

**Roy J. Duhé**

**CURRICULUM VITAE**

**Educational Training and Professional Appointments:**

B.S. in Biochemistry; Louisiana State University; Baton Rouge, Louisiana; 1976-1980

Ph.D. in Biochemistry; University of Wisconsin; Madison, Wisconsin; 1984-1989

Chemist, E. I. DuPont DeNemours & Co., Inc. (Petrochemicals Department); Wilmington, Delaware & LaPlace, Louisiana; 1980 – 1984

Senior Fellow, Department of Pharmacology; University of Washington; Seattle, Washington; 1990-1993

Scientist; PRI/DynCorp and SAIC-Frederick; National Cancer Institute - FCRDC; Frederick, Maryland; 1993 - 1999

Assistant Professor; Department of Pharmacology and Toxicology; University of Mississippi Medical Center; Jackson, Mississippi; 1999 – 2003

Associate Professor; Department of Pharmacology and Toxicology; University of Mississippi Medical Center; Jackson, Mississippi; 2003 - 2009

Professor; Department of Pharmacology and Toxicology; University of Mississippi Medical Center; Jackson, Mississippi; 2009 – present

Associate Member; Cancer Institute; University of Mississippi Medical Center; Jackson, Mississippi; 2010 – present

Professor; Department of Radiation Oncology; University of Mississippi Medical Center; Jackson, Mississippi; 2010 – present

Associate Director for Cancer Education; Cancer Institute; University of Mississippi Medical Center; Jackson, Mississippi; 2011 – present

**Honors and Awards:**

1984-1987      National Institutes of Health Trainee

1987-1988      AMOCO Fellowship

1990-1991      National Research Service Award, National Institute of Neurological Disorders and Stroke

1997              Outstanding Science Achievement Award, SAIC-Frederick

1999-2000      Biomedical Research Grant Recipient, University of Mississippi Medical Center

1999-2000      UMC American Cancer Society Institutional Research Grant Recipient

2000              Pharmaceutical Research and Manufacturers of America Foundation Research Starter Grant Recipient

2001-2004      American Cancer Society Research Scholar Grant Recipient

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**Honors and Awards (continued):**

2001	UMMC Excellence in Research Award, Silver Level
2002	Recipient of American Cancer Society Travel Grant to attend the 18 <sup>th</sup> UICC International Cancer Congress in Oslo, Norway
2007	Diagnosis and Treatment of Cancer Award, Mississippi Partnership for Comprehensive Cancer Control
2011	St. George National Award, American Cancer Society
2013	Making a Difference Award, Fannie Lou Hamer Cancer Foundation
2015	Spirit of Giving Award, Mississippi Partnership for Comprehensive Cancer Control
2015	Image Award (Cancer Research) Phi Beta Sigma Fraternity, Inc., Mu Sigma Chapter
2015	Pink Tie Guy, Susan G. Komen for the Cure, Central MS Steel Magnolias
2015	UMMC Excellence in Research Award, Gold Level

**Publications:**

“*N*-Ethylmaleimide inhibition of the catalytic activities of the *Dunaliella salina* coupling factor 1 (CF<sub>1</sub>) and the restoration of the inhibition of the CF<sub>1</sub> ATPase activity by *N*-ethylmaleimide”, Susanne Selman-Reimer, Roy J. Duhé and Bruce R. Selman (1985) *Biochimica et Biophysica Acta* **810**: 325-331.

“Studies on the heterogeneity of the soluble chloroplast coupling factor 1: the formation of epsilon-deficient isozymes”, Roy J. Duhé and Bruce R. Selman (1989) *Biochimica et Biophysica Acta* **974**: 294-302.

“The dithiothreitol-stimulated dissociation of the chloroplast coupling factor 1 epsilon-subunit is reversible”, Roy J. Duhé and Bruce R. Selman (1990) *Biochimica et Biophysica Acta* **1017**: 70-78.

“L-1-N-Methyl-4-mercaptohistidine disulfide, a potential endogenous regulator in the redox control of chloroplast coupling factor 1 (CF<sub>1</sub>) in *Dunaliella*”, Susanne Selman-Reimer, Roy J. Duhé, Brian J. Stockman and Bruce R. Selman, (1991) *Journal of Biological Chemistry* **266**: 182-188.

“Oxidation of critical cysteine residues of type I adenylyl cyclase by *o*-iodosobenzoate or nitric oxide reversibly inhibits stimulation by calcium and calmodulin”, Roy J. Duhé, Mark D. Nielson, Andrew H. Dittman, Enrique C. Villacres, Eui-Ju Choi and Daniel R. Storm, (1994) *Journal of Biological Chemistry* **269**: 7290-7296.

“Cloning of the gene encoding rat JAK2, a protein tyrosine kinase”, Roy J. Duhé, Hallgeir Rui, John D. Greenwood, Kevin Garvey and William L. Farrar, (1995) *Gene* **158**: 281-285.

“Characterization of active and inactive forms of rat JAK2 protein-tyrosine kinase produced via the baculovirus expression vector system”, Roy J. Duhé and William L. Farrar, (1995) *Journal of Biological Chemistry* **270**: 23084-23089.

“Lymphokine-induced signal transduction”, Hallgeir Rui, Robert A. Kirken, Roy J. Duhé, O. M. Zack Howard, Gerald Evans and William L. Farrar, (1996) pp 29-77 in: Immunopharmacology of Allergic Diseases. Robert G. Townley and Devendra K. Agrawal, editors. Marcell-Dekker, Inc., New York.

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**Publications (continued):**

“Cytokine driven signal transmission”, Gerald A. Evans, Roy J. Duhé, O. M. Zack Howard, Robert A. Kirken, Luis DaSilva, Rebecca Erwin, Maria G. Malabarba and William L. Farrar, (1997) pp 91-116 in: *Cell Cycle Regulation*. Robert R. Ruffolo, Jr., George Poste, and Brian Metcalf, editors. Harwood Academic Publishers, Overseas Publisher Association, Amsterdam.

“Microinjected cDNA encoding JAK2 protein-tyrosine kinase induces DNA synthesis in NIH 3T3 cells”, Mark R. Smith, Roy J. Duhé, Ya-Lun Liu and William L. Farrar, (1997) *FEBS Letters* **408**: 327-330.

“Molecular cloning of FKHL1P2, a member of the developmentally regulated fork head domain transcription factor family”, Luis DaSilva, Robert A. Kirken, Dennis D. Taub, Gerald A. Evans, Roy J. Duhé, Melissa A. Bailey and William L. Farrar, (1998) *Gene* **221**: 135-142.

“Mechanisms of cytokine signal transduction: IL-2, IL-4 and prolactin as hematopoietin receptor models”, Robert A. Kirken, Gerald A. Evans, Roy J. Duhé, Luis DaSilva, M. Grazia Malabarba, Rebecca A. Erwin and William L. Farrar, (1998) *Veterinary Immunology and Immunopathology* **63**: 27-36.

“Structural and mechanistic aspects of Janus kinases: How the two-faced god wields a double-edged sword”, Roy J. Duhé and William L. Farrar, (1998) *Journal of Interferon and Cytokine Research* **18**: 1-15.

“Nitric oxide and thiol redox reagent regulation of Janus kinase activity”, Roy J. Duhé, Gerald A. Evans, Rebecca A. Erwin, Robert A. Kirken, George W. Cox and William L. Farrar (1998) *Proceedings of the National Academy of Sciences USA* **95**: 126-131.

“Defining functional domains of Ku80: DNA binding and survival after radiation”, Oleg Osipovich, Roy J. Duhé, P. Hasty, Scott K. Durum, and Kathrin Muegge (1999) *Biochemical and Biophysical Research Communications* **261**: 802-807.

“Negative regulation of Janus kinases”, Roy J. Duhé, LiHua Wang and William L. Farrar (2001) *Cell Biochemistry and Biophysics* **34**: 17-59.

“Characterization of the *in vitro* kinase activity of a partially purified soluble GST/JAK2 fusion protein”, Roy J. Duhé, Emily A. Clark and William L. Farrar (2002) *Molecular and Cellular Biochemistry* **235**: 23-35.

"Janus kinase 2 activation by the platelet-activating factor receptor (PAFR): Roles of tyrosine kinase 2 and PFR C terminus" Viktoria Lukashova, Zhangguo Chen, Roy J. Duhé, Marek Rola-Pleszczynski and Jana Stankova (2003) *Journal of Immunology* **171**: 3794-3800.

"Emerging roles of targeted protein-tyrosine kinase inhibitors in cancer therapy" John K. Smith, Naila M. Mamoon and Roy J. Duhé (2004) *Oncology Research/Incorporating Anti-Cancer Drug Design* **14**: 175-225.

“Tyrosine phosphorylation of the JAK2 activation loop is essential for a high activity catalytic state, but dispensable for a basal catalytic state”, Kiranam Chatti, William L. Farrar and Roy J. Duhé (2004) *Biochemistry* **43**: 4272-4283.

“The convergence of science and technology in Mississippi: I. Advancing the frontiers of biomedicine”, Roy J. Duhé, Fazlay Faruque, Larry A. Walker, Joe C. Files and Andy Taggart (2005) *Journal of the Mississippi Academy of Sciences* **50**: 14-28.

“Kinase Activity and Subcellular Distribution of a Chimeric Green Fluorescence Protein-Tagged Janus Kinase 2”, Sheeyong Lee and Roy J. Duhé (2006) *Journal of Biomedical Science* **13**: 773-786.

“Cloning of the complementary DNA for murine von Willebrand factor and identification of orthologous genes reveals the extent of conservation among diverse species”, Mohan S. Chitta, Roy J. Duhé and John C. Kermode (2007) *Platelets* **18**: 182-198.

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**Publications (continued):**

“Multiple Cysteine Residues Are Implicated In Janus Kinase 2-Mediated Catalysis”, Naila M. Mamoon\*, John K. Smith\*, Kiranam Chatti, Sheeyong Lee, Kanakadurga Kundrapu, and Roy J. Duhé (2007) *Biochemistry* **46**:14810-14818.

“Activation Loop Tyrosines Allow the JAK2(V617F) Mutant to Attain Hyperactivation”, Kanakadurga Kundrapu, LaToya Colenberg and Roy J. Duhé (2008) *Cell Biochemistry and Biophysics* **52**:103-112.

“Drug Design (Overview Essay)”, Roy J. Duhé (2009) in: Encyclopedia of Cancer, 2<sup>nd</sup> Edition. Manfred Schwab, editor. Springer-Verlag, Berlin.

“Koch’s Postulates”, Roy J. Duhé (2009) in: Encyclopedia of Cancer, 2<sup>nd</sup> Edition. Manfred Schwab, editor. Springer-Verlag, Berlin.

“Tyrosine Kinase Inhibitors”, Roy J. Duhé (2009) in: Encyclopedia of Cancer, 2<sup>nd</sup> Edition. Manfred Schwab, editor. Springer-Verlag, Berlin.

“JAKs go nuclear: Emerging role of nuclear JAK1 and JAK2 in gene expression and cell growth”, Fouad A. Zouein, Roy J. Duhé, and George W. Booz (2011) *Growth Factors* **29**: 245-252.

“Identification of a Redox-Sensitive Activity Switch within the Janus Kinase 2 Catalytic Domain”, John K. Smith\*, Chetan N. Patil\*, Srikanth Patlolla, Barak W. Gunter, George W. Booz and Roy J. Duhé (2012) *Free Radical Biology and Medicine* **52**:1101-1110.

“Depletion of Cellular Glutathione Attenuates LIF-Induced JAK1-STAT3 Signaling in Cardiac Myocytes” Mazen Kurdi, Vidhya Sivakumaran, Roy J. Duhé, Miguel A. Aon, Nazareno Paolucci, and George W. Booz (2012) *The International Journal of Biochemistry & Cell Biology* **44**: 2106-2115

"Redox regulation of Janus kinase: The elephant in the room" Roy J. Duhé (2013) *JAK-STAT* **2**(4):e26141 (DOI: 10.4161/jkst.26141; PMCID: PMC3876428)

"Overview: Cellular plasticity, cancer stem cells and metastasis", Wael M. ElShamy and Roy J. Duhé (2013) *Cancer Letters* **341**: 2-8.

"Special Issue on Cellular Plasticity in Cancer", Roy J. Duhé and Wael ElShamy, Guest Editors (2013) *Cancer Letters* **Volume 341**, Issue 1.

"Loss of STAT3 in Mouse Embryonic Fibroblasts Reveals Its Janus-Like Actions on Mitochondrial Function and Cell Viability", Fouad A. Zouein, Roy J. Duhé, Istvan Arrany, Kristin Shirey, Jonathan P. Hosler, Huiling Liu, Iman Saad, Mazen Kurdi and George W. Booz (2014) *Cytokine* **66**:7-16.

"The geographic distribution of mammography resources in Mississippi", Elizabeth N. Nichols, Denae L. Bradley, Xu Zhang, Fazlay Faruque and Roy J. Duhé (2014) *Online Journal of Public Health Information* **5**(3):e226 (DOI: 10.5210/ojphi.v5i3.4982; ISSN 1947-2579; <http://ojphi.org> )

“Top 10 Facts You Need to Know About Colorectal Cancer (CRC) in Mississippi”, Lucius M. Lampton, Mary Currier and Roy J. Duhé (2015) *Journal of the Mississippi State Medical Association*; **56**(3):67-69.

“The impact of preventive screening resource distribution on geographic and population-based disparities in colorectal cancer in Mississippi”, Fazlay Faruque, Xu Zhang, Elizabeth N. Nichols, Denae L. Bradley, Royce Reeves-Darby, Vonda Reeves-Darby and Roy J. Duhé (2015) *BMC Research Notes* **8**:423 (DOI:10.1186/s13104-015-1352-0)

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**Publications (continued):**

“The Impact of Colorectal Cancer (CRC) in Mississippi, and the Need for Mississippi to Eliminate Its CRC Burden”, Roy J. Duhé (2016) *Journal of the Mississippi State Medical Association*; **57(3)**:63-67.

**Professional Presentations and Abstracts:**

Roy J. Duhé\* and Bruce R. Selman. 1988. "Dithiothreitol Enhances the Dissociation of the Epsilon-Subunit from CFI." Fourteenth Midwest Photosynthesis Conference, Marshall, Indiana.

Roy J. Duhé\*, Andrew H. Dittman, Enrique C. Villacres, Eui-Ju Choi and Daniel R. Storm. 1993. "Nitric Oxide Treatment of Type I Adenylyl Cyclase Causes a Reversible Loss of Calcium/Calmodulin Sensitivity via Cysteine Oxidation." Society for Neuroscience Twenty-third Annual Meeting, Washington, D.C.

Roy J. Duhé\*, Mark Smith, Luis DaSilva, Rebecca Erwin, and William L. Farrar. 1995. "Analysis of wild-type and mutant forms of rat JAK2 protein-tyrosine kinase". NIH Research Festival, Bethesda, Maryland.

Roy J. Duhé\* and William L. Farrar. 1995. "Characterization of active and inactive forms of rat JAK2 protein tyrosine kinase". The FASEB Journal **9**: A1408. Joint Meeting of American Society for Biochemistry and Molecular Biology and Division of Biological Chemistry - American Chemical Society, San Francisco, California.

Roy J. Duhé\*, Gerald A. Evans, Rebecca A. Erwin, George W. Cox and William L. Farrar. 1996. "Regulation of JAK2 autokinase activity through thiol redox state: A possible role for nitric oxide regulation". NIH Research Festival, Bethesda, Maryland.

Roy J. Duhé\*, Luis DaSilva, Gerald A. Evans, Rebecca A. Erwin, Robert A. Kirken and William L. Farrar. 1997. "Two independent mechanisms regulate the catalytic activity of Janus kinases". The FASEB Journal **11**: A1 170. 17th International Congress of Biochemistry and Molecular Biology, San Francisco, California.

Roy J. Duhé\*, Emily A. Clark and William L. Farrar. 1998. "Enzymatic Characterization and Inhibition Profile of Purified Janus Kinase 2". 10th International Conference on Second Messengers and Phosphoproteins, Jerusalem, Israel.

Roy J. Duhé. 2000. "Fundamental Mechanisms of Janus Kinase Activation and Inactivation", Journal of the Mississippi Academy of Sciences **45**:21-22; 64th Annual Meeting of the Mississippi Academy of Sciences, Biloxi, Mississippi

Sheeyong Lee\*, John K. Smith, Parminder J. S. Vig and Roy J. Duhé. 2000. "Construction and expression of chimeric fluorescent proteins for the study of Janus kinase signaling in eukaryotic cells", 21<sup>st</sup> Annual Meeting of the Southeastern Pharmacology Society; Jackson, Mississippi.

Kiranam Chatti\* and Roy J. Duhé, 2000. "Tools to study regulation of Janus kinase", 21<sup>st</sup> Annual Meeting of the Southeastern Pharmacology Society; Jackson, Mississippi.

Sheeyong Lee\*, John K. Smith, Parminder J. S. Vig and Roy J. Duhé. 2001. "Expression of Fluorescent Protein-Fusion of Rat Janus Kinase 2 and Human Thioredoxin in COS-7 Cells", Journal of the Mississippi Academy of Sciences **46**:19-20; 65th Annual Meeting of the Mississippi Academy of Sciences, Tupelo, Mississippi.

Kiranam Chatti\* and Roy J. Duhé. 2001. "In Vitro Tools to Study Regulation of Janus Kinase", Journal of the Mississippi Academy of Sciences **46**:20; 65th Annual Meeting of the Mississippi Academy of Sciences, Tupelo, Mississippi.

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**Professional Presentations and Abstracts (continued):**

Sheeyong Lee, Kiranam Chatti and Roy J. Duhé\*, 2001. “Redox Regulation of Janus Kinases”, Gordon Conference on Oxidative Stress and Disease, Ventura, California.

Sheeyong Lee, Naila M. Mamoon, John K. Smith, Kiranam Chatti, Kanakadurga Kundrapu, Amy L. Marks, Roy J. Duhé\*, 2002, “Thioredoxin-Enhanced JAK Activity: A Target for Redox-Based Chemotherapy?”, 18<sup>th</sup> UICC International Cancer Congress, Oslo, Norway.

Roy J. Duhé\*, Sheeyong Lee, Naila M. Mamoon, John K. Smith, Kiranam Chatti, Kanakadurga Kundrapu, and Amy L. Marks, 2002, “Thioredoxin-Enhanced JAK Activity: A Target for Redox-Based Chemotherapy?”, *Journal of the Mississippi Academy of Sciences* **47**:27; 66th Annual Meeting of the Mississippi Academy of Sciences, Biloxi, Mississippi.

Kiranam Chatti\* and Roy J. Duhé, 2002, “Evidence for Multiple States of Activity in Janus Kinase 2”, International Union of Pharmacology XIV World Congress of Pharmacology, San Francisco, California.

Sheeyong Lee\*, Kiranam Chatti, and Roy J. Duhé, 2002, “Effects of Thioredoxin on Janus Kinase’s Activity”, 42<sup>nd</sup> Annual Meeting of the American Society for Cell Biology”, San Francisco, California.

Roy J. Duhé\* and Kiranam Chatti, 2003, “Tyrosine phosphorylation of the JAK2 activation loop is essential for a high activity catalytic state, but dispensible for a basal catalytic state”, *Journal of the Mississippi Academy of Sciences* **48**:15; 67th Annual Meeting of the Mississippi Academy of Sciences, Hattiesburg, Mississippi.

Roy J. Duhé\*, Kanakadurga Kundrapu, Naila M. Mamoon, Sheeyong Lee, John K. Smith and Kiranam Chatti, 2004, “The use of site-directed mutants to identify state-selective inhibitors of Janus kinase 2.” 95<sup>th</sup> Annual Meeting of the American Association for Cancer Research, Orlando, Florida.

Roy J. Duhé\*, Kiranam Chatti, Sheeyong Lee, and Naila M. Mamoon, 2005, “Multiple cysteine residues are essential for the catalytic activity of Janus kinase 2.” 96th Annual Meeting of the American Association for Cancer Research, Anaheim, California.

Roy J. Duhé\*, John K. Smith, Naila M. Mamoon, Sheeyong Lee, Kiranam Chatti, Kanakadurga Kundrapu, 2006, “The role(s) of cysteine residues in redox regulation of Janus kinase 2.” 97th Annual Meeting of the American Association for Cancer Research, Washington, D.C.

Naila M. Mamoon, John K. Smith, Kiranam Chatti, Sheeyong Lee, Kanakadurga Kundrapu and Roy J. Duhé\*, 2006, “Multiple cysteine residues are involved in JAK2-mediated catalysis: Implications for targeted drug design.” 27<sup>th</sup> Annual Meeting of the Southeastern Pharmacology Society, Oxford, Mississippi.

John K. Smith\*, Naila M. Mamoon, Kiranam Chatti, Sheeyong Lee, Kanakadurga Kundrapu, Roy J. Duhé, 2007, “Identification of redox-regulatory cysteine residues in the catalytic domain of Janus kinase 2.” The American Association for Cancer Research Centennial Meeting, Los Angeles, California.

Dustin Gandy\*, Sheeyong Lee, Roy J. Duhé, and John T. Lam, 2007, “Detection of Intranuclear Janus Kinase 2 in Classical Hodgkin Lymphoma”, *American Journal of Clinical Pathology* **128**:695, American Society for Clinical Pathology Annual Meeting, New Orleans, Louisiana

Tiffani Slaughter, Barak W. Gunter, Fan Fan, Chenghui Huang, Antonio Pannuti, Rodney C. Baker, John R. Falck, Lucio Miele, Richard J. Roman, Roy J. Duhé\*, 2011, “The response of breast cancer cell lines to HET0016 alone or in combination with other chemotherapeutics” 102<sup>nd</sup> Annual Meeting of the American Association for Cancer Research, Orlando, Florida.

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**Professional Presentations and Abstracts (continued):**

Christopher Lahr, Ingrid Espinoza, Xu Zhang, Abdelouahid Elkhattouti, Tangeng Ma, Joy King, Elizabeth Tarsi, Tara Craft, Logan Fair, Mary E. Graichen, Sharon Lobert, Roy Duhe, Charu Subramony, Christian R. Gomez, 2015, "HURP and ZEB1: Novel prognosis biomarkers of aggressiveness in colorectal carcinomas", Fourth AACR International Conference on Frontiers in Basic Cancer Research, Pennsylvania Convention Center, Philadelphia, Pennsylvania

Logan Fair, Ingrid Espinoza, Xu Zhang, Abdelouahid Elkhattouti, Tangeng Ma, Joy King, Elizabeth Tarsi, Richard Whitlock, Vijay Kannuthurai, Ryan Jimenez, Tara Craft, Mary E. Graichen, Sharon Lobert, Roy Duhe, Charu Subramony, Christopher Lahr, Christian R. Gomez, 2016, "Emerging prognostic biomarkers in colorectal cancer: HURP and ZEB1" 107th AACR Annual Meeting. New Orleans, Louisiana

Fazlay Faruque, Xu Zhang, Elizabeth N. Nichols, Denae L. Bradley, Royce Reeves-Darby, Vonda Reeves-Darby and Roy J. Duhé\*, 2016, "The impact of preventive screening resource distribution on geographic and population-based disparities in colorectal cancer in Mississippi", 1<sup>st</sup> Annual Symposium of the Southeastern Colorectal Cancer Consortium, Atlanta, Georgia

**Invited Presentations:**

November, 1998. "Fundamental Mechanisms of Janus Kinase Activation and Inactivation", Astra Draco AB, Lund, Sweden.

October, 1999, "Fundamental Mechanisms of Janus Kinase Activation and Inactivation", Department of Biochemistry, University of Mississippi Medical Center, Jackson, MS

November, 1999, "Fundamental Mechanisms of Janus Kinase Activation and Inactivation", Department of Chemistry and Biochemistry, University of Southern Mississippi, Hattiesburg, MS

August, 2000, "JAKs and Leukemias: Is the Story Beginning or Ending?", Southeastern Pharmacology Society 21<sup>st</sup> Annual Meeting, Jackson, MS

October, 2000, "JAKs and Leukemias: Is the Story Beginning or Ending?", Department of Biochemistry and Molecular Biology, Mississippi State University, Starkville, MS

December, 2000, "JAKs and Leukemias: Is the Story Beginning or Ending?", Department of Biochemistry, Tulane University Health Sciences Center, New Orleans, LA

April, 2001, "JAKs and Leukemias: Is the Story Beginning or Ending?", Department of Basic Pharmaceutical Sciences, The University of Louisiana at Monroe, Monroe, LA

April, 2002, "Janus Kinases: A New Paradigm for Signal Transduction Research", NIMH-COR 2002 Spring Research Colloquium, Jackson State University, Jackson, MS

October, 2002, "Cancer research from the lab bench to the patient", Third Annual Mississippi Partnership for Cancer Control in Underserved Populations Conference, Jackson, MS

November, 2002, "Mechanistic Regulation of Janus Kinases: Implications for Anti-Cancer Drug Design", Department of Pharmacology, University of Mississippi, Oxford, MS

October, 2003, "When Good JAKs Go Bad: Developing Novel Protein-Tyrosine Kinase Inhibitors for Cancer Chemotherapy", Department of Biology, Jackson State University, Jackson, MS

November, 2003, "Cancer research from the lab bench to the patient", Central District Dietetic Association, Jackson, MS

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**Invited Presentations (continued):**

November, 2004, “Curiosity kills cancer: How basic science leads to better medicine” Minority Access to Research Careers symposium series, Tougaloo College, Jackson, MS

November, 2004, “The Role of a Comprehensive Research University in the Knowledge Economy”, Fifth Annual CIT.ms Conference on High Technology, Jackson, MS

October, 2006, “What’s new with JAK2?”, Department of Biochemistry and Molecular Biology, Mississippi State University, Starkville, MS

April, 2008, “The Devil's Waiting at the Crossroads: Research and the Burden of Cancer in Mississippi”, Central Association of Obstetricians and Gynecologists Travel Club, Jackson, MS

November, 2008, “Breast Cancer: Personalized Medicine for a Personal Matter”, Issues + Answers Forum, co-sponsored by the Sun Herald and The University of Southern Mississippi Gulf Coast College of Health, Long Beach, MS

February, 2010, “The roles of JAK2 in diabetes and breast cancer.” Department of Biological Sciences, University of Southern Mississippi, Hattiesburg, MS

March, 2012, “Cancer Therapies for the Future”, Hope Conference, Jackson, MS

April, 2012, “The Essential Role of Multidisciplinary Programs in Eliminating Mississippi’s Population-Based Health Disparities”, Jackson State University Center for Environmental Health, Jackson, MS

May, 2012, "Cancer Education in Mississippi's Cancer Prevention and Control Strategy: Opportunities and Limitations", Mississippi Comprehensive Cancer Control Conference, Biloxi, MS

July, 2012, "Fighting Colorectal Cancer with Knowledge", Fannie Lou Hamer Cancer Foundation / Monument of Grace Church, Greenwood, MS.

October, 2012, "The Discovery of a Redox-Sensor Switch in JAK2", School of Molecular Biosciences, Washington State University, Pullman, WA

April, 2013, "What is cancer?", Men in Black and Blue Fighting Prostate Cancer CHA Training Session, Fannie Lou Hamer Cancer Foundation, Carrollton, MS.

June, 2013, "What is cancer?", Law Enforcement Fighting Crime and Cancer community event, Fannie Lou Hamer Cancer Foundation, Leflore County Civic Center, Greenwood, MS.

November 2013, “Endnotes & Reflections”, Geographic Intervention Project Summit: Collaborating to Address Cancer Health Disparities on the MS Gulf Coast, C-Change and CommonHealth ACTION, Gulfport, MS

February 2014, “Colorectal cancer in Mississippi: Is it time for a change?”, Mississippi Gastroenterology Society Educational Conference, Jackson, MS (CME event)

July 2014, “Colorectal cancer in Mississippi: Is it time for a change?”, North Mississippi Medical Center, Tupelo, MS (CME event)

November 2014, “Mississippi’s Response to Colorectal Cancer”, 2014 Deep South Network Institute, Birmingham, AL

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**Invited Presentations (continued):**

April 2015, “Eliminating colorectal cancer mortality in Mississippi: Uncommon sense also required”, UMMC General Surgery Grand Rounds, Jackson, MS (CME event)

May 2015, “70x2020: The Path to Eliminate Colorectal Cancer Mortality in Mississippi”, Mississippi Comprehensive Cancer Control Program Ancillary Conference, Jackson, MS (CME event)

August 2015, “70x2020: The Path to Eliminating Colorectal Cancer Mortality in Mississippi”, 147th Annual Session of the Mississippi State Medical Association, Jackson, MS (CME event)

October 2015, “70x2020: The Path to Eliminating Colorectal Cancer Mortality in Mississippi”, 78th Public Health Conference of the Mississippi Public Health Association, Jackson, MS

November 2015, “Forging your own path: The plan to lift screening rates in Mississippi”, Keynote speaker, National Colorectal Cancer Roundtable Annual Meeting, Bethesda, MD

February 2016, “State Comprehensive CRC Control Programs”, Mississippi Gastroenterology Society Educational Conference, Jackson, MS (Panel Discussion - CME event)

March 2016, “Can we eliminate colorectal cancer mortality along the Mississippi River Delta?”, Grand Rounds Presentation, University of Arkansas for Medical Sciences, Little Rock, AR

April 2016, “Good intentions won’t solve a math problem, and math won’t solve a lack of motivation”, 1<sup>st</sup> Annual Symposium of the Southeastern Colorectal Cancer Consortium, Atlanta, GA

June 2016, “70x2020 Colorectal Cancer Initiative”, Mississippi Primary Health Care Association 29th Annual Conference, Tunica, MS (CE accredited Workshop Presentation)

September 2016, “Analysis of Factors Contributing to Mississippi’s Geographic Disparities in Colorectal Cancer”, 13th International Symposium on Recent Advances in Environmental Health Research, Jackson, MS

November, 2016, “Eliminating colorectal cancer mortality: Solvable and unsolved challenges ahead”, Department of Pharmaceutical and Biomedical Sciences, University of Georgia, Athens, GA

April, 2017, “Natural History and Epidemiology of Colorectal Cancer”, 2017 Dialogue for Action, Prevent Cancer Foundation, McClean, VA

**Professional Memberships:**

American Chemical Society (1989 – present)

American Association for the Advancement of Science (1991 – 2015)

Mississippi Academy of Sciences (1999 – present)

American Association for Cancer Research (2004 – 2013)

**Other Activities and Appointments:**

1998 – 1999      Scientific Consultant (Astra Draco, AB)

1997 – present    Ad hoc reviewer, *Cytokine*

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**Other Activities and Appointments (continued):**

1997 – present	Ad hoc reviewer, <i>Journal of Biological Chemistry</i>
2001 – present	Ad hoc reviewer, <i>Lasers in Surgery and Medicine</i>
2002 – present	Ad hoc reviewer, <i>Biochemistry</i>
2003 – present	Editorial Board, <i>Cell Biochemistry and Biophysics</i>
2006 - present	Field Editor for Drug Design, <u>Encyclopedia of Cancer, 2<sup>nd</sup> Edition</u> , Manfred Schwab, editor
2007 – present	Editorial Board, <i>Cancer Letters</i>
1999 – 2000	Principal Investigator, University of Mississippi Medical Center Biomedical Research Grant; “Redox Regulation of Janus Kinases” (\$19,600.00)
1999 – 2000	Principal Investigator, UMC American Cancer Society Institutional Research Grant; “Synergism between Janus Kinases and Thioredoxin in Oncogenesis” (\$20,000.00)
2000 – 2001	Vice Chair, Division of Cellular, Molecular and Developmental Biology, Mississippi Academy of Sciences
2000	Principal Investigator, Pharmaceutical Research and Manufacturers of America Foundation Research Starter Grant; “Molecular Mechanisms of JAK2 Activation” (\$25,000.00)
2000 – 2010	Organizer & Coordinator, Jackson Cancer Research Interest Group (J-CRIG)
2000 – 2002	Member, Task Force on Basic and Translational Science; University of Mississippi Cancer Center Working Group
2001 – 2006	Member, UMC American Cancer Society Institutional Research Grant Committee
2001 – 2002	Chair, Division of Cellular, Molecular and Developmental Biology, Mississippi Academy of Sciences
2001- 2005	Principal Investigator, American Cancer Society Research Scholar Grant; “Thioredoxin-Enhanced JAK Activity: a Target for Redox-Based Chemotherapy?” (\$650,000.00, including indirect costs)
2003	Honorary Chairman of the Cancer League’s 2003 Great Gatsby Gala (Jackson, MS)
2003 - 2006	Member, Board of Directors, Mississippi Academy of Sciences
2003 - 2008	Course Director, “Principles of Modern Drug Design” (PH785)
2004 – 2006	Member, Math and Science Task Group, The Education Design Group
2005 - 2012	Course Director, Pharmacology Seminar (PH701)
2005 - 2011	Member, University of Mississippi Cancer Institute Steering Committee

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**Other Activities and Appointments (continued):**

2005 – 2007	Principal Investigator, University of Mississippi Medical Center Institutional Research Support Grant; “Molecular Mechanisms Regulating JAK2’s Catalytic Activity” (\$20,000.00)
2006 - 2007	Mississippi Ambassador, 2006 American Cancer Society - Cancer Action Network Celebration On the Hill
2006 - 2013	Member, American Cancer Society Jackson Leadership Council
2006 - present	Member, Mississippi Cancer Registry Advisory Board
2006 - 2008	Principal Investigator, American Cancer Society Institutional Research Grant (\$218,700.00)
2007 - present	Member, Mississippi Partnership for Comprehensive Cancer Control
2008 - 2011	Member, Board of Directors, The University of Mississippi Alumni Association, School of Graduate Studies in the Health Sciences
2008 - 2012	Co-Investigator (G.W. Booz, P.I.), National Institute of Diabetes and Digestive and Kidney Diseases 1R01HL088101-01A2; “Regulation of IL-6-Type Cytokine Cardioprotective Signaling in the Ischemic Heart”
2009	Member, National Cancer Institute Special Emphasis Panel, P50 NIH-Supported Centers for Population Health and Health Disparities (ZCA1 SRLB-3 (J1))
2009 - 2011	Principal Investigator, National Institute of Diabetes and Digestive and Kidney Diseases 1R56DK082781-01; “Pathophysiological Redox Regulation of JAK2 in Diabetes” (\$148,000.00, including indirect costs)
2009 – 2015	University of Mississippi Cancer Institute Representative, GMAP-3 Evaluation Core
2009 – 2015	University of Mississippi Cancer Institute Representative, GMAP-3 Biomedical Informatics Core
2015 – present	University of Mississippi Cancer Institute Representative, GMAP-2
2009 – 2013	University of Mississippi Cancer Institute Representative, BMAP-3 Community and Socio-Cultural Beliefs Core
2010 – 2011	Principal Investigator, UMMC Institutional Research Support Program, “A novel functional model of oxidized JAK2 in type II diabetes mellitus” (\$30,000 direct costs)
2010 - 2014	Member, American Cancer Society Physicians Advisory Council
2010 - present	Course Director, “Radiobiology” (Radiation Oncology Residency Program)
2011 – 2012	Member, UMMC Radiation Research Review Committee
2011 – 2014	Member, UMMC Cancer Institute Executive Committee
2012 - 2014	President, American Cancer Society Jackson Leadership Council

**Roy J. Duhé, Ph.D.**

**Other Activities and Appointments (continued):**

- 2012            Technical Advisor/Facilitator for the production of three cancer prevention awareness videos for the Mississippi State Department of Health's Healthy Mississippi website:  
Colorectal Cancer – Survivors Speak <http://www.youtube.com/watch?v=MwKhl0-7VPk>  
Cervical Cancer – Women's Stories <http://www.youtube.com/watch?v=KKRbPe3YTzk>  
Mississippians Talk About Oral Cancer <http://www.youtube.com/watch?v=Oe9BzUFTOzI>
- 2012            Lead Community Champion, American Cancer Society Cancer Prevention Study (CPS-3)
- 2012 – present    Member, UMMC Department of Pharmacology Promotion/Tenure Committee
- 2013 - present    Medical/Research Advisor, Mississippi Partnership for Comprehensive Cancer Control Executive Board
- 2013 - 2015       University of Mississippi Cancer Institute Representative, Faculty Recruitment/Job Placement (R&P) Sub-Committee, Transdisciplinary Geographic Management Program for Region 3 (GMAP-3; redefined as GMAP-2 in 2015)
- 2013 - 2015       Member, Fannie Lou Hamer Cancer Foundation Board of Directors
- 2014 - present    Community Outreach Subcommittee Chair, UMMC Clinical Cancer Committee
- 2014 - present    Member, Department of Radiation Oncology Program Evaluation Committee
- 2014 - present    Member, Protocol Review Committee, UMMC Cancer Institute
- 2014 - present    Organizer, 70x2020 Colorectal Cancer Screening Initiative
- 2014 - present    UMMC Representative, National Colorectal Cancer Roundtable
- 2014 - 2015       Member, ZRG1 F09B-B 20 (Fellowship: Oncological Sciences) Study Section, National Cancer Institute
- 2015 - present    Project Lead, Eugene Washington PCORI Engagement Award Program Agreement EA-1148-UMC, “70x2020 Colorectal Cancer Screening Initiative”, Patient-Centered Outcomes Research Institute (\$250,000 total costs)
- 2015 - 2016       Member, Planning Committee, Southeastern Colorectal Cancer Symposium 2016 (Atlanta, GA, April 20-22, 2016)
- 2016            Member, ZRG1 F09B-M (20) L (Oncological Sciences Fellowships) Study Section, National Cancer Institute
- 2016 - present    Member, Advocacy Committee, Southeastern Colorectal Cancer Consortium
- 2017            Leadership Team Member, “See, Test and Treat” multi-cancer screening event, January 28, 2017, Jackson, MS
- 2017            Mississippi Advocate, 2017 Call On Congress, Fight Colorectal Cancer, Washington, D.C.

**Ph.D. Thesis Advisor**

Dr. Kiranam Chatti (2000 - 2004)  
Dr. Sheeyong Lee (2000 - 2007)  
Dr. John K. Smith (2003 - 2008)

**Roy J. Duhé, Ph.D.**

**Ph.D. Thesis Advisory Committee Member (continued):**

Dr. Kanakadurga Kundrapu (2001 - 2009)  
Dr. Chetan Patil (2008 - 2012)

**Postdoctoral Advisor**

Dr. Naila M. Mamoon (2002 – 2005)

**Undergraduate and High School Intern Mentor**

Ms. Emily Ann Clark (1996)  
Ms. Kimberly Cornelius Donald (2003)  
Mr. Jay Craddock (2003; 2007)  
Ms. Lauren Treadwell (2004 - 2005)  
Ms. Ashley Jenkins (2004)  
Ms. LaToya Colenberg (2006)  
Mr. Srikant “Shiva” Patlolla (2008 - 2011)  
Ms. Denae Bradley (2011 – 2012)  
Ms. Elizabeth Nichols (2011 – 2013)  
Mr. Royce Reeves-Darby (2013)

**Ph.D. Thesis Advisory Committee Member**

Dr. Heon Park (1999 - 2002; Department of Microbiology)  
Dr. Kathy Barker (2000 - 2001; Department of Microbiology)  
Dr. Moonkyu Kang (2001 - 2002; Department of Pharmacology & Toxicology)  
Dr. Dapeng Sun (2001 - 2002; Department of Biochemistry)  
Dr. Yongting Wang (2002 - 2004; Department of Biochemistry)  
Dr. Mohan Chitta (2002 - 2006; Department of Pharmacology & Toxicology)  
Dr. Shoulei Jiang (2003 - 2006; Department of Biochemistry)  
Dr. Sandeep S. Negi (2003 - 2006; Department of Biochemistry)  
Dr. Ashish Aggarwal (2003 - 2007; Department of Biochemistry)  
Dr. Gene L. Bidwell, III (2004 - 2007; Department of Biochemistry)  
Dr. Eva-Stina Edhlm (2008 - 2010; Department of Microbiology)  
Dr. Sooim Shin (2009 - 2011; Department of Biochemistry)  
Dr. Carlos Zgheib (2011 - 2012; Department of Pharmacology & Toxicology)  
Dr. Fouad Zouein (2012 - 2013; Department of Pharmacology & Toxicology)  
Mr. Xiaochen He (2014 - present; Department of Pharmacology & Toxicology)