:F922-F930.
68. Arthur, J.M., Collinsworth, G.P., Gettys, T.W., RAYMOND, J.R. (1999) Agonist-induced translocation of Gq/11alpha directly from plasma membranes in MDCK cells. *Am. J. Physiol.* 276:F528-F534.
69. RAYMOND, J.R., Mukhin, Y.V., Garnovskaya, M.N. (1999) The recombinant 5-HT1A receptor: G protein coupling and signalling pathways. *British J. Pharmacol.* 127:1751-1764.
70. Tholanikunnel, B.G., RAYMOND, J.R., Malbon, C.C. (1999) Detailed mutational sequence analysis of the destabilizing (A+U)-rich 3'-untranslated region of the beta2-adrenergic receptor mRNA across different species. *Biochemistry* 38:15564-15572.
71. Mukhin, Y.V., Garnovskaya, M.N., Collinsworth, G., Nagai, T., Pinckney, S., Pendergrass, D., Greene, E.L., RAYMOND, J.R. (2000) 5-HT1A receptor couples through G-beta-gamma and Src to stimulate mitogen-activated protein kinase via reactive oxygen species in fibroblasts. *Biochem. J.* 347:61-67.
72. Greene, E.L Houghton, O., Collinsworth, G., Garnovskaya, M.N., Nagai, T., Sajjad, T., Bheemanathini, V.,

- Grewal, J., Paul, R.V., RAYMOND, J.R. (2000) 5HT<sub>2A</sub> receptors stimulate mitogen-activated protein kinase via ROS in rat renal mesangial cells. *Am. J. Physiol.* 278: F650-F658.
73. Pahan K., Liu, X., McKinney, M.J., Wood, C., Sheikh, F.G., RAYMOND, J.R. (2000) Expression of a dominant-negative mutant of p21ras inhibits induction of nitric oxide synthase and activation of NF- $\kappa$ B in primary astrocytes. *J. Neurochem.* 74:2288-2295.
74. Pahan K., Liu, X., McKinney, M.J., Wood, C., Sheikh, F.G., RAYMOND, J.R. (2000) Expression of a constitutively active form of phosphatidylinositol 3-kinase inhibits the induction of nitric oxide synthase in human astrocytes. *FEBS Lett.* 472:203-207.
75. Chen, R. Garnovskaya, M., Thielen, T., Iijima, Y., Huang, C., RAYMOND, J.R., Ullian, M.E., and Paul, R.V. (2000) Increase in nuclear localization of an angiotensin II type I receptor-GFP fusion protein after angiotensin II exposure. *Am. J. Physiol. Renal Physiol.* 279:F44-F448, 2000.
76. Mukhin, Y.V., Garnovskaya, M.N., Collinsworth, G., Bell, J.L., Tholanikunnel, B.G., Pettus, T., Jaffa, A.A., Fitzgibbon, W., Ploth, D.W., RAYMOND, J.R., Garnovskaya, M.N. (2001) Bradykinin B<sub>2</sub> receptors activate Na<sup>+</sup>/H<sup>+</sup> exchange in mIMCD-3 cells via Ca<sup>2+</sup>/calmodulin. *J. Biol. Chem.* 276: 17339-17346.
77. Grewal, J.S., Luttrell, L.M., RAYMOND, J.R. (2001). G protein-coupled receptors desensitize and down-regulate EGF receptors in renal mesangial cells. *J. Biol. Chem.* 276:27335-27344.
78. RAYMOND, J.R., Mukhin, Y.V., Gelasco, A., Turner, J., Collinsworth, G., Gettys, T.W., Grewal, J.S., Garnovskaya, M.N. (2002) Multiplicity of Mechanisms of Serotonin Receptor Signal Transduction. *Pharmacology and Therapeutics* 92:179-212.
79. Lefler, D., Mukhin, Y.V., Pettus, T., Leeb-Lundberg, L.M.F., Garnovskaya, M.N, RAYMOND, J.R. (2003) Jak2 and Ca<sup>2+</sup>/calmodulin are key intermediates for bradykinin B<sub>2</sub> receptor-mediated activation of Na<sup>+</sup>/H<sup>+</sup> exchange in KNRK and CHO Cells. *Assay Drug Devel. Technol.* 1:281-289.
80. Garnovskaya, M.N., Mukhin, Y.V., Vlasova, T., RAYMOND, J.R. (2003) Hypertonicity activates Na<sup>+</sup>/H<sup>+</sup> exchange through Janus kinase 2 and Ca<sup>2+</sup>/calmodulin. *J. Biol. Chem.* 278:16908-16915.
81. Garnovskaya, M.N., Mukhin, Y.V., Turner, J., Vlasova, T., Ullian, M.E., RAYMOND, J.R. (2003) Mitogen-induced activation of Na<sup>+</sup>/H<sup>+</sup> exchange in vascular smooth muscle cells involves Janus kinase 2 and Ca<sup>2+</sup>/calmodulin. *Biochemistry* 42:7178-7187.
82. Budisavljevic, M.N., Hodge, L., Barber, K., Fulmer, J.R., Durazo-Arvizu, R.A., Self, S.E., Kuhlmann, M., RAYMOND, J.R., Greene, E.L. (2003) Oxidative stress in the pathogenesis of experimental mesangial proliferative glomerulonephritis. *Am. J. Physiol. Renal Physiol.* 285:F1138-1148.83.
83. Banerjee, H., Hawkins, Z., Johnson, T., Eley, S., Alikhan, A., McDaniel, M., Singh, I., RAYMOND, J. (2003) Identification of a mouse orthologue of the CED-6 gene of *Caenorhabditis elegans*. *Plasmid* 49: 30-33.
84. Mukhin, Y.V., Garnovskaya, M.N., Ullian, M.E., RAYMOND, J.R. (2004) ERK is regulated by sodium-proton exchanger in rat aortic vascular smooth muscle cells. *J. Biol. Chem.* 279:1845-1852.
85. Turner, J.H., Gelasco, A.K., RAYMOND, J.R. (2004) Calmodulin interacts with the third intracellular loop of the serotonin 5-HT<sub>1A</sub> receptor: Possible role in receptor phosphorylation by protein kinase C. *J. Biol. Chem.* 279:17027-17037.
86. Garnovskaya, M.N., Mukhin, Y.V., Grewal, J.S., Tholanikunnel, B.G., Ullian, M.E., RAYMOND, J.R. (2004) MEK is an intermediate for rapid phosphorylation of serine 795 of the retinoblastoma gene product in vascular smooth muscle cells. *J. Biol. Chem.* 279:24899-24905.
87. Subramaniam, K., Chen, K., Joseph, K., RAYMOND, J.R., and Tholanikunnel, B.G. (2004) The 3'-untranslated region of the beta<sub>2</sub>-adrenergic receptor mRNA regulates receptor synthesis. *J. Biol. Chem.* 279:27108-27115.
88. Lefler, D.M., Pafford, R.G., Black, N., RAYMOND, J.R., and Arthur, J.M. (2004) Identification of proteins in slow continuous ultrafiltrate by reverse phase chromatography and proteomics. *J. Proteome Res.* 3:1254-1260.
89. Jamison, R.L., Hartigan, P., Gaziano, J.M., Fortmann, S.P., Goldfarb, D.S., Haroldson, J.A., Kaufman, J., Lavori, P., McCully, K.S., Robinson, K., and the HOST investigators\* (2004) Design and statistical issues in the Homocysteinemia in kidney and end stage renal disease (HOST) study. *Clinical Trials* 1:451-460. \*Dr. Raymond is a HOST investigator.
90. Dave, S., Honney, S., RAYMOND, J.R., and Flume, P.A. (2005) An unusual case of cystic fibrosis presenting in adulthood with hypokalemic metabolic alkalosis. *Am. J. Kidney Dis.* 45:e41-e44.
91. Kandasamy, K., Joseph, K., Subramaniam, K., Joseph, K., RAYMOND, J.R., and Tholanikunnel, B.G. (2005) Translational control of the beta<sub>2</sub>-adrenergic receptor mRNA by T-cell-restricted intracellular antigen-related protein (TIAR). *J. Biol. Chem.* 280:1931-1943.
92. Turner, J.H., and RAYMOND, J.R. (2005) Interaction of calmodulin with the serotonin 5-

- hydroxytryptamine<sub>2A</sub> receptor: A putative regulator of G protein coupling and receptor phosphorylation by protein kinase C. *J. Biol. Chem.* 280: 30741-30750.
93. Gelasco, A.K., and RAYMOND, J.R., (2006) Indoxyl sulfate induces complex redox alterations in mesangial cells. *Am. J. Physiol. Renal Physiol.* 290:F1551-F1558.
94. Mukhin, Y.V., Gooz, M., RAYMOND, J.R., and Garnovskaya, M.N. (2006) Collagenases 2 and 3 mediate epidermal growth factor receptor transactivation by bradykinin B2 receptor in kidney cells. *J. Pharmacol. Expt. Ther.* 318:1033-1040.
95. Gooz, M., Gooz, P., Luttrell, L.M., and RAYMOND, J.R. (2006) Serotonin induces ERK phosphorylation and proliferation through ADAM-17 (TACE) activation and HB-EGF shedding in mesangial cells. *J. Biol. Chem.* 281:21004-21012.
96. Turner, J.H., Garnovskaya, M.N., Coaxum, S.D., Vlasova, T.M., Yakutovich, M.D., Lefler, D.M., and RAYMOND, J.R. (2007) Ca<sup>2+</sup>/calmodulin and Jak2 are required for activation of sodium-proton exchange by the Gi-coupled 5-hydroxytryptamine 5-HT<sub>1A</sub> receptor. *J. Pharmacol. Expt. Ther.* 320:314-322.
97. Alvi, F., Idkowoak-Baldys, J., Baldys, A., RAYMOND, J.R., Hannun, Y.A. (2007) Regulation of membrane trafficking and endocytosis by Protein Kinase C; Emerging role of the pericentron, a novel PKC-dependent subset of recycling endosomes. *Cell. Mol. Life Sci.* 64:263-270.
98. Janech, M.G., RAYMOND, J.R., Arthur, J.M. (2007) Proteomics in Renal Research. *Am. J. Physiol. Renal.* 292:F501-12
99. Morinelli, T.A., RAYMOND, J.R., Yang, Q., Lee, M.-h., Luttrell, L., and Ullian, M.E. (2007) Identification of a putative nuclear localization sequence within the angiotensin II AT<sub>1A</sub> receptor. *Am. J. Physiol. Cell.* 292:1398-1408.
100. Turner, J.H., Garnovskaya, M.N., RAYMOND, J.R. (2007) 5-HT<sub>1A</sub> receptor regulates JNK activity and apoptosis through the intermediary actions of monomeric G proteins. *Biochim Biophys Acta - Mol Cell Res.* 1773:391-399.
101. Varghese, S.A., Powell, T.B., Budisavljevic, M.N., Oates, J.C., RAYMOND, J.R., Almeida, J.S., Arthur, J.M. (2007) Urine biomarkers predict the cause of glomerular disease. *J. Am. Soc. Nephrol.* 18:913-922.
102. Velez, J.C.Q., Bland, A.M., Arthur, J.M., RAYMOND, J.R., Janech, M.G. (2007) Characterization of renin-angiotensin system enzyme activities in podocytes. *Am. J. Physiol. Renal.* 293:F398-407.
103. Jamison, R.L., Hartigan, P., Kaufman, J., Goldfarb, D.S., Warren, S.R., Guarino, P.D., Graziano, J.M., and the HOST investigators\* (2007) Effect of homocysteine lowering on mortality and vascular disease in in advanced chronic kidney disease and end-stage renal disease (HOST) study. *JAMA* 298:1163-1170. \*Dr. Raymond is a HOST investigator.
104. Kramarenko, I., Bunni, M., Morinelli, T., RAYMOND, J.R., Sr., Garnovskaya, M.N. (2009) Identification of functional bradykinin B2 receptors expressed in HEK293 cells. *Biochem. Pharmacol.* 77:269-276. PMID: PMC2645039
105. Baldys, A., Göoz, M., Lee, M.-H., Raymond, J.R., Jr., Luttrell, L.M., and RAYMOND, J.R., Sr. (2009) Essential role of c-Cbl in amphiregulin-induced trafficking and signaling of recycling epidermal growth factor receptor (EGFR). *Biochemistry.* 48:1462-1473. PMID: PMC2645952.
106. Velez, J.C., Ryan, K.J., Harbeson, C.E., Woodsworth, C.L., Bland, A.M., Budisavljevic, M.N., Arthur, J.M., Fitzgibbon, W.R., RAYMOND, J.R., Janech, M.G. (2009) Angiotensin is largely converted to Angiotensin- (1-7) and Angiotensin-(2-10) by isolated rat glomeruli. *Hypertension* 53:790-797. PMID: PMC2706530
107. Coaxum, S.D., Garnovskaya, M.N., Gooz, M., Baldys, A., and RAYMOND, J.R. (2009) Epidermal growth factor activates Na<sup>+</sup>/H<sup>+</sup> exchanger in podocytes through a mechanism that involves janus kinase and calmodulin. *Biochem. Biophys. Acta.* 1793:1174-1181. PMID: 19341767
108. Idkowiak-Baldys, J., Baldys, A., RAYMOND, J.R., Hannun, Y.A. (2009) Sustained receptor stimulation leads to sequestration of recycling endosomes in a cPKC and phospholipase D dependent manner. *J. Biol. Chem.* 284(33):22322-22331.
109. Baldys, A. RAYMOND, J.R. (2009) Critical Role for ESCRT Machinery in EGFR Recycling. *Biochemistry* 48:9321-9323 (Rapid Communication). Chosen as featured article on the Journal's web site.
110. Brady, C.B., Gaziano, J.M., Cxypoliski, R.A., Guarino, P.D., Kaufman, J.S., Warren, S.R., Hartigan, P., Goldfarb, D.S., Jamison, R.L.\* (2009) Homocysteine Lowering and Cognition in CKD: The Veterans Affairs Homocysteine Study. *Am. J. Kidney Dis.* 54:440-449. PMID: 19628319. \*Dr. Raymond is a HOST investigator.

111. Best, C.L. Smith, D.W., RAYMOND, J.R., Sr., Greenberg, R.S., and Crouch, R.K. (2010) Preventing and Responding to complaints of sexual harassment in a medical university: A 10-year review of a successful program. *Academic Medicine* 85:722-727.
112. Dey, M., Baldys, A., Sumter, D.B., Gooz, P., Luttrell, L.M., RAYMOND, J.R., and Gooz, M. (2010) Bradykinin decreases podocyte permeability through ADAM17-dependent epidermal growth factor receptor activation and zonula occludens-1 rearrangement *J. Pharmacol. Expt. Ther.* 334:775-783. PMID: 20566668; PMCID: PMC2939663.
113. Blue, A., Smith, T.G., RAYMOND, J.R., Greenberg, R.S., Mitcham, T.G. (2010) Embedding interprofessional education through conceptual and operational frameworks. *Academic Medicine* 85:1290-1295.
114. Kramarenko, I.I., Bunni, M.A., RAYMOND, J.R., and Garnovskaya, M.N. (2010) Bradykinin B2 receptor interacts with integrin alpha5beta1 to transactivate epidermal growth factor receptor in kidney cells. *Molecular Pharmacology* 78:126-134. PMID: 20385709; PMCID: PMC2912058
115. Tholanikunnel, B.G., Joseph, K., Kandasamy, K., Baldys, A., RAYMOND, J.R., Luttrell, L.M., McDermott, P.J., and Fernandes, D.J. (2010) Mechanisms in the regulation of G protein-coupled receptor trafficking to the plasma membrane. *J. Biol. Chem.* 285:33816-33825. PMID: 20739277; PMCID: PMC2962481
116. Bunni, M.A., Kramarenko, I.I., Walker, L.P., RAYMOND, J.R., and Garnovskaya, M.N. (2011) Role of integrins in angiotensin II-induced proliferation of vascular smooth muscle cells. *Am. J. Physiol. Cell Physiol.* 300:C647-C656. PMID: 21148411; PMCID: PMC3063971.
117. Baldys, A., and RAYMOND, J.R. (2011) Role of c-Cbl carboxyl terminus in serotonin 5-HT<sub>2A</sub> receptor recycling and resensitization. *J. Biol. Chem.* 286: 24656-24665. PMID 21464131; PMCID: PMC3137041

#### **Books, Chapters, and Reviews**

1. RAYMOND, J.R., Hnatowich, M.R., Caron, M.G., Lefkowitz, R.J. (1990) Structure-function relationships of G protein-coupled receptors. In: *ADP-Ribosylating Toxins and G Proteins: Insights into Signal Transduction* (Moss, J., and Vaughan, M., Eds.). Am. Soc. Microbiol., pp 163-188.
2. Dennis, V.W., Middleton, J.P., RAYMOND, J.R., Dunham, C., Sens, D. (1990) Phosphate uptake in human proximal renal cells. In *Diuretics 3: Chemistry, Pharmacology, and Clinical Applications* (Puschett, J.B., and Greenberg, A., Eds.). Elsevier, New York, pp 131-155.
3. Fargin, A., RAYMOND, J.R., Caron, M.G. (1990) Biochemical characterization of the human 5-HT<sub>1A</sub> receptor, genomic clone (G21), expressed in mammalian cells. In *Serotonin: from Cell Biology to Pharmacology and Therapeutics* (Paoletti, R., and Vanhoutte, P.M., Eds.). Kluwer Academic Publishers, Netherlands, pp 19-24.
4. RAYMOND, J.R., El Mestikawy, S., Fargin, A. (1992) The 5-HT<sub>1A</sub> receptor: from molecular characteristics to clinical correlates. In: *Molecular Biology of Receptors which Couple to G Proteins* (Brann, M., Ed.). Birkhauser Boston, Cambridge, MA, pp. 113-141.
5. Liggett, S.B., RAYMOND, J.R. (1993) Pharmacology and molecular biology of adrenergic receptors. In: *The Catecholamines* (Bouloux, E., Ed.). W.B. Saunders, London, UK, pp. 279-305.
6. RAYMOND, J.R., Turner, J., Ayiku, H., Lefler, D., Gelasco, A., Arthur, J.M. (2005) Use of mass spectrometry to identify receptor-interacting proteins. In: *G Protein-coupled Receptor Interacting Proteins*. pps. 179-199. (George, S., O'Dowd, B, and Sibley, D., Eds.). Wiley Press, Indianapolis.
7. RAYMOND, J.R., Turner, J.H., Gelasco, A, Ayiku, H., Coaxum, S., Arthur, J.M., and Garnovskaya, M.N. (2006) 5-HT Receptor Signal Transduction Pathways. In: *The Serotonin Receptors: From Molecular Pharmacology to Human Therapeutics*. (Roth, B. Ed.), pp 143-206. The Humana Press, Inc., Totowa, NJ.
8. TURNER, J.H., Coaxum, S.D., Gelasco, A.V., and RAYMOND, J.R. (2007) Calmodulin is a 5-HT Receptor Interacting and Regulatory Protein. In: *Frontiers in Neuroscience. Serotonin Receptors in Neurobiology*. (Chattopadhyay, A. Ed.), (Nicolelis, M. and Simon, S. Series Eds.), Chapter 4, pp 61-80, CRC Press, Boca Raton, FLA.
9. Garnovskaya M.N., RAYMOND J.R. (2009) Serotonin 5-HT<sub>2C</sub> Receptor Signal Transduction. In: *The Pathophysiology of Central 5-HT<sub>2C</sub> Receptors*. (Di Giovanni, G., and Di Matteo, E. Eds.). Humana Press/Springer, New York, USA.

#### **Editorials, Letters to Editor, Other**

1. Inglese, J, and RAYMOND, J.R (2003) Robert J. Lefkowitz, M.D., Mentor extraordinaire. *Assay Drug Devel.*

Technol 1:227-232.

2. RAYMOND, J.R (2011) Institute for Health and Society provides framework, resources for community-engaged activities. Wisconsin Medical Journal 110:45-46. PMID 21473514

**Abstracts**

1. van den Berg, E.K. Jr., RAYMOND, J.R., Knapp, M. (1985) Sudden death in young adults. Chest 88: 11S.