

Donald A. Primerano, PhD

DONALD A. PRIMERANO, PhD

Department of Biochemistry and Microbiology Joan C. Edwards School of Medicine Marshall University

EDUCATION

B.S. St. Vincent College, Latrobe, PA. Biology 1976. Ph.D. Duke University, Durham, NC. Microbiology 1982.

PROFESSIONAL EXPERIENCE/FACULTY APPOINTMENTS

2005 – present Head, Division of Microbiology, Marshall University School of Medicine 1998 -present Professor, Marshall University School of Medicine 1991 -present Director, Marshall University Genomics Core Facility 1994 -1998 Associate professor. Marshall University School of Medicine. 1988 -1994 Assistant professor. Marshall University School of Medicine. 1982 – 1988 Research associate. Dept of Microbiology. Michigan State University 1976 – 1982 Doctoral Studies, Department of Microbiology. Duke University 1975 – 1976 Lab assistant. Saint Vincent College. Department of Biology

RESEARCH SUPPORT (completed)

Title: West Virginia Biomedical Research Infrastructure Network (WV-BRIN)

Appalachian Cardiovascular Research Network Period: 10/1/01 -6/30/04 Amount: approx \$1,000,000/year Agency: NIH/NCRR Role: Co-P.I. (30% Effort)

Title: Characterization of the skin antigen, Skn 2 (Dr. Susan Jackman) Period: 9/1/03 – 8/31/04 Amount: \$19,700 Agency: MU EPSCoR Faculty Seed Grant Role: Co-investigator

Title: WV-INBRE Supplement (Communications Infrastructure) Agency: NIH/NCRR Period: 08/15/2005 -04/30/2006 Amount: \$351,414 Role: Co-P.I. and Director of Appalachian Cardiovascular Research Network

Title: WV-Idea Network of Biomedical Research Excellence (WV-INBRE) Agency: NIH/NCRR Period: 7/01/04 to 6/30/09 Amount: approx \$2.5 million/year Role: Co-P.I. and Director of Appalachian Cardiovascular Research Network

Title: Transcription Factors in Cancer (COBRE) Agency: NIH/NCRR Period: 10/01/04 to 7/31/09 Amount: approx \$1.6 million/year Role: Co-I./Director of Genomics Core Facility (R. Niles, P.I.)

RESEARCH SUPPORT (active)

RESEARCH SUPPORT (pending)

NIH RESEARCH SUPPORT (planning)

Title: Nutrition and Cancer (Subproject: MU Genomics Core Facility) Agency: NIH/NCRR Role: Co-P.I. (E. Hardman, P.I.) Goal: To support the genome analysis needs of the COBRE investigators

Title: WVU Clinical and Translational Science Institute Agency: NIH/NCRR Role: Genomics Core Director Goal: To support the genome analysis needs of the CTSI investigators

TEACHING AND HONORS

Director and lecturer for Medical Microbiology course (22 contact hours) 1990 to present (director 97 to present) Director and Lecturer in Human Genetics (IDM624/724) (8 contact hrs) 1989-present; director 89-96, 04-present) Lecturer in Nucleic Acids/Protein synthesis (22 contact hrs) 1990-present Lecturer in Molecular and Cell Biology (BMS600) (3 contact hrs) 1991-present 2004 Graduate Faculty Achievement Award 1998-99 SOM Professor of the Year (by the SOM class of 2001) 1998 Gender Equity Award (by the SOM class of 2000) 2009 Certificate of Teaching Excellence awarded by

PROFESSIONAL SOCIETIES:

American Association for the Advancement of Science American Society for Microbiology American Society of Human Genetics

ACADEMIC COMMITTEES (active)

Institutional Biosafety Committee 12/88-present, Chair (1991-1995, 1999-present) Biological Safety Officer, MUSOM representative (6/92-present) Radiation Safety Committee, 10/93 -present SOM Year Two Integration Subcommittee 2007-present Graduate Faculty Status, April 2005-April 2008 Dean's Advisory Committee, 2005 -present Cardiovascular Research Cluster, 2006 – present

GRANT REVIEWS

Mary Babb Randolph Cancer Pilot Grant Reviewer

GRADUATE STUDENTS:

- (1) John L. Huffman, M.S. 7/91. Thesis title: Characterization of an upstream activating sequence in the sporulation-regulated gene *SPR2* of *Saccharomyces cerevisiae*. D.Pharm. Medical College of Virginia.
- (2) Kathy Y. Sole, M.S. 9/90 -5/95 (1995) Dissertation title: Isolation and identification of transactivators binding to the upstream activating sequence of *SPR2* a late sporulationregulated gene of *Saccharomyces cerevisiae*.
- (3) Sharmini S. Soosaithasan, Ph.D. 9/93 -12/98. Dissertation title: Characterization of the promoter and upstream activation sequences of sporulation-specific genes *SPR1* and *SPR2* in *Saccharomyces cerevisiae*. Currently Research Scientist at Zymed Corp.
- (4) Scott Cobbs, Ph.D. 6/99-6/01. The Regulation of Manganese Superoxide Dismutase and Inducible Nitric Oxide Synthase by NF-KB and AP1 in Rat Aortic Endothelial Cells. Currently, Postdoctoral fellow in Renal Division at Emory University School of Medicine. 6/01-present.
- (5) Jan Sikorsky, PhD. 1999-2005. Effect of DNA Base Modification on Polymerase Chain Reaction Efficiency and Fidelity. Lead America 2005-present.

RECENT PUBLICATIONS:

Chertow BS, HK Driscoll, DA Primerano, WS Blaner, MB Cordle and KA Matthews. 1996. Retinoic acid receptor transcripts and effects of retinol acid on glucagon secretion from islets and glucagon cell lines. *Metabolism* 45: 300-305.
 Chertow BS, HK Driscoll, N. Goking, DA Primerano, MB Cordle and KA Matthews. 1997. Retinoid-X receptors and the effects of 9-cis retinoic acid on insulin secretion from RINm5F cells. *Metabolism* 46: 656 -660.
 Chertow BS, HK Driscoll, N Goking, DA Primerano and KA Matthews. 1997. Effects of All*trans*-Retinoic Acid Receptor (RAR) Expression on Secretion, Growth, and Apoptosis of Insulin-Secreting RINM5f Cells. *Pancreas* 15: 122-131.

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Elitsur Y, BC Chertow, RD Jewell, SN Finver and DA Primerano. 1998. Identification of Hereditary Pancreatitis Mutation in Four WV Families. *Ped. Res* 44: 927-930.
 Sikorsky JA, DA Primerano, TW Fenger, and J. Denvir. 2004. Effect of DNA Damage on PCR Amplification Efficiency with the Relative Threshold Cycle Method. *Biochem. Biophys. Res. Comm.* 323: 823-830
 Sikorsky JA, DA Primerano, TW Fenger, and J Denvir. 2007. DNA damage reduces *Taq* DNA polymerase fidelity and PCR amplification efficiency. *Biochem. Biophys. Res. Comm.* 355: 431

437.

7. Estler, M, Boskovic G, Denvir J, Miles S, Primerano DA, and Niles RM. Global Analysis of Gene Expression Changes During Retinoic Acid-Induced Growth Arrest and Differentiation of Melanoma: Comparison to Differentially Expressed Genes in Melanocytes vs. Melanoma. 2008. *BMC Genomics* 9:478-490. 8 Y. Huang, Kan Huang, G. Boskovic, Y. Dementieva, J. Denvir, D. A. Primerano, G.-Z. Zhu. Proteomic and genomic analysis of PITX2 interacting and regulating networks. *FEBS*

Letters 583:638-642 (2008)

LA Dvoracek, JI Kreisberg, J McKinney, G Schmid, AD Francis, KL Kacmarik HM Lee, MS Detrick, DA Primerano, N Santanam and R Kreisberg. Lovastatin inhibits Oxidized-L-Aphosphatidylcholine B-arachidonoyl-gamma-palmitoyl (ox-PAPC)-Stimulated Interleukin-8 mRNA and Protein Synthesis in Human Aortic Endothelial Cells by Depleting Stores of Geranylgeranyl Pyrophosphate Atherosclerosis. *Atherosclerosis* 208:50–55(2010). PMID: 19595352

S. T. Dorsam, E. Vomhof-Dekrey, R. Hermann, J. Haring, E. Wilkerson, G.Boskovic, J. Denvir, Y. Dementieva, D. Primerano and G. P. Dorsam. Identification of the Early VIP-Regulated Transcriptome and its Associated Interactome in Resting and Activated Murine CD4 T Cells. Accepted in *Molecular Immunology* January 2010.

S. E. Kelly, A. Di Benedetto, A. Greco, C. M. Howard, V. E. Sollars, D. A. Primerano, J.V. Valluri, P. P. Claudio. Rapid Selection and Proliferation of CD133(+) Cells from Cancer Cell Lines: Chemotherapeutic Implications. *PLoS One* 5: e10035 (2010).

The Appalachian Cardiovascular Research Network (Yulia Dementieva*, J. Denvir, L. Wei,

D. A. Primerano, T. L. Green, P. Wehner, M. R. Flood, D. Calica, B. Freeman, M. Huff, S. Dodson, C. Hill, A. Francis, K. McIntyre, R. Kreisberg, S. Warren, H. Blackwood, M. Davis, H-M Lee.) Identification of genes contributing to cardiovascular disease in overweight and obese individuals from West Virginia. Submitted to *WV Medical Journal*.

2010

1. LA Dvoracek, JI Kreisberg, J McKinney, G Schmid, AD Francis, KL Kacmarik HM Lee, MS Detrick, DA Primerano, N Santanam and R Kreisberg. Lovastatin inhibits Oxidized-L-A-phosphatidylcholine B-arachidonoyl-gamma-palmitoyl (ox-PAPC)-Stimulated Interleukin-8 mRNA and Protein Synthesis in Human Aortic Endothelial Cells by Depleting Stores of Geranylgeranyl Pyrophosphate Atherosclerosis. *Atherosclerosis* 208:50–55(2010). PMID: 19595352

2. S. T. Dorsam, E. Vomhof-Dekrey, R. Hermann, J. Haring, E. Wilkerson, G.Boskovic, J. Denvir, Y. Dementieva, D. Primerano and G. P. Dorsam. Identification of the Early VIP-Regulated Transcriptome and its Associated Interactome in Resting and Activated Murine CD4 T Cells. Accepted in *Molecular Immunology* January 2010.

3. S. E. Kelly, A. Di Benedetto, A. Greco, C. M. Howard, V. E. Sollars, D. A. Primerano, J.V. Valluri, P. P. Claudio. Rapid Selection and Proliferation of CD133(+) Cells from Cancer Cell Lines: Chemotherapeutic Implications. *PLoS One* 5: e10035 (2010).

2011. The Appalachian Cardiovascular Research Network (Yulia Dementieva*, J. Denvir, L. Wei, D. A. Primerano, T. L. Green, P. Wehner, M. R. Flood, B. Freeman, M. Huff, S. Dodson, C. Hill, A. Francis, K. McIntyre, R. Kreisberg, S. Warren, H. Blackwood, M. Davis, H-M Lee.) Identification of genes contributing to cardiovascular disease in overweight and obese individuals from West Virginia. Accepted for publication in the *WV Medical Journal*.

Presentations

1. Y. Dementieva, James Denvir, Maureen Joyce, Jun Fan and Donald A. Primerano. Genetic Analysis of Candidate Genes in Familial Combined Hyperlipidemia (FCHL) Families from West Virginia. Presented as a poster at the NIH, NCRR Third Biennial National IDeA Symposium of Biomedical Research Excellence (NISBRE) (June 2010)

ABSTRACTS:

Soosaitathan, S, R.D. Jewell and D.A. Primerano. 1996. Characterization of an upstream regulatory sequence of SPR2 (SSG1), a late sporulation-specific gene. Presented at the Yeast Genetics and Molecular Biology Meeting in Madison, WI.

Elitsur Y., B.C. Chertow, R. D. Jewell, S. N. Finver and D.A. Primerano. Identification of Hereditary Pancreatitis Mutation in Four WV Families. Presented as a poster at the Annual Meeting of the American Gastroenterology Association 1998.

Chertow, B.S., H.K. Driscoll., D. A. Primerano, and K.A. Matthews. Effects of 9-cis and all-trans retinoic acid and receptor-selective retinoids on β TC6-7 Cell Insulin Secretion, Content and Growth. presented at the American Diabetes Association.

Sikorsky J.A., D.A. Primerano D.A., T.W.Fenger , and J. Denvir. Determination of amplification efficiencies of templates with oxidative modifications using real time PCR. MU Research Day March 2003 program.

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H M Lee, M. R. Flood, D. Calica, B. Freeman, M. Huff, S. Dodson, A. Clark, A. Magers, R. Kreisberg, M. Davis, P. Wehner, T. L. Green, D. A. Primerano, J. Denvir, L. Wei, and Y. Dementieva. Identification of genes contributing to obesity

associated cardiovascular disease given at the 4th Annual WV-INBRE Research Symposium. August 2005.

NISBRE Meeting (07/2006) Marshall University Genomics Core Facility. G. Boskovic, J. Denvir and D. Primerano

ASHG (10/2006) and NISBRE Meeting (07/2006): Identification of Genes Contributing to Obesity Associated Cardiovascular Disease (OCARD). H.M. Lee, M. Davis, M.R. Flood, D. Calica, B. Freeman, M. Huff, S. Dodson, A. Clark, A. Magers, R. Kreisberg, P. Wehner, T.L. Green, D.A. Primerano, J. Denvir, L. Wei, and Y. Dementieva.

Heather L Ratliff DO, Mohammed Yousufuddin MD, Jeremy Stapleton DO, Firasat Malik MD, Sulaiman Hasan MD, Zafrullah Khan MD, Gregory Rosencrance MD, Gregory Clarke MD, Goran Boskovic PhD, Jim Denvir PhD, Donald Primerano PhD. Gene Fingerprinting of Human Heart in Obesity. Presented as a poster at the WV Chapter of the American College of Physicians in October 2006.

M. Yousufuddin, H. Ratliff, J. Stapleton, F. Malik, S. Hasan, Z. Khan, G. Rosencrance, J. Denvir, G. Boskovic, and D. Primerano. Transcriptional Alterations in Human Heart: A Prelude to Understanding the Molecular Pathways of Cardiac Aging. J Am Geriatr Soc. 2007 April;55 (4 Supplement):S114

M. Estler, G. Boskovic, J. Denvir, S. Miles, D. Primerano, and R.M. Niles. Global Gene Expression Changes During Retinoic Acid-Induced Growth Arrest and Differentiation of Melanoma: Comparison to Differentially Expressed Genes in Melanocytes vs. Melanoma. National IDeA Symposium of Biomedical Research Excellence. Bethesda August 2008.

Richards-Waugh, DA. Primerano, Y. Dementieva, JC Kraner, and GO Rankin. Genetic Polymorphism of the CYP3A4 Gene May Contribute to Methadone-related Deaths. Presented as a poster at the Society of Forensic Toxicologists meeting in Phoenix, AZ on 10/26/2008.

LL Richards-Waugh, DA Primerano, Y. Dementieva, J. Kraner, GO Rankin. Unexpected Death due to Methadone Overdose May Be Associated with Genetic Polymorphisms of the CYP3A4 Gene. Presented as a Poster at the Annual Society of Toxicology Meeting in Baltimore on March 15-19 2009.

Y. Dementieva, James Denvir, Maureen Joyce, Jun Fan and Donald A. Primerano. Genetic Analysis of Candidate Genes in Familial Combined Hyperlipidemia (FCHL) Families from West Virginia. Presented as a poster at the NIH, NCRR Third Biennial National IDeA Symposium of Biomedical Research Excellence (NISBRE) (June 2010)

INVITED TALKS:

"Appalachian Cardiovascular Research Network (ACoRN)". Given at the Joan C. Edwards School of Medicine Alumni Annual Homecoming. October 2002. "Gene Mapping in Complex Human Diseases". Given at Ohio University Edison Biotechnology Institute January 8, 2004 "Appalachian Cardiovascular Research Network (ACoRN)". COBRE-INBRE Meeting. Nov 2005. "Obesity Associated Cardiovascular Disease". Charleston Area Medical Center, Feb 15 2006. "Patient Recruitment into Genetics Studies (ACoRN)". NIH Workshop on Collaborative and Community Based Clinical and Translational Research. May 15 2007. "Appalachian Cardiovascular Research Network". Southeast Regional IDeA Conference. Lexington KY. April 19 2008. "MU Genomics Core: Next Generation Sequencing Service". Given at the WVU Cancer Retreat August 12 2010.

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GRADUATE STUDENT ADVISORY COMMITTEES (current)

Heath Damron, Jennifer Napper, Lauren Richards, Melinda Varney, Amy Nash, Ryan Withers

CONFERENCES ATTENDED:

Workshop on Efficient Management and Utilization of Core Facilities. NIH Campus. Bethesda, Maryland. July 14-15, 2009

American Society for Human Genetics Annual Meeting. October 2008. Philadelphia. American Society for Human Genetics Annual Meeting. October 2007. San Diego. American Society for Human Genetics Annual Meeting. October 2006. New Orleans. American Society for Human Genetics Annual Meeting. November 2005. Salt Lake City. American Society for Human Genetics Annual Meeting. October 2004. Toronto Ontario "Creating your Style: What is your Teaching Perspective/ Learning Perspective" Workshop on September 14, 2004. Marshall University. "Effective course director workshop" June 2, 2004 American Society for Human Genetics Annual Meeting. November 2003. Los Angeles CA Biomedical Research Infrastructure (BRIN) P.I Meeting. October 2003. National Institution of Health National Center for Research Resources University, Washington D.C. Biomedical Research Infrastructure (BRIN) Southeastern Regional Meeting. June 2003. Louisiana State University, Baton Rouge, LA. American Society for Human Genetics Annual Meeting. October 2002. Baltimore MD. Association of Biomedical Research Facilities. The New Biology: Technologies for Resolving Macromolecular Communications. San Diego Mar. 2001. "Write Winning Grants" Workshop, Marshall University School of Medicine, November 22 2002 Genetic Analysis of Complex Diseases, Duke University Center for Human Genetics April 2002

American Society for Human Genetics. Annual Meeting. October 2001. San Diego, CA. Association of Biomolecular Resource Facilities. The New Biology: Technologies for Resolving Macromolecular Communications. San Diego Mar. 2001. Association of Biomedical Research Facilities. From Singular to Global Analyses of Biological Systems. Bellevue WA. Feb. 19-22, 2000. Yeast Genetics and Molecular Biology Meeting (Madison, WI) 1996 Li-COR Sequencing/Genotyping training session. January 26-28, 1998. Lincoln, NE.

RESEARCH INTERESTS

- (1) Genetic Susceptibility to Cardiovascular Disease
- (2) Microarray and Next Generation Sequencing Methods in Expression Profiling