

**David J. Samuelson, Ph.D.**

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**EDUCATION**

1985 - 1990      B.S. in Animal Science, University of Minnesota-Twin Cities, St. Paul, Minnesota  
1990 - 1992      M.S. in Quantitative Genetics, Virginia Tech, Blacksburg, Virginia  
1996 - 2001      Ph.D. in Cancer Biology, University of Arizona, Tucson, Arizona  
2001 - 2007      Postdoctoral Training, Breast Cancer Genetics & Susceptibility, McArdle Laboratory for  
Cancer Research, University of Wisconsin-Madison, Madison, Wisconsin  
Mentor: Michael N. Gould.

**ACADEMIC APPOINTMENTS**

2013 – Present      Associate Professor with Tenure, Department of Biochemistry and Molecular Genetics,  
University of Louisville School of Medicine, Louisville, Kentucky  
2007 – 2013      Assistant Professor, Department of Biochemistry and Molecular Biology, University of  
Louisville School of Medicine, Louisville, Kentucky  
2012 – Present      Director of Seminar Programs, Center for Genetics and Molecular Medicine,  
University of Louisville School of Medicine, Louisville, Kentucky

**OTHER POSITIONS AND EMPLOYMENT**

1986 – 1989      Research Animal Technician, College of Veterinary Medicine, University of Minnesota,  
St. Paul, Minnesota  
1990 – 1992      Research Associate/Teaching Assistant, Department of Dairy Science, Virginia Tech,  
Blacksburg, Virginia  
1992 – 1994      Dairy Procurement Specialist, 21<sup>st</sup> Century Genetics (now GENEX), Shawano, Wisconsin  
1994 – 1996      Dairy Genetics Program Specialist, 21<sup>st</sup> Century Genetics (now GENEX), Shawano,  
Wisconsin

## PROFESSIONAL MEMBERSHIPS

1993 – Present	Member, American Association for The Advancement of Science
2000 – Present	Member, American Association for Cancer Research
2007 – Present	Member, James Graham Brown Cancer Center, University of Louisville
2008 – Present	Member, Center for Genetics and Molecular Medicine, University of Louisville
2008 – Present	Member, Institute for Molecular Diversity and Drug Design, University of Louisville
2009 – 2012	Member, Center for Environmental Genomics and Integrative Biology, University of Louisville

## HONORS AND AWARDS

1988	Elected Treasurer, University of Minnesota Gopher Dairy Club Student Organization
1992	Elected to Sigma Xi, Scientific Research Society
1999	E. Ray Cowden Scholarship, University of Arizona
1999 - 2001	Appointed to NIH/NCI, Molecular Carcinogenesis Pre-Doctoral Training Grant (T32 CA09213), University of Arizona
2000	Arizona Cancer Center Travel Award to American Association for Cancer Research Annual Meeting, in San Francisco, CA.
2000	Cancer Biology Graduate Registration Scholarship, University of Arizona
2001 - 2003	Appointed to NIH/NCI, Molecular Mechanisms of Carcinogenesis Post-Doctoral Training Grant (T32 CA09681-10), McArdle Laboratory for Cancer Research, University of Wisconsin-Madison
2003 - 2006	U.S. Department of Defense, Congressionally Directed Research Program, Breast Cancer Research Program, Postdoctoral Fellowship Award (DAMD17-03-1-0280 DOD)
2005	Invited guest at “International Workshop on Encoding Information in DNA”, Okinawa, Japan.
2009	NIH/NIEHS Center for Environmental Genomics & Integrative Biology Career Development Award

## COMMITTEE ASSIGNMENTS AND ADMINISTRATIVE SERVICES

### SCIENTIFIC REVIEW PANELS - External

2008	U.S. DOD/CDMRP/Breast Cancer Research Program
2009	U.K. Medical Research Council
2009	U.S. DOD/CDMRP/Breast Cancer Research Program (2 panels)
2010	U.S. DOD/CDMRP/Breast Cancer Research Program
2011	Diamond Black Fan Anemia Foundation ( <i>ad hoc</i> reviewer)
2012	U.S. DOD/CDMRP/Breast Cancer Research Program
2012	U.S. DOD/CDMRP/Breast Cancer Research Program ( <i>ad hoc</i> reviewer)
2014	U.S. DOD/CDMRP/Breast Cancer Research Program
2019	U.S. DOD/CDMRP/Breast Cancer Research Program
2020	U.S. DOD/CDMRP/Breast Cancer Research Program

**SCIENTIFIC REVIEW PANELS - University of Louisville**

- 2007, 2008, 2010, 2011 NIH/NIEHS Center for Environmental Genomics and Integrative Medicine Pilot Project Awards
- 2008 - 2014 University of Louisville School of Medicine Research Committee (quarterly)

**SCIENTIFIC JOURNAL MANUSCRIPT PEER REVIEWS**

- 2007 *Genetics*
- 2008 *Oncogene*
- 2010 *PLoS One*
- 2012 *PLoS Genetics* (2x), *Cytokine*
- 2013 *PLoS One* (3x), *Physiological Genomics*
- 2014 *Cell Communication and Signaling*, *Genes, Genomes, and Genetics (G3)*, *International Journal of Cancer*, *BMC Cancer*, *Endocrine-Related Cancer*
- 2015 *AIMS Medical Science*, *Mammalian Genome*, *PLoS Genetics*
- 2016 *PLoS Genetics*, *Springer Plus*, *Bioinformatics*, *Tumor Biology*, *Molecular Carcinogenesis*
- 2017 *Scientific Reports*, *BMC Cancer*
- 2018 *Cellular Physiology and Biochemistry*, *BMC Genomics*, *PLoS Genetics*
- 2020 *Genetics*

**OTHER – External**

- 2008 MetaCyte Business, Lab Focus Group
- 2009 Interviewed by Jean West for “Jean West Medical Digest” TV/media program
- 2009 Kentucky Regional Junior Science & Humanities Symposium Competition Paper Evaluation
- 2010 Live TV interview addressing breast cancer susceptibility on “Jean West’s Medical Daily”, WBKI-TV

**OTHER – University of Louisville**

- 2008 - present Judge posters during annual Research!Louisville
- 2008 - 2014 School of Medicine Research Committee
- 2008 Department of Biochemistry & Molecular Biology Faculty/Student Retreat Committee
- 2009 Chair, scientific session at Center for Molecular Diversity & Drug Design 11<sup>th</sup> annual symposium
- 2009 - 2011 Center for Molecular Diversity & Drug Design summer fellowships evaluation committee
- 2009 – 2010 Center for Genetics & Molecular Medicine Public Affairs Committee
- 2009 Department of Biochemistry & Molecular Biology Faculty Search Committee
- 2010, 2011 Center for Molecular Diversity & Drug Design graduate fellowships evaluation committee
- 2010 Chair, Department of Biochemistry & Molecular Biology Faculty Search Committee
- 2011 Chair, Center for Genetics & Molecular Medicine Seminar Committee
- 2011 Animal Resources Advisory Committee
- 2011 Chair, SoM Research *ad hoc* Subcommittee for President’s Distinguished Faculty Awards in Basic & Applied Sciences and Career Achievement
- 2011 Chair, UofL Department of Biochemistry & Molecular Biology Faculty Search Committee

2012 – 2018	Director, Center for Genetics & Molecular Medicine Seminar Programs
2012 – Present	Department of Biochemistry & Molecular Genetics Graduate Education Committee
2012 – 2019	Director, Biochemistry & Molecular Genetics Graduate Curriculum and Examinations
2012 – Present	Department of Biochemistry & Molecular Genetics Curriculum Committee
2016 – Present	Member, University of Louisville Animal Care and Use Committee (IACUC)
2016 – Present	Member, University of Louisville School of Medicine Faculty Forum
2019 – Present	Director of Graduate Studies, Biochemistry & Molecular Genetics

## EDUCATIONAL ACTIVITIES

### TEACHING

Institution	Semester	Course	Responsibilities
University of Louisville	Spring 2019	BIOC 675 Cancer Biology	Course director; Lecture, cancer genetics & genomics, public health impact of cancer (4 hours)
		BIOC 630 Research Ethics	Course director; Lecture writing and reporting research, scientific rigor, reproducibility, and experimental design, avoiding research misconduct (3 hours of lectures)
Biochemistry & Molecular Genetics Graduate Qualifying Exam		Faculty member of the Ph.D. preliminary examination process that evaluates graduate student grant writing abilities and applicable knowledge of biochemistry, mol. biology, & genetics	
BMSC 804 Dental Biochemistry		Lectures covering biochemistry information metabolism and central dogma of molecular biology (10 hours)	
		Biochemistry & Molecular Genetics Graduate Student Journal Club	Faculty facilitator
	Fall 2018	BIOC 668 Molecular Biology & Genetics	Lectures, literature discussions, and group projects on Mendelian disorders, gene mapping, population genetics, quantitative genetics, and genetic association studies (12 hours)
		IPIBS Research Integrity Training	Lecture, Scientific rigor and reproducibility
		Biochemistry & Molecular Genetics Graduate Student Journal Club	Faculty facilitator
		School of Medicine, Distinction in Research Program	Lecture, Scientific rigor and reproducibility

	Summer 2018	T35 ES014559-10 Environmental Health Sciences Research Training	Lecture on genetics and environmental chemicals.
	Spring 2018	BIOC 675 Cancer Biology  BIOC 630 Research Ethics  BMSC 804 Dental Biochemistry  Biochemistry & Molecular Genetics Graduate Student Journal Club	Course director; Lecture, cancer genetics & genomics, public health impact of cancer (4 hours)  Course director; Lecture writing and reporting research, scientific rigor, reproducibility, and experimental design, avoiding research misconduct (3 hours of lectures)  Lectures covering biochemistry information metabolism and central dogma of molecular biology (10 hours)  Faculty facilitator
	Fall 2017	BIOC 668 Molecular Biology & Genetics  IPIBS Research Integrity Training  Biochemistry & Molecular Genetics Graduate Student Journal Club	Lectures, literature discussions, and group projects on Mendelian disorders, gene mapping, population genetics, quantitative genetics, and genetic association studies (12 hours)  Lecture, Scientific Rigor and reproducibility  Faculty facilitator
	Summer 2017	T35 ES014559-09 Environmental Health Sciences Research Training	Lecture on genetics and environmental chemicals.
	Spring 2017	BIOC 675 Cancer Biology  BIOC 630 Research Ethics  Biochemistry & Molecular Genetics Graduate Qualifying Exam  BMSC 804 Dental Biochemistry	Course director; Lecture, cancer genetics & genomics, public health impact of cancer (4 hours of lectures)  Course director; Lecture writing and reporting research, scientific rigor, reproducibility, and experimental design, avoiding research misconduct (3 hours of lectures)  Director of the Ph.D. preliminary examination process that evaluates graduate student grant writing abilities and applicable knowledge of biochemistry, mol. biology, & genetics  Lectures covering biochemistry information metabolism and central dogma of molecular biology (10 hours)

Fall 2016	BIOC 668 Molecular Biology & Genetics  IPIBS Research Integrity Training	Lectures, literature discussions, and group projects on Mendelian disorders, gene mapping, population genetics, quantitative genetics, and genetic association studies (12 hours)  Lecture, Scientific Rigor and reproducibility
Summer 2016	T35 ES014559-09 Environmental Health Sciences Research Training	Lecture on genetics and environmental chemicals.
Spring 2016	BIOC 675 Cancer Biology  BIOC 630 Research Ethics  Biochemistry & Molecular Genetics Graduate Qualifying Exam	Course director; Lecture, cancer genetics & genomics (2 hour lecture)  Course director; Lecture writing and reporting research, scientific rigor, reproducibility, and experimental design, avoiding research misconduct (3 hours of lectures)  Director of the Ph.D. preliminary examination process that evaluates graduate student grant writing abilities and applicable knowledge of biochemistry, mol. biology, & genetics
Fall 2015	BIOC 668 Molecular Biology & Genetics	Lectures, literature discussions, and group projects on Mendelian disorders, gene mapping, population genetics, quantitative genetics, and genetic association studies
Summer 2015	T35 ES014559-09 Environmental Health Sciences Research Training	Lecture on genetics and environmental chemicals.
Spring 2015	Biochemistry & Molecular Genetics Graduate Qualifying Exam	Director of the Ph.D. preliminary examination process that evaluates graduate student grant writing abilities and applicable knowledge of biochemistry, mol. biology, & genetics
	BIOC 675 Cancer Biology	Course Co-director  Lecture, cancer genetics & genomics
	BIOC 630 Research Ethics	Lecture, writing & reporting research,
Fall 2014	BIOC 668 Molecular Biology & Genetics	Lectures, literature discussions, and group projects on Mendelian disorders, gene mapping, population genetics, quantitative genetics, and genetic association studies
Summer 2014	T35 ES014559-09 Environmental Health Sciences Research Training	Lecture on genetics and environmental chemicals.  Host medical student, Anna Thamann, in our research group to participate in a summer research project.

Spring 2014	Biochemistry & Molecular Biology Graduate Qualifying Exam	Director of the Ph.D. preliminary examination process that evaluates graduate student grant writing abilities and knowledge of biochemistry, mol. biology, & genetics
	BIOC 675 Cancer Biology	Course Co-director
	BIOC 630 Research Ethics	Lecture on Writing & Reporting Research
Fall 2013	BIOC 668 Molecular Biology & Genetics	Lectures and literature discussions on Mendelian disorders, gene mapping, population genetics, quantitative genetics, and genetic association studies
Summer 2013	T35 ES014559-08 Environmental Health Sciences Research Training	Lecture on genetics and environmental chemicals
Spring 2013	Biochemistry & Molecular Biology Graduate Exam I	Chair the faculty committee that evaluates graduate student grant writing abilities and knowledge of biochemistry, mol. biology, & genetics
	BIOC 675 Cancer Biology	Course Co-director Lecture on Cancer Genetics
	BIOL 388 Biology Honors Seminar	Seminar on breast cancer susceptibility research
	BIOC 630-01 Research Ethics	Lecture on Writing & Reporting Research
Fall 2012	BIOC 668 Molecular Biology & Genetics	Lectures on Mendelian disorders, gene mapping, population genetics, quantitative genetics, and genetic association studies
Summer 2012	T35 ES014559-07 Environmental Health Sciences Research Training	Lecture Genetics and Environmental Chemicals
Spring 2012	BIOC 675 Cancer Biology	Course Co-director Lecture on Cancer Genetics
	BIOC 603-5 Adv. Techniques in Biochemistry & Molecular Biol. II	Lecture & Literature Discussion on Gene Targeting
	BIOC 630-01 Research Ethics	Lecture on Writing & Reporting Research
Summer 2011	T35 ES014559-07 Environmental Health Sciences Research Training	Mentor medical student in research Lecture Genetics and Environmental Chemicals
Spring 2011	BIOC 675 Cancer Biology	Course Co-director Lecture on Cancer Genetics
	BIOC 603-5 Adv. Techniques in Biochemistry & Molecular Biol. II	Lecture & Literature Discussion on Gene Targeting
	BIOC 630-01 Research Ethics	Lectures on Writing & Reporting Research, Managing Postdoctoral Training, & Getting a Job

		BIOL 405 Breast Cancer Genetics	Mentor undergraduate student in research
Fall 2010		BIOC/BIOL 641 Advanced Genetics	Course Director Lectures on: Mendelian, population, and quantitative genetics, genetic association studies, model organisms, and cancer genetics
Summer 2010		Biochemistry & Molecular Biology Graduate Exam I	Evaluate graduate student grant writing abilities and knowledge of biochemistry, molecular biology, & genetics
Spring 2010		BIOC 675 Cancer Biology	Course Co-director Lecture on Cancer Genetics
		BIOC 603-5 Adv. Techniques in Biochemistry & Molecular Biol. II	Lecture & Discussion on Gene targeting
		BIOL 390 Biology Honors Seminar	Lecture on Breast Cancer Research
		BIOC 630-01 Research Ethics	Lecture on Writing & Reporting Research
			Lecture on Managing Postdoctoral Training
			Lecture on Getting a job
		BIOL 405 Breast Cancer Genetics	Mentor undergraduate student in research
Fall 2009 – Spring 2010		BIOC 816 Special Project in Biochemistry	Mentor medical student in research
Fall 2009		BIOL 406 Breast Cancer Genetics	Mentor undergraduate student in research & writing
Summer 2009		Research Scholar Program	Mentor medical student in research
		Biochemistry & Molecular Biology Graduate Exam I	Evaluate graduate student grant writing abilities and knowledge of biochemistry, mol. biology, & genetics
Spring 2009		BIOC 630-01 Research Ethics	Lecture: Writing & Reporting Research
			Lecture: Managing Postdoctoral Training
			Lecture: Getting a job
			Discussion Genetic Engineering
		BIOC 675 Cancer Biology	Course Co-director Lecture: Cancer Genetics
		BIOL 405-04 Breast Cancer Genetics	Mentor undergraduate student in research
		BIOL 390 Biology Honors Seminar	Lecture: Breast Cancer Research
Fall 2008		BIOC/BIOL 641 Advanced Genetics	Lecture: Genetic Mapping Lecture: Genetic Association Studies Lecture: Rodent Genetic Models

	Summer 2008	Biochemistry & Molecular Biology Graduate Exam I	Evaluate graduate student grant writing abilities and knowledge of biochemistry, molecular biology, & genetics
	Spring 2008	BIOC 630-01 Research Ethics BIOC 675 Cancer Biology	Lecture Managing Postdoctoral Training Course Co-director Lecture Cancer Genetics
University of Arizona	Fall 1998 Fall 1997	Genetics	Lecture Teaching Assistant Tutor
Virginia Tech	Spring 1990	Animal Genetics	Teaching Assistant
	Fall 1991 Fall 1990	Applied Dairy Cattle Genetics	Teaching Assistant

<b>Student Evaluations of David Samuelson's Teaching by Year.</b>						
<b>Course</b>	<b>Evaluation Question</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
<b>Average linear score with number of students in parentheses (n)</b>						
BIOC 675 Cancer Biology	Is the faculty member well-organized to present material? <sup>1</sup>	4.7 (7)	NA	4.5 (12)	4.5 (10)	4.8 (7)
	Is the faculty member highly knowledgeable about the material presented? <sup>1</sup>	5.0 (7)	NA	4.8 (12)	4.9 (10)	4.8 (7)
	Does the faculty member's style of presentation allow the conceptual material to be understood? <sup>1</sup>	4.7 (7)	NA	4.8 (12)	4.7 (10)	4.8 (7)
	Does the faculty member interact well with students regarding the course on a 'one-to-one' basis outside the classroom? <sup>1</sup>	5.0 (5)	NA	5.0 (9)	4.6 (10)	4.8 (7)
	Are the examination questions, problems and other exercises comprehensive, relevant to the material, and at an appropriate level of rigor? <sup>1</sup>	4.7 (7)	NA	4.8 (12)	4.7 (10)	4.8 (7)
	How do you evaluate this faculty member's lectures and lecture style compared to other faculty? <sup>1</sup>	4.7 (7)	NA	4.6 (12)	4.6 (10)	4.8 (7)
<sup>1</sup> Linear scoring options were 5:Excellent; 4:Above Average; 3:Average; 2:Below Average; and 1:Substandard; NA:Not Available						
<b>Actual linear score with number of students responding in parentheses (n)</b>						
BIOC 668 Molecular Biology & Genetics	My background was sufficient for the advanced topics: please use list below for responses <sup>2</sup>		5 (1) 4 (5)	5 (2) 4 (1) 3 (1)	5 (6) 4 (6) 3 (2)	5 (6)
	Sufficient background reading was provided for the advanced topics: please use list below for responses <sup>2</sup>		5 (3) 4 (3)	5 (3) 4 (1)	5 (6) 4 (6) 3 (2)	5 (4) 4 (2)
	The written paper assignments enhanced my understanding of the course content <sup>2</sup>		5 (4) 4 (2)	5 (3) 4 (1)	5 (5) 4 (7) 2 (2)	5 (4) 4 (1) 3 (1)
	was knowledgeable about the subject matter <sup>2</sup>	5 (3) 4 (2)			5 (9) 4 (4) 3 (1)	5 (4) 4 (2)
	was well organized/prepared <sup>2</sup>	4 (2) 3 (1) 2 (2)			5 (5) 4 (5) 3 (3) 2 (1)	5 (4) 4 (2)
	presented the information in a clear manner <sup>2</sup>	4 (4) 2 (1)			5 (6) 4 (6) 2 (2)	5 (4) 4 (2)
	style of presentation allows the conceptual material to be understood <sup>2</sup>	5 (1) 4 (3) 2 (1)			5 (6) 4 (6) 2 (2)	5 (4) 4 (2)
	stimulated thought and learning during lectures <sup>2</sup>	5 (1) 4 (4)			5 (8) 4 (4) 3 (1) 2 (1)	5 (3) 4 (2) 3 (1)
	seemed interested in helping me learn the subject matter <sup>2</sup>	5 (3) 4 (2)			5 (9) 4 (4) 2 (1)	5 (3) 4 (3)
	demonstrated respect for the diversity of the class <sup>2</sup>	5 (4) 4 (1)			5(11) 4 (3)	5 (4) 4 (2)
<sup>2</sup> Linear scoring options were 5:Strongly Agree; 4:Agree; 3:Neutral; 2:Disagree; and 1:Strongly Disagree						

## MENTORING AND TRAINING

### MEDICAL STUDENTS

Allie Thomas-Fannin, M.D. student, 2009 – 2010, UofL, Role: mentor, Outcome: abstract/poster at 2010 Research!Louisville and contributions to a manuscript

M. Derek Vaughn, M.D. student, 2011, UofL, Role: SoM Distinction in Research mentor, Outcome: abstract/poster at Research!Louisville and contributions to a manuscript and abstract at Rat Genomics & Models 2001 Annual Meeting

Anna Thamann, M.D. student, 2014, UofL, Role: mentor for T35 ES014559-09 Summer Environmental Health Sciences Research Training, Outcome: abstract/poster at 2014 Research!Louisville.

Alissa Doll, M.D. student, 2015, UofL Health Sciences Research Office Summer Research Program, Role: mentor, Outcome: abstract/poster at 2015 Research!Louisville.

### POSTDOCTORAL

Bharat Devapatla, Ph.D., 2009 – 2011, UofL, Role: mentor, Outcome: Postdoc JGB-Cancer Center

Xin Xu, Ph.D., 2009 – 2013, UofL, Role: mentor, Outcome: Assistant Professor, Weifang Medical University

### PREDOCTORAL

Aaron denDekker, 2008 – 2013, UofL, Role: mentor, Outcome: Postdoc Univ. of Michigan

Ngome Makia, 2009 – 2011, UofL, Role: committee member, Outcome: Postdoc NIH/NIEHS

Timothy Cummins, 2009 – 2011, UofL, Role: committee member, Outcome: Postdoc Univ. of Dundee

Jennifer Sanders, 2010 – 2014, UofL, Role: mentor, Outcome: PhD Scientist at Regenerex, LLC

Saasha A. Le, 2011 – 2016, UofL, Role: mentor, Outcome: PhD

Melissa Metzler, 2012 – 2016, UofL, Role: committee member, Outcome: Postdoc Univ. of Louisville

Nicholas Nelson, 2012 – 2015, UofL, Role: committee member, Outcome: TBD

Tim Barnoud, 2012 – 2015, UofL, Role: committee member, Outcome: Postdoc Wistar Institute

Marcus Stepp, 2013 – Present, UofL, Role: committee member, Outcome: TBD

Madara Ratradiwakara, 2014, Australian National University, Role: committee member, Outcome: PhD

Penn Muluhngwi, 2014 – 2017, UofL, Role: committee member, Outcome: Clinical Chemistry Training Fellow

Lalu Vijayakrishna, 2015 – 2019, UofL, Role: committee member, Outcome: Postdoc

Stephanie Metcalf, 2016 – 2019, UofL, Role: committee member, Outcome: Postdoc Univ. of Indiana

Jon Faugn, 2016 – 2018, UofL, Role: committee member, Outcome: Postdoc at Moffit Cancer Center

Emily Duderstadt, 2017 – Present, UofL, Role: mentor, Outcome: TBD

Justin Kos, 2018 – Present, UofL, Role: committee member, Outcome: TBD

### MASTER'S

John Zhao, 2015 – 2017, UofL, Role: co-mentor, Outcome: Scientist at Bluebird Bio, Boston, Massachusetts

## UNDERGRADUATE

Beth Aperavich, 2003 – 2006, UW-Madison, Role: research supervisor, Outcome: position at Nimblegen  
Corey Cooper, 2005 – 2005, UW-Madison, Role: research supervisor, Outcome: position at Invitrogen  
Louis Gardner, 2006 – 2007, UW-Madison, Role: research supervisor, Outcome: position at Opgen  
Courtney J. Lambring, 2008 – 2010, UofL, Role: research mentor, Outcome: entered dental school  
M. Derek Vaughn, 2009 – 2010, UofL, Role: research mentor, Outcome: entered medical school  
Lucas Deschenes, 2009 – 2011, UofL, Role: research mentor, Outcome: entered medical school  
Kendall Prater, 2010 – 2011, UofL, Role: research mentor, Outcome: entered medical school  
Zachary Martin, 2013 – 2017, UofL, Role: research mentor, Outcome: entered medical school  
Thomas Gordon, 2015, UofL Cancer Education Program (R25 CA134283), Role: research mentor, Outcome: poster presentation  
Sarah McQuaide, 2017, UofL Cancer Education Program (R25 CA134283), Role: research mentor, Outcome: poster presentation, 1st place NCI Cancer Education Program Norbert J. Burzynski Award; entered medical school.

## HIGH-SCHOOL

Kaitlin Mans, 2010, 2011 DuPont Manual High School, Role: science fair project mentor  
Eric Duan, 2010, 2011 DuPont Manual High School, Role: science fair project mentor

## FUNDING

### CURRENT

Title: University of Louisville Cancer Education Program  
Principal Investigator: David W. Hein (University of Louisville)  
Role in Project: Mentor  
Funding Agency: NIH/NCI (R25- CA134283)  
Project Period: April 1, 2017 to March 31, 2022  
Project Award: \$1,593,000 (total)

Title: UofL Environmental Health Sciences Training Program  
Principal Investigator: David W. Hein (University of Louisville)  
Role in Project: Mentor  
Funding Agency: NIH/NIEHS (T32- ES011564)  
Project Period: July 1, 2016 to June 30, 2021  
Project Award: \$2,314,825 (total)

Title: Summer Environmental Health Sciences Training Program  
Principal Investigator: Russell A. Prough (University of Louisville)  
Role in Project: Mentor  
Funding Agency: NIEHS (T35- ES014559)  
Project Period: May 15, 2016 to March 31, 2021  
Project Award: \$186,540 (total)

**COMPLETED**

1. University of Louisville, School of Medicine, Health Sciences Research Office, Bridge Grant, 7/1/2014-6/30/2015, \$30,000.
2. NIH/NCI R01 CA137052, UofL OGMB090514 (David J. Samuelson, PI), "Identifying candidate modifier elements of a breast cancer risk allele", 5/8/2009 – 4/30/2014, \$1,037,500 Total Direct, \$485,251 Total Indirect, 30% effort, 100% collaboration
3. NIH/NIEHS T32 ES011564 (David W. Hein, PI), Environmental Health Sciences Training Program, stipend and tuition for graduate student Jennifer Sanders, 7/1/2012 – 6/30/2014, 0% effort, 0% collaboration.
4. NIH/NIEHS T32 ES011564 (David Hein, PI), Environmental Health Sciences Training Program, stipend and tuition for graduate student Aaron denDekker, 7/1/2010 – 6/30/2012.
5. Research Program Start-up Funds, University of Louisville School of Medicine, Department of Biochemistry and Molecular Biology and the James Graham Brown Cancer Center, 8/1/2007 - 6/30/2012
6. NIH P20 RR024489-01A1 COBRE (Aruni Bhatnagar, PI), Center of Excellence in Diabetes and Obesity Research, 10/1/2008-5/31/2011 (DJ Samuelson, collaborator)
7. Bales Award, University of Louisville School of Medicine Collaborative Matching Grant, "Toward Breast Cancer Susceptibility Gene-Networks Genotype-Environment Interaction" 9/1/2009-8/31/2010, \$20,000
8. Undergraduate Research Grant for M. Derek Vaughn, Office of The Executive Vice President for Research, University of Louisville, 6/1/2009-5/31/2010, \$3,000
9. Undergraduate Research Grant for Courtney J. Lambring, Office of The Executive Vice President for Research, University of Louisville, 6/1/2009-5/31/2010, \$3,000
10. Center for Environmental Genomics & Integrative Biology Pilot Project Award, University of Louisville, "Toward Breast Cancer Susceptibility Gene-Networks Genotype-Environment Interaction", 5/1/2009-4/30/2010 (This was an award to D Samuelson from NIH/NIEHS P30 ES014443, Kenneth Ramos, PI), \$30,000
11. Competitive Enhancement Grant, Office of The Executive Vice President for Research, University of Louisville, 9/1/2008-8/31/2009, \$15,000
12. Center for Environmental Genomics & Integrative Biology Career Development Award, University of Louisville, 4/1/2008-3/31/2009 (This is an award to D Samuelson from NIH/NIEHS P30 ES014443, Kenneth Ramos, PI), \$20,000
13. DAMD17-03-1-0280 DOD - Breast Cancer Research Program Postdoctoral Fellowship, 2003 – 2006, Stipend
14. T32 CA09681-10 NIH/NCI - Molecular Mechanisms of Carcinogenesis Postdoctoral Training Award, 2001 – 2003, Stipend
15. T32 CA09213 NIH/NCI - Cancer Biology Training Grant Predoctoral Fellowship, 1999 – 2001, Stipend
16. E. Ray Cowden Scholarship, 1999
17. The University of Arizona, Graduate Teaching Assistant Stipend, 1996 – 1998
18. Virginia Tech, Graduate Teaching Assistant Stipend, 1990 – 1992

**PENDING**

R01 ES029931 David J. Samuelson (Co-I), "Multi-system investigation of environmental factors contributing to ASD"

R03 CA246031 David J. Samuelson (PI), "Evaluation of Rat *Mcs1b* and Human *5q11.2* Nominated Breast Cancer Genes"

**GRANT PROPOSALS in progress**

R01 David J. Samuelson (PI), "Functional analysis of prioritized breast cancer susceptibility gene *MIER3*"

**PATENTS**

"METHOD OF ANALYZING BREAST CANCER SUSCEPTIBILITY AND RESISTANCE" Inventors: Michael N. Gould, David J. Samuelson, Stephanie Nelson, Jill D. Haag. Patent No. US 7,858,303 issue date 12-28-2010.

**ABSTRACTS AND INVITED PRESENTATIONS****ABSTRACTS AT NATIONAL/INTERNATIONAL CONFERENCES [presenter(s) underlined]****ORAL PRESENTATIONS**

1. Samuelson DJ, Le S, Sanders J, denDekker AD. Rat *Mcs1b*, *Mcs3*, and *Mcs6* are genetic models of female breast cancer risk. Oral Presentation, Complex Trait Community & Rat Genomics & Models Annual Meeting, University of Memphis, Tennessee, June 13 – 17, 2017.
2. Samuelson DJ, Sanders J, Xu X, Vaughn MD, Kemper AF, Kalbfleisch T. Discovery of concordant human-breast and rat-mammary carcinoma susceptibility associated *MCS1B/Mcs1b* gene regulatory elements, Invited Talk, Rat Genomics & Models Annual Meeting, Cold Spring Harbor Laboratory, Cold Spring Harbor, New York, December 11-14, 2013.
3. Samuelson DJ, Sanders J, Xu X, Vaughn D, denDekker AD. Identification of rat *mammary carcinoma susceptibility-1b* QTL candidate genes and elements. Oral Presentation, Rat Genomics & Models Annual Meeting, Cold Spring Harbor Laboratory, Cold Spring Harbor, New York, December 7-10, 2011.
4. Sanders J, Xu X, Kemper AF, Kalbfleisch T, and Samuelson DJ. Mechanistic analysis of rat *mammary carcinoma susceptibility-1b* genetic elements. Oral Presentation, Rat Genomics & Models Annual Meeting, Cold Spring Harbor Laboratory, Cold Spring Harbor, New York, December 7-10, 2011.
5. denDekker AD, Puckett AH, Vaughn MD, Lambring CJ, and Samuelson DJ. Rat *Mcs1b* is a mammary gland autonomous QTL and an ortholog of a breast cancer susceptibility locus on human chromosome *5q*. Oral Presentation, Rat Genomics & Models Annual Meeting, Cold Spring Harbor Laboratory, Cold Spring Harbor, New York, December 2-5, 2009.

6. **Gould MN, Samuelson DJ**, Smits B, and Haag JD. Functional Characterization of a Non-Coding Breast Cancer Susceptibility QTL. Oral Presentation, Rat Genomics & Models Annual Meeting, Cold Spring Harbor Laboratory, Cold Spring Harbor, New York, December 6-9, 2007.
7. **Samuelson DJ**, Nelson SE, Aperavich BA, Haag JD, Trentham-Dietz A, Mau R, Gardner LL, Hampton JM, Pharoah DP, Shah M, Luben RN, Dunning A, Ponder BAJ, and Gould MN. Genetic Interaction within the Compound QTL, *Mcs5a*, a Rat Modifier Who's Human Ortholog Associates with Breast Cancer Risk. Oral Presentation, Rat Genomics & Models Annual Meeting, Cold Spring Harbor Laboratory, Cold Spring Harbor, New York, December 8-11, 2005.
8. **Samuelson DJ**, Aperavich BA, Haag JD, Gardner LL, and Gould MN. Fine-Mapping a Mammary Carcinoma Susceptibility QTL Reveals Three Independently Acting Loci. Oral and Poster Presentation, International Workshop on Encoding Information in DNA Sequences, Okinawa, Japan, 2005.
9. **Samuelson DJ** and Pearson RE. Impact of granddaughter information from son's PTA on the cow's PTA and evidence of bias or errors. *Journal of Dairy Science* 75:Suppl. 1:246, 1992. Oral Presentation, American Dairy Science Association Annual Meeting, Columbus, 1992.
10. **Samuelson DJ**, Pearson RE, and Cassell BG. Accuracy of predicting daughter yield deviation milk from animal model information on relatives for A.I. sampled bulls. *Journal of Dairy Science* 74:Suppl. 1:265, 1991. Oral Presentation, American Dairy Science Association Annual Meeting, Lexington, 1991.

## POSTER PRESENTATIONS

1. **Samuelson DJ**, Sanders J, Xu X. Rat *Mammary carcinoma susceptibility-1b* single-nucleotide-variant *A074-SNV-17* is a candidate *Mcs1b* quantitative trait nucleotide. Poster Presentation, Complex Trait Community 12th Annual Meeting, Madison, Wisconsin, May 28-31, 2013.
2. Xu X, Powell DW, Lambring CJ, Puckett AH, Deschenes L, Prough RA, Poeschla EM, and **Samuelson DJ**. A Conserved Breast Cancer Susceptibility Associated SNP rs7042509 and LEDGF/p75 are Involved in Regulating FBXO10. Poster Presentation, Environmental Epigenomics and Disease Susceptibility, A Keystone Symposium on Molecular and Cellular Biology, Asheville, North Carolina, March 27 – April 1, 2011.
3. **Samuelson DJ**, Xu X, denDekker AD, Sanders J, Kemper AF, Kalbfleisch T. Congenic Mapping and Functional Characterization of a Rat Mammary Carcinoma Susceptibility QTL, *Mcs1b*, Identifies *MAP3K1* and *MIER3* as Candidate Breast Cancer Susceptibility Genes. Poster Presentation, Quantitative Genetics & Genomics Gordon Research Conference, Galveston, Texas, February 20-25, 2011.
4. Smits, BMG, **Samuelson DJ**, Traun BD, Devries TL, Haag JD, and Gould MN. Mechanisms underlying the non-coding breast cancer susceptibility locus *MCS5A*. Poster Presentation, Rat Genomics &

Models Annual Meeting, Cold Spring Harbor Laboratory, Cold Spring Harbor, New York, December 2-5, 2009.

5. **Samuelson DJ**, denDekker AD, and Puckett AH. Rat *Mcs1b* is a comparative genetic model of a human breast cancer susceptibility locus. Poster Presentation, Annual NIEHS P30 Directors' Meeting, University of Pennsylvania, Philadelphia, 2008.
6. **Samuelson DJ**. Rat *Mcs1b* Is A Genetic Model of A Human Chromosome 5 Breast Cancer Susceptibility Locus. Poster Presentation, Mammary Gland Biology, Gordon Research Conference, Italy, 2008.
7. Veillet A, **Samuelson DJ**, Haag JD, and Gould MN. Fine-Mapping and Characterization of the Mammary Carcinogenesis Susceptibility Locus, *Mcs5c*. Poster Presentation, Era of Hope, Department of Defense Breast Cancer Research Program, Philadelphia, 2008.
8. Smits BMG, Haag JD, **Samuelson DJ**, and Gould MN. Characterization of *MCS5A*, a Non-Coding Breast Cancer Susceptibility Locus. Poster Presentation, Era of Hope, Department of Defense Breast Cancer Research Program, Philadelphia, 2008.
9. **Samuelson DJ**, Haag JD, and Gould MN. Rat *Mcs1b* maps to a human breast cancer risk allele. Poster Presentation, Rat Genomics & Models Annual Meeting, Cold Spring Harbor Laboratory, Cold Spring Harbor, New York, December 6-9, 2007.
10. Veillet AL, **Samuelson DJ**, Haag JD, and Gould MN. The mammary carcinogenesis susceptibility locus *Mcs5c* has been mapped to a region devoid of known genes. Poster Presentation, Mammary Gland Biology, Gordon Research Conference, 2007.
11. **Samuelson DJ**, Nelson SE, Aperavich BA, Haag JD, Trentham-Dietz A, Mau R, Gardner LL, Hampton JM, Pharoah DP, Shah M, Luben RN, Dunning A, Ponder BAJ, and Gould MN. The human chromosome 9 region orthologous to *Mcs5a*, a rat compound QTL, contains a breast cancer risk allele. Poster Presentation, American Association for Cancer Research Annual Meeting, Washington DC, 2006.
12. **Samuelson DJ**, Nelson SE, Trentham-Dietz A, Mau R, Hampton JM, Shah M, Luben RN, Pharoah DP, Ponder BAJ, and Gould MN. The rat *mammary carcinoma susceptibility 5a (Mcs5a)* compound QTL and its association with reduced risk for breast cancer in women. Poster Presentation, The Genetics Society of America, 2006.
13. **Samuelson DJ**, Aperavich BA, Haag JD, Gardner LL, and Gould MN. Fine-Mapping a Mammary Carcinoma Susceptibility QTL Reveals Three Independently Acting Loci. Oral and Poster Presentation, International Workshop on Encoding Information in DNA Sequences, Okinawa, Japan, 2005.
14. **Samuelson DJ**, Haag JD, Aperavich BA, Gardner LL, and Gould MN. The Wistar-Kyoto Mammary Carcinoma Susceptibility Locus, *Mcs5*, Contains Three Independent Susceptibility Loci: Two Resistance

Loci and a Locus Conferring Increased Susceptibility. Poster Presentation, Era of Hope, Department of Defense Breast Cancer Research Program, Philadelphia, 2005.

15. Nelson SE, **Samuelson DJ**, Trentham-Dietz A, and Gould MN. A Haplotype Block Map of the Human Homologous Region to a Rat QTL. Poster Presentation, Era of Hope, Department of Defense Breast Cancer Research Program, Philadelphia, 2005.
16. **Samuelson DJ**, Haag JD, Aperavich BA, Lopez-Guajardo CC, and Gould MN. The Wistar-Kyoto Mammary carcinoma susceptibility locus, *Mcs5*, contains three independent susceptibility loci: two resistance loci and a locus conferring increased susceptibility. Poster Presentation, 24th Congress of the International Association for Breast Cancer Research, Sacramento, 2003.
17. **Samuelson DJ**, Powell MB, Lluria-Prevatt M, and Romagnolo DF. Kinetics of phorbol-ester stimulated production of reactive oxygen species detected with lucigenin and 2', 7'-dichlorofluorescein in cancer cells. Poster Presentation, American Association for Cancer Research Annual Meeting, San Francisco, 2000.

#### **ABSTRACTS AT REGIONAL/LOCAL CONFERENCES [presenter(s) underlined]**

1. McQuaide S, Duderstadt EL, and **Samuelson DJ**. Genotypic Analysis of Mammary Carcinoma Susceptibility 3 Nominated Gene Expression Levels in Rat Mammary Glands. Poster Presentation, NCI Cancer Education Program, University of Louisville, Louisville, Kentucky, August 4, 2017 and Research!Louisville, University of Louisville, Louisville, Kentucky, September 11-15, 2017.
2. Gene Expression Levels in Rat Mammary Glands."Ley S, **Samuelson D**. A 29MB region of *Mcs3*, a mammary carcinoma susceptibility QTL, reduces mammary carcinoma susceptibility. Poster Presentation, Research!Louisville, Louisville, Kentucky, October 27-30, 2015.
3. Gordon T, **Samuelson D**. Developing a CRISPR/Cas9 system to genetically-edit *Mcs1b* candidate mammary carcinoma susceptibility variants. Poster Presentation, Research!Louisville, Louisville, Kentucky, October 27-30, 2015.
4. Doll A, **Samuelson D**. Use of CRISPR/cas9 system to target *Mcs1b* for further genetic breast cancer investigation. Poster Presentation, Research!Louisville, Louisville, Kentucky, October 27-30, 2015.
5. Thamann A, Kareparembil S, **Samuelson D**. Breast Cancer Susceptibility Genes: Characterizing *MIER3*. Poster Presentation, Research!Louisville, Louisville, Kentucky, September 16, 2014.
6. Vaughn MD, Xu X, **Samuelson DJ**. Breast Cancer Susceptibility Candidate Gene *MIER3* Encodes a Nuclear Protein. Poster Presentation, Research!Louisville, Louisville, Kentucky, October 10-14, 2011.
7. Sanders J, Xu X, Kemper A, Kalbfleisch T, and **Samuelson DJ**. Identification and mechanistic analysis of rat mammary carcinoma susceptibility-1b genetic elements. Poster Presentation, Research! Louisville, Kentucky, October 10-14, 2011 AND 10<sup>th</sup> Annual James Graham Brown Cancer Center Retreat, Louisville, Kentucky, October 28, 2011.

8. Xu X, Lambring C, Puckett A, Deschenes L, Powell D, and **Samuelson DJ**. A conserved breast cancer susceptibility associated SNP *rs7042509* is involved in regulation of *FBXO10* upon heat and oxidative stress by affecting LEDGF/p75 binding. Poster Presentation, Research! Louisville, Kentucky, October 11-15, 2010 AND 9<sup>th</sup> Annual James Graham Brown Cancer Center Retreat, Louisville, Kentucky, November 5, 2010.
9. Devapatla BR, Thomas-Fannin A, Puckett AH, Hassan S, Vaughn MD, Yan J, and **Samuelson DJ**. Genetic Variation in a potential immune component of rat mammary cancer susceptibility. Poster Presentation, 8<sup>th</sup> Annual James Graham Brown Cancer Center Retreat, Louisville, Kentucky, November 6, 2009.
10. Xu X, Lambring CJ, Puckett AH, and **Samuelson DJ**. Molecular mechanisms of breast cancer susceptibility associated and human-rat conserved SNP *rs7042509*. Poster Presentation, 8<sup>th</sup> Annual James Graham Brown Cancer Center Retreat, Louisville, Kentucky, November 6, 2009.
11. Thomas-Fannin A, Devapatla B, and **Samuelson DJ**. A potential role of the immune system in breast cancer susceptibility. Poster Presentation, Research! Louisville, Louisville, Kentucky, October 12-16, 2009.
12. denDekker AD, Puckett AH, Lambring CJ, Vaughn MD, and **Samuelson DJ**. Rat *Mcs1b* is mammary gland autonomous QTL and an ortholog of a breast cancer susceptibility locus on human chromosome 5q. Poster Presentation, 8<sup>th</sup> Annual James Graham Brown Cancer Center Retreat, Louisville, Kentucky, November 6, 2009 and Research! Louisville, Louisville, Kentucky, October 12-16, 2009.
13. denDekker AD, Puckett AH, and **Samuelson DJ**. Rat *Mcs1b* is a comparative genetic model of a human breast cancer susceptibility locus. Poster Presentation, 7<sup>th</sup> Annual James Graham Brown Cancer Center Retreat, Louisville, Kentucky, October 29, 2008.
14. **Samuelson DJ**, Puckett AH. Rat *Mcs1b* is a genetic model of a human chromosome 5 breast cancer susceptibility locus. Poster Presentation, Research! Louisville, Louisville, Kentucky, October 20-24, 2008.

#### INVITED PRESENTATIONS

1. "Scientific Rigor, Reproducibility, and Experimental Design", University of Louisville Responsible Conduct of Research Seminar Series, University of Louisville, Louisville, Kentucky, June 6, 2018 with co-presenters Drs. Peter Quesada and Shesh Rai.
2. "Rat Genetic Models of Female Breast Cancer Risk", James Graham Brown Cancer Center, University of Louisville, Louisville, Kentucky, May 10, 2017.
3. "Discovery of concordant human-breast and rat-mammary carcinoma susceptibility associated *MCS1B/Mcs1b* gene regulatory elements", Rat Genomics & Models Annual Meeting, Cold Spring Harbor Laboratory, Cold Spring Harbor, New York, December 11-14, 2013.
4. "I'll Have Another Rat to Win the Race Against Breast Cancer", Department of Biochemistry & Molecular Biology, University of Louisville, Kentucky, May 14, 2012.
5. "Comparative Environmental Genomics of Common Breast Cancer Susceptibility Alleles", NIH/NIEHS Center Director's Meeting, Louisville, Kentucky, October 20, 2010.
6. "Breast Cancer Susceptibility Research", University of Louisville Chapter of Alpha Epsilon Delta, Health Sciences Student Organization, September 29, 2010.

7. "Rat Orthologs of Human Breast Cancer Susceptibility Alleles", Department of Bioinformatics & Biostatistics, University of Louisville, Kentucky, February 19, 2010.
8. "Breast Cancer Risk Complexity: Rats to the Rescue", Department of Biochemistry & Molecular Biology, University of Louisville, Kentucky, November 30, 2009.
9. "Rat *Mcs1b* and *Mcs5a* Comparative Genetics and Molecular Biology of Human Breast Cancer Susceptibility Loci *5q* and *9p*", James Graham Brown Cancer Center, University of Louisville, Louisville, Kentucky, July 23, 2009.
10. "Comparative and Systems Approaches to Understanding Breast Cancer Susceptibility", NIH/NIEHS Center for Environmental Genomics and Integrative Biology Program Project Review Meeting, University of Louisville, Louisville, Kentucky, May 27, 2009.
11. "Comparative and Systems Approaches to Understanding Breast Cancer Susceptibility", Mathematics, Bioinformatics, Biostatistics, and Computational Biology Mini Symposium sponsored by NIH/NIEHS Center for Environmental Genomics and Integrative Biology, University of Louisville, Louisville, Kentucky, April 3, 2009.
12. "Comparative Genetics of Breast Cancer Susceptibility", Center for Genetics and Molecular Medicine, University of Louisville, Louisville, Kentucky, June 17, 2008.
13. "Rat Genetics and Human Breast Cancer Susceptibility", *Poa Pratensis* Molecular Targets Program, James Graham Brown Cancer Center, University of Louisville, Louisville, Kentucky, November 1, 2007.
14. "Rat Models of Human Breast Cancer Genetic Susceptibility", Human Genetics Program, Fox Chase Cancer Center, Philadelphia, Pennsylvania, March 1, 2007.
15. "Rat Genetic Models of Human Breast Cancer Susceptibility: A Comparative Genomics Approach to Identify Genetic Risk Factors", Department of Biochemistry & Molecular Biology, University of Louisville School of Medicine, Louisville, Kentucky, October 18, 2006.
16. "Rat Models of Human Breast Cancer Genetics", Department of Biochemistry, University of North Dakota, Grand Forks, North Dakota, April 24, 2006.

## PUBLICATIONS

### PEER-REVIEWED PUBLICATIONS

1. Le S\*, Martin ZC\*, and **Samuelson DJ**. Physical confirmation and comparative genomics of the rat *Mammary carcinoma susceptibility 3* quantitative trait locus. *G3: Genes, Genomes, Genetics*, 7(6):1767-1773, 2017. PMID: 28391240 PMCID: PMC5473756
2. Stepp MW, Doll MA, **Samuelson DJ**, Sanders MAG, States JC, Hein DW. Congenic rats with higher arylamine N-acetyltransferase 2 activity exhibit greater carcinogen-induced mammary tumor susceptibility independent of carcinogen metabolism. *BMC Cancer*, 17: 233, 2017. Epub doi. 10.1186/s12885-017-3221-9 <http://rdcu.be/qxZk>

3. Xu X, Ren X, Wang H, Zhao Y, Yi Z, Wang K, Zhang S, Wang L, **Samuelson DJ**, Hu Z. Identification and Functional Analysis of Acute Myeloid Leukemia Susceptibility Associated Single Nucleotide Polymorphisms at Non-protein Coding Regions of RUNX1, *Leukemia & Lymphoma* 57(6):1442-9, 2016. doi: 10.3109/10428194.2015.1094698. PMID: 26374622
4. Xu X\*, Prough RA, and **Samuelson DJ**. Differential 12-O-tetradecanoylphorbol-13-acetate-induced activation of rat mammary carcinoma susceptibility *Fbxo10* variant promoters *via* a PKC-AP1 pathway. *Molecular Carcinogenesis* 54:134-147, 2015. doi: 10.1002/mc.22081. PMID: 24008983.
5. Sanders J\* and **Samuelson DJ**. Significant overlap between human genome-wide association-study nominated breast cancer risk alleles and rat mammary cancer susceptibility loci. *Breast Cancer Res.* 16(1):R14, 2014. PMID: 24467842.
6. Xu X\*, Powell DW, Lambring CJ\*, Puckett A, Deschenes L\*, Prough RA, Poeschla EM, and **Samuelson DJ**. Human *MCS5A1* Candidate Breast Cancer Susceptibility Gene *FBXO10* is Induced by Cellular Stress and Correlated with Lens Epithelium-Derived Growth Factor (LEDGF). *Molecular Carcinogenesis* 53:300-313, 2014. doi: 10.1002/mc.21977. PMID: 23138933.
7. denDekker AD\*<sup>†</sup>, Xu X\*<sup>†</sup>, Vaughn MD\*, Puckett AH, Gardner LL, Lambring CJ\*, Deschenes LE\*, and **Samuelson DJ**. Rat *Mcs1b* is concordant to the genome wide association identified breast cancer risk locus at human *5q11.2* and *Mier3* is a candidate cancer susceptibility gene. *Cancer Research* 72(22):6002-12, 2012. PMID: 22993404
8. Devapatla B\*, Sanders J\*, and **Samuelson DJ**. Genetically determined inflammatory-response related cytokine and chemokine transcript profiles between mammary carcinoma resistant and susceptible rat strains. *Cytokine* 2012; 59(2):223-227. PMID: 22609213
9. Smits BM, Traun BD, Devries TL, Tran A, **Samuelson D**, Haag JD, Gould M. An insulator loop resides between the synthetically interacting elements of the human/rat conserved breast cancer susceptibility locus *MCS5A/Mcs5a*. *Nucleic Acids Research* 2012; 40(1):132-147. PMID: 21914726
10. Smits BM<sup>†</sup>, Sharma D<sup>†</sup>, **Samuelson DJ**<sup>†</sup>, Woditschka S, Mau B, Haag JD, and Gould MN. The non-coding breast cancer susceptibility locus *Mcs5a* acts in a non-mammary cell-autonomous fashion through the immune system and modulates T-cell homeostasis and functions. *Breast Cancer Research* 2011; 13(4): R81. doi:10.1186/bcr2933. PMID: 21846333
11. Sanders J\*<sup>†</sup>, Haag JD<sup>†</sup>, and **Samuelson DJ**. Physical confirmation and mapping of overlapping rat mammary carcinoma susceptibility QTLs, *Mcs2* and *Mcs6*. *PLoS One* 2011; 6(5): e19891. doi:10.1371/journal.pone.0019891. PMID: 21625632
12. Veillet AL, Haag JD, Remfert JL, Meilahn AL, **Samuelson DJ**, and Gould MN. *Mcs5c*: A Mammary Carcinoma Susceptibility Locus Located in a Gene Desert that Associates with *Tenascin C* Expression. *Cancer Prevention Research* 2011; 4:97-106. PMID: 21205740
13. **Samuelson DJ**, Hesselton SE, Aperavich BA, Zan Y, Haag JD, Trentham-Dietz A, Hampton JM, Mau B, Chen K, Baynes C, Khaw KT, Luben RN, Perkins B, Shah M, Pharoah PD, Dunning AM, Easton DF, Ponder BA,

- and Gould MN. Rat *Mcs5a* is a compound QTL with orthologous human loci that associate with breast cancer risk. *Proc Natl Acad Sci U S A*. 2007; 104: 6299-304. PMID: 17404222
14. **Samuelson DJ**, Aperavich BA, Haag JD, Gould MN. Fine Mapping Reveals Multiple Loci and a Possible Epistatic Interaction within the Mammary Carcinoma Susceptibility Quantitative Trait Locus, *Mcs5*. *Cancer Res*. 2005; 65: 9637-42. PMID: 16266982
  15. Haag JD, Shepel LA, Kolman BD, Monson DM, Benton ME, Watts KT, Waller JL, Lopez-Guajardo CC, **Samuelson DJ**, Gould MN. Congenic rats reveal three independent Copenhagen alleles within the *Mcs1* quantitative trait locus that confer resistance to mammary cancer. *Cancer Res*. 2003; 63: 5808-12. PMID: 14522903
  16. **Samuelson DJ**, Haag JD, Lan H, Monson DM, Shultz MA, Kolman BD, Gould MN. Physical evidence of *Mcs5*, a QTL controlling mammary carcinoma susceptibility, in congenic rats. *Carcinogenesis* 2003; 24: 1455-60. PMID: 12844486
  17. **Samuelson DJ**, Powell MB, Lloria-Prevatt M, Romagnolo DF. Transcriptional activation of the *gp91phox* NADPH oxidase subunit by TPA in HL-60 cells. *J Leukoc Biol*. 2001; 69: 161-8. PMID: 11200061
  18. **Samuelson DJ**, Denise SK, Roffler R, Ax RL, Armstrong DV, Romagnolo DF. Response of Holstein and Brown Swiss cows fed alfalfa hay-based diets to supplemental methionine at two stages of lactation. *J Dairy Sci*. 2001; 84: 917-28. PMID: 11352168
  19. **Samuelson DJ**, Pearson RE. Accuracy of predicting genetic merit from pedigree information for bulls entering stud sampling programs. *J Dairy Sci*. 1995; 78: 2057-66. PMID: 8550915
  20. **Samuelson DJ**. How stable are the PTA's of A.I. sires? *Hoard's Dairyman* 139(4):136, 1994.

#### NON-PEER-REVIEWED PUBLICATIONS

21. **Samuelson DJ**. Changes to genetic evaluations for production and type coming in January 1995. *Genetic Visions* 10(7):1, 1994 (reprinted in the *Jersey Journal*).
22. **Samuelson DJ**. Which selection index really maximizes income? *Horizons*, 1(4):27, 1995.

#### PENDING PUBLICATIONS

23. denDekker\* AD, Duderstadt\*, EL, Sanders, MAG, Shull, JD, and **Samuelson DJ**. Effect of donor tissue preparation method on rat ectopic mammary carcinoma susceptibility. *Cancer Letters, In Preparation* (2019)
24. Duderstadt\*, EL, Sanders, MA, and **Samuelson DJ**. Expression of p21-activated kinase (*Pak1*) in rat mammary cancer tumorigenesis. *Disease Models & Mechanisms, In Preparation* (2019)

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## OTHER PUBLICATIONS AND WRITTEN WORK

### Book Chapter

**Samuelson DJ.** Inherited Susceptibility to Complex Disease. *Comprehensive Toxicology, 2nd Edition*, Publisher: Oxford Elsevier, Editor: Charlene A. McQueen, Volume Editor: Kenneth S. Ramos, pages 297-323, 2010 ISBN: 9780080468686 e-ISBN: 9780080468846

### Doctoral Dissertation

**Samuelson DJ.** Molecular Mechanisms of Reactive Oxygen Species Production: Role of Activator Protein-1 Mediated Transcription of gp91phox, A Subunit of The Superoxide Anion Producing Phagocyte NADPH Oxidase. Ph.D. Dissertation. University of Arizona Library Call # Micro fiche E9791 2001 282, Publisher: University of Arizona, Tucson, Arizona, 2001.

### Master's Thesis

**Samuelson DJ.** Accuracy of predicting genetic merit of A.I. sampled bulls from pedigree information and the impact of son's proof on dam's PTA. Unpublished Thesis. Virginia Polytechnic Institute and State University, Blacksburg, VA, 1992.