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CURRICULUM VITAE

Aron Geurts PhD

Professor
Department of Physiology

OFFICE ADDRESS:

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EDUCATION:

09/1995 - 06/1999 B.S. Genetics and Cell Biology, University of Minnesota - Twin Cities, Minneapolis, MN
09/2001 - 04/2006 Ph.D. Molecular, Cellular, Developmental Biology and Genetics, University of Minnesota - Twin Cities, Minneapolis, MN

POSTGRADUATE TRAINING AND FELLOWSHIP APPOINTMENTS:

06/2006 - 07/2009 Postdoctoral Fellow - Human Molecular Genetics Center, Physiology, Medical College of Wisconsin, 8701 Watertown Plank Road, Milwaukee, WI 53226
08/2006 Rat Pronuclear Microinjection Training, The Transgenic Animal Core, University of Michigan

FACULTY APPOINTMENTS:

07/01/2009 - 07/01/2012 Assistant Professor, Physiology, Medical College of Wisconsin, 8701 Watertown Plank Road, Milwaukee, WI 53226
07/01/2012 - 06/30/2021 Associate Professor, Physiology, Medical College of Wisconsin, 8701 Watertown Plank Road, Milwaukee, WI 53226
07/01/2021 - Present Professor with Tenure, Physiology, Medical College of Wisconsin, 8701 Watertown Plank Rd, Milwaukee, WI 53226

AWARDS AND HONORS:

2007 Fellowship in Physiological Genomics, American Physiological Society
2011 New Innovator Award, Office of the Director of the National Institutes of Health
2015 Steven Cullen Health Heart Scholar Award, Cardiovascular Center - MCW
2019 Community of Innovators award, Medical College of Wisconsin
2023 Outstanding Graduate School Educator, Medical College of Wisconsin

MEMBERSHIPS IN HONORARY AND PROFESSIONAL SOCIETIES:

2012 - Present American Physiological Society (Regular member)
2016 - Present Genome Writers Guild (Founder and Treasurer)
2017 - Present International Society for Transgenic Technology (Regular member)
2021 - Present American Heart Association (General Professional)
2022 - Present Medical College of Wisconsin (Society of Research Excellence)

EDITORSHIPS/EDITORIAL BOARDS/JOURNAL REVIEWS:

Journal Review

2007 - Present Nucleic Acids Research
2008 - Present Physiological Genomics
2011 - Present PLoS One
2011 - Present Science Translational Medicine

2011 - 2013 Frontiers in Physiological Genomics
2011 - Present Cell and Molecular Life Sciences
2013 - Present Genes to Cells
2013 - Present The Prostate
2013 - Present Methods
2013 - Present eLife
2014 - Present Disease Models and Mechanisms
2015 - Present Scientific Reports
2016 - Present Human Gene Therapy
2016 - Present Disease Models and Mechanisms
2017 - Present Nature Communications
2017 - Present BMC Biology
2017 - Present Stem Cell Reports
2018 - Present PLoS Genetics
2018 - Present Nature Reviews Nephrology
2020 - Present Journal of Advanced Research
2020 - Present Renal Failure
2020 - Present Journal of Biomedical Research
2021 - Present BMC Biology
2021 - Present BMC Biotechnology
2021 - Present Genes
2021 - Present European Journal of Pharmacology
2022 - Present Scientific Reports
2023 - Present Animals

LOCAL/REGIONAL APPOINTED LEADERSHIP AND COMMITTEE POSITIONS:

2012 - 2018 Voting member, Institutional Biosafety Committee, Medical College of Wisconsin
2014 - 2016 Research faculty representative, Cardiovascular Center Roadmap Advisory Board, Medical College of Wisconsin
2014 - 2020 Reviewer, Research Affairs Committee, Medical College of Wisconsin
2015 - 2016 Chair, Research Affairs Committee, Medical College of Wisconsin
2016 - 2018 Chair, IDP Directors Group subcommittee on curriculum change, Medical College of Wisconsin
2016 - 2019 Department of Physiology representative, IDP Directors Group, Medical College of Wisconsin
2016 - 2018 Chair, Institutional Biosafety Committee, Medical College of Wisconsin
2019 - Present Course Director, Course Directors Group, IDP

NATIONAL ELECTED/APPOINTED LEADERSHIP AND COMMITTEE POSITIONS:

2011 - 2015 Member, External Advisory Committee, Mayo Translational Polycystic Kidney Disease Center
2013 - 2015 Organizer, Organizing Committee, Rat Genomics and Models Meeting, Cold Spring Harbor
Grant Reviewer, ZDA1 JXR - G (02) IDENTIFICATION OF GENE VARIANTS FOR ADDICTION RELATED TRAITS BY NEXT-GEN SEQUENCING IN MODEL ORGANISMS SELECTIVELY BRED FOR ADDICTION TRAITS (UH2/UH3), NIH
Grant Reviewer, ZDA1 JXR - G (10) CUTTING-EDGE BASIC RESEARCH AWARDS (CEBRA) (R21), NIH
Grant Reviewer - stage 1, ZRG1 RCCS - L (70) NIH DIRECTOR'S NEW INNOVATOR AWARD PROGRAM (DP2), NIH
Grant Reviewer, ZDA1 GXM - A (09) CUTTING-EDGE BASIC RESEARCH AWARDS (CEBRA) (R21), NIH

RESEARCH GRANTS/AWARDS/CONTRACTS/PROJECTS:

Active

<u>Peer Review</u>

Title:	Hybrid rat diversity program
Source:	NIH-ORIP
Role:	Co-Investigator
PI:	Melinda Dwinell

Dates:	08/01/2018 - 03/31/2026
Direct Funds:	$6,093,649 (All years, salary support)
Title:	Dissemination and Coordination Center for the SCGE Consortium
Source:	NIH-NHGRI
Role:	Co-Investigator
PI:	Melinda Dwinell
Dates:	12/01/2018 - 11/30/2024
Direct Funds:	$9,902,054 (All years, salary support)
Title:	ROLE OF CHROMATIN CONFORMATION IN BP REGULATION
Source:	NIH-NHLBI
Role:	Project Leader
PI:	Aron Geurts
Dates:	08/15/2020 - 07/31/2025
Direct Funds:	$345,145 (FY1)
Title:	Mechanisms of Inflammation in Sickle Cell Disease
Source:	NIH-NHLBI
Role:	Co-Investigator
PI:	Kirkwood Pritchard
Dates:	04/01/2021 - 03/31/2025
Direct Funds:	$2,091,652 (All years, salary support)
Title:	Transformative rat models to study sex differences in disease
Source:	NIH-ORIP
Role:	Multi-PI
PI:	Arthur Arnold, Melinda Dwinell, Aron Geurts
Dates:	06/01/2021 - 03/31/2026
Direct Funds:	$670,572 (All years, subaward)
Title:	Transcriptomics of adherent endothelial cells for improved endothelialization of small-diameter vascular grafts
Source:	NIH-NHLBI
Role:	Co-Investigator
PI:	Brandon Tefft
Dates:	01/01/2022 - 12/31/2026
Direct Funds:	$1,953,058 (All years, salary support)
Title:	Enlisting HPV integration events to illuminate drivers and target treatment in invasive cervical cancer
Source:	NIH/NCI
Role:	Co-investigator
PI:	Janet Rader
Dates:	07/15/2022 - 08/31/2027
Direct Funds:	$2,139,297 (salary support)
Title:	Leveraging genetic mapping for personalized targeting of breast cancer

	microenvironment
Source:	NIH/NCI
Role:	Co-investigator
PI:	Amit Joshi
Dates:	09/15/2022 - 07/31/2027
Direct Funds:	$1,784,250 (salary support)
Title:	RIGERR: Resources for Investigating Genetic and Epigenetic Regulation of Renal Disease
Source:	NIH/NIDDK
Role:	Co-investigator
PI:	Mingyu Liang
Dates:	09/15/2022 - 07/31/2027
Direct Funds:	$4,999,999 (salary support)

Prior

Peer Review

Title:	Tissue-Specific Mutagenesis in Rat as an In Vivo Tool for Colon Cancer Gene Discovery
Source:	Transposagen Biopharmaceuticals
Role:	Co-Investigator
PI:	Eric Ostertag
Dates:	07/01/2009 - 06/30/2011
Title:	Genetic and Cellular Basis of Resistance/Sensitivity to Myocardial Ischemia
Source:	NIH-NHLBI
Role:	Co-Investigator
PI:	Howard Jacob
Dates:	08/01/2009 - 07/31/2013
Title:	CRE Rat For Psychiatric Disorders
Source:	NIH-NIDA
Role:	Principal Investigator
PI:	Aron Geurts, Matthew Hodges
Dates:	04/01/2011 - 03/31/2013
Direct Funds:	$250,000
Title:	Genetic & Physiological Basis of Salt-sensitive Hypertension
Source:	NIH-NHLBI
Role:	Co-Investigator
PI:	Allen Cowley
Dates:	07/15/2011 - 06/30/2017
Title:	The Virtual Rat Project
Source:	NIH-NIGMS
Role:	Co-Investigator
PI:	Daniel Beard
Dates:	09/30/2011 - 07/31/2016
Title:	Advanced Genetic Engineering Technology Development

Source:	NIH-Office of the Director
Role:	Principal Investigator
PI:	Aron Geurts
Dates:	09/30/2011 - 08/29/2016
Direct Funds:	$1,500,000 (All years)

Title:	Discovery and Functional Studies of Genes for T1D GWAS Susceptibility Loci
Source:	NIH-NIDDK
Role:	Multi-PI
PI:	Aron Geurts, Yi-Guang Chen
Dates:	09/15/2012 - 06/14/2017
Direct Funds:	$2,880,377 (All years)

Title:	ROLE OF SYSTEM XC- IN ADDICTION: DEVELOPING & PHENOTYPING A SLC7A11 KNOCKOUT RAT
Source:	NIH-NIDA
Role:	Multi-PI
PI:	David Baker
Dates:	02/01/2013 - 01/31/2016

Title:	GENE TARGETED RAT RESOURCE FOR THE STUDY OF COMPLEX DISEASE
Source:	NIH-NHLBI
Role:	Co-Investigator
PI:	Melinda Dwinell
Dates:	09/01/2013 - 05/31/2018
Direct Funds:	$8,709,789 (All years, salary support)

Title:	RENAL MECHANISMS IN BLOOD PRESSURE CONTROL
Source:	NIH-NHLBI
Role:	Co-Investigator
PI:	Allen Cowley
Dates:	09/01/2013 - 12/31/2017

Title:	Oxidant Stress in the Nrf2 Knockout Rat
Source:	NIH-NHLBI
Role:	Co-Investigator
PI:	Julian Lombard
Dates:	04/15/2014 - 01/31/2017

Title:	FLEXIBLE AND INDUCIBLE GENE KNOCKDOWN IN RAT NEURONS: BDNF AND DRUG ADDICTION
Source:	NIH-NIDA
Role:	Co-Investigator
PI:	Margaret Wong-Riley
Dates:	04/01/2015 - 06/30/2018

Title:	Systems Genetics of Adiposity Traits in Outbred Rats
Source:	NIH-NIDDK

Role:	Co-Investigator
PI:	Leah Solberg-Woods
Dates:	07/01/2015 - 06/30/2020
Direct Funds:	$426,276 (Salary support only)

Title:	miRNA mediated cross-talk in CSR4: the role of the miR-21-5P/PPAR-alpha pathway
Source:	NIH-NHLBI
Role:	Co-investigator
PI:	Alison Kriegel
Dates:	07/01/2016 - 04/30/2021
Direct Funds:	$1,947,713 (All years, Salary support)

Title:	Renal ion channels in the control of blood pressure
Source:	NIH-NHLBI
Role:	Co-investigator
PI:	Alexander Staruschenko
Dates:	01/15/2017 - 12/31/2021
Direct Funds:	$5,794,537 (All years, salary support)

Title:	Genetic impact of MYH6 variants in a patient-derived in vitro model of congenital heart disease
Source:	AHW-REP
Role:	Co investigator
PI:	Mike Mitchell
Dates:	02/01/2017 - 01/31/2019
Direct Funds:	$200,000 (All years, salary support)

Title:	Transformation of mitochondrial Vdac1 between protective and lethal states
Source:	NIH-NHLBI
Role:	Co-investigator
PI:	Wai-Meng Kwok
Dates:	04/01/2017 - 03/28/2021
Direct Funds:	$2,909,269 (All years, salary support)

Title:	Development of Mas receptor knockout rat resource
Source:	NIH-Office of the Director
Role:	Co-investigator
PI:	Julian Lombard
Dates:	08/01/2017 - 12/31/2019
Direct Funds:	$402,325 (All years, salary support)

Title:	RENAL MECHANISMS IN BLOOD PRESSURE CONTROL
Source:	NIH-NHLBI
Role:	Core Leader
PI:	Allen Cowley
Dates:	01/01/2018 - 08/30/2022
Direct Funds:	$2,324,678 (FY1)

Title:	Sry rat models for XX and XY phenotypic differences

Source:	NIH-ORIP
Role:	Multi-PI
PI:	Art Arnold, Melinda Dwinell, Aron Geurts
Dates:	08/01/2018 - 07/31/2021
Direct Funds:	$202,788 (subcontract)
Title:	Developing Cone-Dominant Retinal Disease Models as a Resource for Translational Vision Research
Source:	NIH-NEI
Role:	Co-Investigator
PI:	Joe Carroll
Dates:	09/01/2018 - 08/31/2023
Direct Funds:	$6,250,219 (All years, salary support)
Title:	DEFINING HPV INTEGRATION SITES OF UNKNOWN SIGNIFICANCE IN INVASIVE CERVICAL CANCER
Source:	NIH-NCI
Role:	Co-Investigator
PI:	Janet Rader
Dates:	09/01/2020 - 08/31/2022
Direct Funds:	$257,125 (All years, salary support)

INVITED LECTURES/WORKSHOPS/PRESENTATIONS:

Local

Aron Geurts, Modeling complex disease in rodent models using cutting-edge genome engineering technologies, Nephrology Grand Rounds, MCW, 08/20/2014

Aron Geurts, Principles of Engineering: Digital Editing of Genomes, Joint Biomedical Engineering Seminar Series, MCW, 09/25/2015

Aron Geurts, CRISPR gene editing, High school, 05/15/2017

Aron Geurts, Practical Applications of CRISPR, Vasculata 2019, MCW, 07/15/2019

Aron Geurts, Uncovering novel mechanisms for complex traits, Precision Cardiovascular Medicine Signature Group, Cardiovascular Center MCW, 12/03/2019 - Present

Regional

Aron Geurts, Breaking into the rat genome with a jumping gene and a pair of scissors, Mayo Research Clinic, 07/09/2010

Aron Geurts, Empowering genetic manipulation inthe rat model to uncover human disease mechanisms, Seminar series, University of Louisville, Louisville, KY, 03/15/2012

Aron Geurts, Student-invited Lecture: Empowering rodent models through targeted engineering directly in the embryo, Annual Mouse Genomic Symposium, Northwestern Universtiy, Chicago, IL, 05/13/2012

Aron Geurts, Empowering laboratory models through genetic engineering to acclerate discovery, Nutritional Sciences Seminar Series, University of Wisconsin, Madison, WI, 11/28/2012

Aron Geurts, Empowering genetic manipulation in model organisms to uncover human disease mechanisms, 6th Aquatic Animal Models for Human Disease/Midwest Zebrafish Meeting, University of Wisconsin - Milwaukee, 07/01/2013

Aron Geurts, Editing Genomes, MSOE, 07/10/2014

Aron Geurts, Edting Genomes: GMO in biomedical research, Wisconsin Lutheran College, 07/22/2014

Aron Geurts, Zinc-Finger Nucleases, TALENs, and CRISPR... (Oh my!) Genome engineering in a brave new world, Science Cafe, UWM Innovation Center, 11/18/2014

Aron Geurts, Transforming a laboratory species through genome engineering, Genome Engineering 2017, Minneapolis, MN, 06/14/2017

Aron Geurts, CRISPR: Engineering Genomes in the Lab and Clinic, Milwaukee Academy of Medicine,

Milwaukee, WI, 03/20/2018
Aron Geurts, CRISPR/Cas9: how we get from, GWG Satellite event, The Ohio State University, 03/30/2018
San Diego, CA, Gene Editing in Rats: what We've Learned from Unlocking the Genome of a Valuable Laboratory Species, University of Minnesota, 10/02/2019

National

Aron Geurts, New strategies to target the rat genome - role of zinc finger nucleases, Council on High Blood Pressure Reseearch, Chicago, IL, 09/01/2009
Aron Geurts, Howard Jacob, Targeted gene disruption in rats using zinc finger nucleases, Animal Models and Their Value in Predicting Efficacy and Toxicity, The New York Academy of Sciences, New York, NY, 09/15/2011
Aron Geurts, The state of the art of genetic engineering in laboratory rats, Kidney Week 2011: Advances in Research Conference: MicroRNA, Philadelphia, PA, 11/09/2011
Aron Geurts, Gene editing in rats: advances and opportunities, UTHSC, 09/29/2014
Aron Geurts, Empowering the Laboratory Rat through Advances in Genome Engineering, IU O'Brien Center Annual Retreat, IUPUI, 04/28/2015
Aron Geurts, Genetic Engineering in rat models: progress and challenges for addiction and behavioral research, NIDA Center for GWAS in Outbred Rats Annual Retreat, Chicago, 06/29/2015
Aron Geurts, 10 years of manipulating the rat genome – where are we and what have we learned?, Physiological Genomics Symposium, 04/24/2017
Aron Geurts, Hybrid rat diversity program (HRDP): A rat resource for systems genetics, Complex Trait Consortium Meeting, San Diego, CA, 06/09/2019

International

Aron Geurts, Targeted modification of the rat genome using zinc-finger nucleases, Rat Genomics & Models Meeting, Wellcome Trust Sanger Center, Hinxton, U.K., 12/2008
Aron Geurts, Targeted heritable gene disruption in the rat by embryo injection of designed zinc finger nucleases, Funcional Annotation of Genomes, Banff, Alberta, Canada, 04/25/2009
Aron Geurts, Targeted modification of the rat genome using zinc-finger nucleases, FASEB, New Orleans, LA, 04/2009
Aron Geurts, Heritable, targeted gene disruption in the rat after embryo microinjection of designed zinc-finger nucleases, Conferenece on Genome Engineering, Minneapolis, MN, 06/2009
Aron Geurts, Gene knockout in the rat embryo using designed zinc-finger nucleases, 5th Annual Quebec Transgenic Research Network Symposium, Montreal, Quebec, Canada, 11/2009
Aron Geurts, That was yesterday, this is tomorrow – building the next generation of disease models, University of Edinburgh, 03/16/2010
Aron Geurts, Prospects for the rat as a disease model through genetic engineering, 6th International ISP Congress and 14th International SHR Symposium, Montreal, Quebec, Canada, 09/22/2010 - 09/25/2010
Aron Geurts, Howard Jacob, The International Society for Transgenic Technologies (ISTT), Tampa Bay, FL, 10/25/2011
Aron Geurts, Empowering laboratory models through genetic engineering to accelerate discovery, ZFN workshop, Heidelberg, Germany, 02/27/2013 - 03/01/2013
Aron Geurts, Empowering the laboratory rat through advances in genetic engineering, IUPS 2013, Birmingham, United Kingdom, 07/21/2013 - 07/26/2013
Aron Geurts, Targeted Nuclease Technology: Empowering genetic engineering beyond the mouse, Conference on Transposition & Genome Engineering, Budapest, Hungary, 09/18/2013 - 09/21/2013
Aron Geurts, New transgenic technologies: Applications of TALENs, ZFNs and CRISPR/Cas9, EMBO 2013, Amsterdam, The Netherlands, 09/21/2013 - 09/24/2013
Aron Geurts, The impact of maternal in utero environment on salt-induced hypertension in the SS rat, FASEB, San Diego, 04/27/2014
Aron Geurts, New Models of Human Physiological Disorders Generated by Genome Editing in the Rat, American Society for Nephrology Kidney Week, San Diego, 11/06/2015
Aron Geurts, Seven years of knocking out rat genes – where are we and what have we learned?, Rat Genomics and Models Meeting, CSHL, 12/07/2015
Aron Geurts, 10 years of manipulating the rat genome - where are we at and what have we learned?, Experimental Biology 2017, Chicago, IL, 04/24/2017

Aron Geurts, Rat models of arterial hypertension (engineering the Dahl S rat genome), INSERM TRIP meeting, Nantes, France, 05/11/2017

PEER REVIEWED WORKSHOPS/PRESENTATIONS:

National

Geurts AM, Advancing genetic engineering technology beyond murine systems, Pioneer Symposium, Washington, DC, 09/13/2012 - 09/14/2012

Sara J Holditch, Alessandro Cataliotti, Aron M. Geurts, Yasuhiro Ikeda, Determining the physiologic effect of B-Type Natriuretic Peptide on cardio-renal homeostasis, American Society of Gene & Cell Therapy 2013, Salt Lake City, Utah, 05/15/2013 - 05/18/2013

Fan Fan, Ying Ge, Sydney Murphy, Aron M. Geurts, Howard Jacob, Richard J. Roman, CYP4A1 transgenic rats generated using Sleeping Beauty transposon system restores the impaired myogenic responses in the afferent arteriole of Dahl S rats, Council on High Blood Pressure Research, New Orleans, LA, 09/11/2013 - 09/14/2013

Harrison MD, Grzybowski MN, Utschig-Samuels LE, Schneider ED, Miller J, Geurts AM, Genetic Engineering Strategies: Novel Tools for Control of Gene Expression in Cells and Animal Models, Rat Genomics and Models Meeting, Cold Spring Harbor, NY, 12/2013

Aron M. Geurts, Pengyuan Liu, Alex Dayton, Nathan Rudemiller, Meredith Skelton, Terry Kurth, Jason Klotz, Michael Grzybowski, David Mattson, Mingyu Liang, and Allen W. Cowley, Jr., The impact of maternal in utero environment on salt-induced hypertension in the SS rat, EB 2014, San Diego, 04/2014

S. Rasmussen, S. Mallanna, W. Tan, D. Carlson, S. Fahrenkrug, A. Lerch-Gaggl , P. North , L. Wilson, S. Duncan, A. Geurts, Restoration of Liver Function Following Transplantation of Healthy Hepatocytes into the Fah -/- IL2rg-/- Rat Model, Experimental Biology 2015, Boston, MA, 04/2015

Megan Constans, Diana Escobar-Zarate, Jessica Smith, Aron M. Geurts, Vicente E. Torres, Peter C. Harris, Characterization of two Pkd1 rat models, ASN 2016, Chicago, IL, 2016

Oleg Palygin, Anna Manis, Vladislav Levchenko, Daria Zaika, Nicholas Burgraff, Aron Geurts, Matthew Hodges and Alexander Staruschenko, Kcnj10 (Kir 4.1) Knockout in Dahl SS Rats Determines the Expression of Kcnj10 and Kcnj16 Proteins in Brain and Kidney, Experimental Biology 2017, Chicago, IL, 04/22/2017 - 04/26/2017

Maribel Marquez, Chris McDermott-Roe, Mike Grzybowski, Daniel Helbling, David P. Dimmock, James W. Verbsky, Aron M. Geurts, Evaluation of Patient-Specific MTERF4 Variants in Gene-Edited Human iPSC-derived Cardiomyocytes, 2017

Melinda R Dwinell, Rebecca Schilling, Michael Grzybowski, Anne Temple, Allison Zappa, Lynn Lazcares, Jessica Niebuhr, Shawn Kalloway, Jamie Foeckler, Akiko Takizawa, Aron M Geurts, Gene Editing Rat Resource Center (GERRC): Rat models for heart, lung, blood, and sleep disorder studies, HBPR 2018, Chicago, IL, 09/06/2018 - 09/09/2018

MARGARET WONG-RILEY, DANDAN WANG, MICHAEL GRZYBOWSKI, LIANWEI MU, DAVID BAKER, SUJEAN CHOI, AND ARON M. GEURTS, Flexible and inducible BDNF gene knockdown in rat neurons, SfN 2018, San Diego, CA, 11/03/2018 - 11/07/2018

Aron M. Geurts, Angela Lemke, Aimee Steffenhagen, Jeff De Pons, Anne Temple, Rebecca R. Schilling1, fer R. Smith, Monika Tutaj, Michael N. Grzyowski, Marek Tutaj, Jyothi Thota, Kristin Nord, Matthew J. Hoffman, Stacy Zacher, Kent Brodie, Ryan Spellecy, Arthur R. Derse, Mary Shimoyama, Melinda R. Dwinell, Somatic Cell Genome Editing Program: Dissemination and Coordinating Center, Keystone CRISPR meeting, Banff, Canada, 02/08/2020 - 02/13/2020

T.C. Rich, N. Annamdevula, D.J. Pleshinger, A.M. Geurts, and S.J. Leavesley, Novel hyperspectral imaging approaches allow 3D measurement of cAMP signals in localized subcellular domains, AKAP 2020, Virtual, 10/06/2020 - 10/08/2020

Rebecca A. Slick, Jennifer A. Tinklenberg, Hui Meng, Margaret Beatka, Mariah Prom, Emily Ott, Federica Montanaro, Liwen Zhang, Henk Granzier, Edna Hardeman, Aron Geurts, Michael W. Lawlor, Proteomic profiling in Nemaline Myopathy to identify molecular phenotypes that contribute to disease heterogeneity, New Directions in Biology and Disease of Skeletal Muscle Conference, virtual, 10/30/2020 - 10/31/2020

Jennifer Tinklenberg, Rebecca Slick, Jessica Sutton, Mark Vanden Avond, Margaret Beatka, Mariah Prom1, Emily Ott, Hui Meng, Michael Grzybowski, James Heisner, Jacob Ross, Julien Ochala, Kristen J Nowak, Liwen Zhang, Aron Geurts, David Stowe, Federica Montanaro, Michael W Lawlor, Mouse

models of nemaline myopathy display structural and functional abnormalities of mitochondria, New Directions in Biology and Disease of Skeletal Muscle Conference, virtual, 10/30/2020 - 10/31/2021

Alexandria M Szalanczy, Osborne Seshie, Emily Goff, Michael Grzybowski, Aron M. Geurts, & Leah Solberg Woods, Keratinocyte-Associated Protein 3 knock-out rats exhibit increased body weight and fat pad weight, TOS 2020, virtual, 11/02/2020 - 11/06/2020

Arthur P. Arnold, Xuqi Chen, Michael Gryzbowski, Lynn Lazcares, Akiko Takizawa, Laurent Vergnes, Helen Skaletsky, David C Page, Karen Reue, Melinda Dwinell, and Aron M. Geurts, “Four Core Genotypes” Rats: Comparing XX and XY Rats with the Same Type of Gonads to Detect Sex Chromosome Effects that Cause Sex Differences in Physiology and Disease, ORWH SCORE meeting, virtual, 12/16/2020 - 12/17/2020

Jennifer A. Tinklenberg, Rebecca A. Slick, Jessica Sutton, Hui Meng, Margaret Beatka, Mark Vanden Avond, Mariah Prom, Emily Ott, Liwen Zhang, Federica Montanaro, James Heisner, Rafael Toro, Gina Ravenscroft, Edna Hardeman, Julian Ochala, Kristin Nowak, Aron Geurts, David Stowe, Blake Hill, Michael W. Lawlor, Acta1 mouse models of nemaline myopathy display structural and functional abnormalities of mitochondria, 2022 MDA Clinical & Scientific Conference, Nashville, TN, 03/13/2022 - 03/16/2022

Rebecca A. Slick, Jennifer A. Tinklenberg, Jessica Sutton, Liwen Zhang, Hui Meng, Margaret Beatka, Mark Vanden Avond, Mariah Prom, Emily Ott, Federica Montanaro, James Heisner, Rafael Toro, Henk Granzier, Aron Geurts, David Stowe, Blake Hill, Michael W. Lawlor, Proteomic profiling of Neb cKO mice reveals metabolic changes, 2022 MDA Clinical & Scientific Conference, Nashville, TN, 03/13/2022 - 03/16/2022

Chen X, Ryan JM, Harley VR, Lazcares L, Takizawa A, Dwinell MR, Geurts AM, Arnold AP, Hormone levels, gonadal histology, body growth in Four Core Genotypes-like rats dissociating hormonal and sex chromosomal effects on sexual differentiation, OSSD 16th Annual Meeting, Marina del Rey, CA, 05/02/2022 - 05/05/2022

Mohanroy T, Sengelaub DR, Chen X, Grisham W, Dwinell MR, Geurts AM, Arnold AP, Brain Sexual Dimorphisms and Estrous Cycling in the Four Core Genotypes-like Rats, OSSD 16th Annual Meeting, Marina del Rey, CA, 05/02/2022 - 05/05/2022

Xuqi Chen, Melinda Dwinell, Aron Geurts, and Arthur P. Arnold, Hormone levels and body growth in Four Core Genotypes-like rats dissociating hormonal and sex chromosome effects on sexual differentiation, OSSD 16th Annual Meeting, Marina del Rey, CA, 05/02/2022 - 05/05/2022

Michael Grzybowski, Mark Vanden Avond, Kristie Usa, Jason Klotz, Medical Coll of Wisconsin, Milwaukee, WI; Oleg Palygin, Medical Univ of SC, Charleston, SC; Melinda R Dwinell, MEDICAL COLLEGE OF WISCONSIN, Milwaukee, WI; Allen W Cowley Jr., MEDICAL COLLEGE WISCONSIN, Milwaukee, WI; Alexander Staruschenko, Univ of South Florida, Tampa, FL; Mingyu Liang, MEDICAL COLLEGE OF WISCONSIN, Milwaukee, WI; Aron M Geurts, Transgenic Cre Drivers For Harvesting Podocytes And Endothelial Cells From Dahl Salt-sensitive Rats, HBPR Scientific Sessions, San Diego, CA, 09/07/2022 - 09/10/2022

AM Szalanczy, M Fitzpatrick, T Bui, C Dyson, S Eller, G Giorgio, E Goff, J Landry, C Scott, O Seshie, M Grzybowski, J Klotz, AM Geurts, EE Redei, J L Weiner, & LC Solberg Woods, Investigating Krtcap3 as a novel stress gene, APS Summit 2023, Long Beach, CA, 04/20/2023 - 04/23/2023

Atrayee Ray, Cary Stelloh, Chun Yang, Yong Liu, Aaron M. Geurts, Allen Cowley, Anne Kwitek, Pengyuan Liu, Mingyu Liang, Andrew S Greene, Sridhar Rao, Chromatin accessibility landscape of blood pressure relevant kidney tissues by ATAC-seq, HBPR Scientific Sessions, Boston, MA, 09/07/2023 - 09/10/2023

Aron M. Geurts, Monika Tutaj, Jeffrey De Pons, Pengyuan Liu, and Anne E. Kwitek, Rat ReMap Initiative at the Rat Genome Database a resource of publicly accessible transcriptomic and epigenomic data for laboratory rats, HBPR Scientific Sessions, Boston, MA, 09/07/2023 - 09/10/2023

Aron M. Geurts, Chun Yang, Emily Novak, Bhavika Therani, Yong Liu, Andrew S. Greene, Sridhar Rao, Mingyu Liang, Pengyuan Liu & Allen W. Cowley, Jr., RIGERR: Resources for Investigating Genetic and Epigenetic Regulation of Renal Disease, HBPR Scientific Sessions, Boston, MA, 09/07/2023 - 09/10/2023

Qiongzi Qiu, Yong Liu, Hong Xue, Jing Liu, Bhavika Therani, Kristie Usa, Jing Huang, Andrew Greene, Sidhar Rao, Aron M. Geurts, Allen Cowley, Pengyuan Liu, Mingyu Liang, Shared and distinct cellular and molecular landscapes of cardiac left ventricle injurydamage in three models of hypertension: Insights from single-nucleus RNA sequencing, HBPR Scientific Sessions, Boston, MA, 09/07/2023 - 09/10/2023

Brody Smith, Lashodya V Dissanayake, Adrian Zietara, Vladislav Levchenko, Aron M. Geurts, Oleg Palygin, Alexander Staruschenko, Effects of carnitine palmitoyltransferase 2 (CPT2) deficiency on blood pressure regulation and renal homeostasis, HBPR Scientific Sessions, Boston, MA, 09/07/2023 - 09/10/2023

Aron M. Geurts, Akiko Takizawa, Lynn Lazcares, Monika Tutaj, Rebecca Schilling, Anne E. Kwitek, Bina Joe, Melinda R. Dwinell, Hybrid Rat Diversity Program (HRDP): A rat resource for mapping complex traits, Complex Trait Consortium, University of Colorado, 09/22/2023 - 09/23/2023

Philip M. Boone, Ricardo Harripaul, Rachita Yadav, Ryan L. Collins, Michael Grzybowski, Matthew O. Larson, Paulina Gonzalez Tovar, John Lemanski, Maris Handley, Celine de Esch, Kiana Mohajeri, James F. Gusella, Derek J.C. Tai, Sandra Sanchez-Roige, Benjamin Currall, Christopher McGraw, Abraham Palmer, Ryan Doan, Aron M. Geurts, Michael E. Talkowski, Structural variant alteration to Aberrant recursive splicing associated with ADHD, WCPG 2023, Montreal, Canada, 10/10/2023 - 10/14/2023

International

Aron Geurts, Germline transposon mutagenesis and applications to forward-genetic screens and chromosome engineering using the Sleeping Beauty transposon system, 5th VW Stiftung meeting on conditional mutagenesis and mouse models, Max Planck Institute of Molecular Cell Biology and Genetics, Dresden, Germany, 2004

Aron Geurts, Progress on insertional mutagenesis in the mouse using the Sleeping Beauty transposon system and design of a forward-genetic screen, Mouse Molecular Genetics Meeting, Cold Spring Harbor, New York, NY, 2004

Aron Geurts, Progress on a forward-genetic insertional mutagenesis screen in the mouse using the Sleeping Beauty transposon system, 3rd Annual International Conference on Transposition and Animal Biotechnology, Minneapolis, MN, 06/2005

Aron Geurts, Biology of Genomes meeting, Rat Genomics & Models Meeting, Cold Spring Harbor Laboratory, New York, NY, 12/2005

Aron Geurts, Prospects for disease gene discovery using transposable elements, Biology of Genomes Meeting, Cold Spring Harbor Laboratory, New York, NY, 03/2007

Aron Geurts, Unlocking the rat genome with transposable elements, Fifth Annual International Conference on Transposition and Animal Biotechnology, Minneapolis, MN, 06/2007

Aron Geurts, Transposon knockouts by high throughput gene trapping in the rat, Rat Genomics & Models Meeting, Cold Spring Harbor Laboratory, New York, NY, 12/2007

Aron Geurts, The rat knockout project: Unravelling complex human disease through advances in rat knockout technology, Rat Genomics & Models Meeting, Cold Spring Harbor Laboratory, New York, NY, 12/2009

Aron Geurts, Faster, cheaper and more elegant methods for engineering the rat genome, Rat Genomics & Models Meeting, Cold Spring Harbor Laboratory, New York, NY, 12/2011

Endres B, Moreno C, Lombard JK, Jacob HJ, Geurts AM, A potential protective role for Plekha7, an adherens junction protein, against renal damage, Experimental Biology 2012, San Diego, CA, 04/21/2012 - 04/25/2012

Casati M, Hoffman M, Schilling R, Flister M, Geurts AM, Dwinell MR, Lazar J, Jacob JH, Moreno C, Characterization of a Comt knockout rat for blood pressure and associated phenotypes, Council for High Blood Pressure Research 2012, Washington, DC, 09/19/2012 - 09/22/2012

Endres B, Sarkis AB, Priestley J, Casati M, Hoffman M, Lazar J, Schilling R, Dwinell MR, Lombard JH, Cowley AJ, Mattson D, Moreno C, Geurts AM, Jacob HJ, GWAS candidate knockout in rats reveals a potential role for ERK/MAPK signaling in hypertension, Council for High Blood Pressure Research 2012, Washington, DC, 09/19/2012 - 09/22/2012

Mattson DL, Lund H, Guo C, Geurts AM, Jacob HJ, Genetic deletion of CD247 in dahl salt-sensitive (SS) rats attentuates hypertension and renal damage, Council for High Blood Pressure Research 2012, Washington, DC, 09/19/2012 - 09/22/2012

Aron Geurts, Progress on targeted nuclease-mediated engineering of the rat genome, Rat Genomics & Models, Cambridge, U.K., 12/07/2012 - 12/10/2012

Bradley Endres, Jessica Priestley, Oleg Palygin, Matthew Hoffman, Carol Moreno, Julian Lombard, Howard Jacob, Aron Geurts, Plekha7, a candidate gene for human hypertension, plays a critical role in the regulation of intracellular calcium, Experimental Biology 2013, San Diego, CA, 04/21/2013 - 04/25/2013

Shauna A Rasmussen, Sunil Mallanna, Stephen A. Duncan, Wengfan Tan, Daniel F. Carlson, Scott C. Fahrenkrug, Aron M. Geurts, Transplanted healthy hepatocytes engraft and repopulate the Fah -/- IL2rg-/- rat model of liver failure, Rat Genomics and Models Meeting 2013, Cold Spring Harbor, NY, 12/11/2013 - 12/14/2013

Bradley Endres, Jessica R.C. Priestley, Oleg Palygin, Matthew Hoffman, Mike Grzybowski, Julian H. Lombard, Alexander Staruschenko, Carol Moreno, Howard J. Jacob, Aron M. Geurts, Plekha7, a candidate gene for human hypertension, plays an functional role in the regulation of blood pressure and renal function, Rat Genomics and Models Meeting 2013, Cold Spring Harbor, NY, 12/11/2013 - 12/14/2013

Harrison MD, Grzybowski M, Utschig-Samuels L, Schneider L, Miller J, Geurts A, Genetic Engineering Strategies: Novel Tools for Control of Gene Expression in Cells and Animal Models, Rat Genomics and Models Meeting 2013, Cold Spring Harbor, NY, 12/11/2013 - 12/14/2013

M. Grzybowski, T. Stodola, S. Pietrzak, and A. Geurts, In vitro validation and comparison of targeted nucleases in mouse and rat cells, Rat Genomics and Models Meeting 2013, Cold Spring Harbor, NY, 12/11/2013 - 12/14/2013

Jason Klotz, Rebecca Schilling, Melinda Dwinell, Jozef Lazar, Aron M Geurts, Michael Grzybowski, Angela Lemke, Jocelyn Miller, Anne Temple, Allison Zappa, Chieh-Ti Kuo, Lynn Lazcares, Shawn Kalloway, Jamie Foeckler, Akiko Takizawa, Jozef Lazar, Howard J Jacob1,, Aron M Geurts, Melinda Dwinell, Jason Klotz,2, Rebecca Schilling1,22, Melinda Dwinell1,2, Jozef Lazar1,3, Aron M Geurts1,2, Michael Grzybowski1,2, Angela Lemke1,2, Jocelyn Miller1,2, Anne Temple1,2, Allison Zappa1,2, Chieh-Ti Kuo1,2, Lynn Lazcares1,2, Shawn Kalloway1,4, Jamie Foeckler1,4, Akiko Takizawa1,2, Jozef Lazar1, Howard J Jacob1,2, Aron M Geurts1,2, Melinda Dwinell1,2, ISTT 2016, Prague, Czech Republic, 03/20/2016 - 03/23/2016

Aron M Geurts, Rebecca Schilling, Michael Grzybowski, Anne Temple, Allison Zappa, Lynn Lazcares, Jessica Niebuhr, Shawn Kalloway, Jamie Foeckler, Akiko Takizawa, Andrew S. Greene, Allen W Cowley, Jr., Mingyu Liang, David Mattson, Melinda R Dwinell, Mechanisms of blood pressure control: impact of rat genomic and transgenic model resources, Complex Trait Consortium meeting, Glasgow, UK, 06/20/2018 - 06/22/2018

COMMITTEE SERVICE:

Medical College of Wisconsin

2012 - 2018 Voting Member, Instiutional Biosafety Committee, Medical College of Wisconsin
2013 - 2021 Member, Physiology PhD program admissions, Physiology, Medical College of Wisconsin
2014 - 2020 Appointed Member, Research Affairs Committee, Medical College of Wisconsin
2014 - 2015 Elected Member, Graduate Studies Council Awards Committee, Medical College of Wisconsin
2015 - 2016 Chair, Research Affairs Committee, MCW
2016 - 2018 Chair, Interdisciplinary Program in Biomoedical Sciences - subcommittee on curriculum change, Medical College of Wisconsin
2016 - 2018 Chair, Institutional Biosafety Committee, Medical College of Wisconsin
2016 - 2019 Physiology representative, Interdisciplinary Program in Biomedical Sciences - Program Directors Group, Medical College of Wisconsin
2017 - 2018 Member, Ad Hoc committee on graduate student education, Medical College of Wisconsin
2022 - Present Member, Committee on Self-Imposed Regulatory Burden, Medical College of Wisconsin
2023 - Present Member, Course Evaluation Committee

MEDICAL COLLEGE TEACHING ACTIVITIES:

Medical Student Education

2017 - 2020 Lecturer Molecules & Cells

Graduate Student Education

2010 - Present Translational Genetics
2011 - 2022 Physiological Genomics - Course Director
2016 - 2019 Classical Genetics
2019 - Present Foundations in Biomedical Sciences III, Co-course Director

2020 - Present Functional Genomics - Course Director

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

Graduate Students

PhD Students Advised

Bradley Endres, MCW, 2010 - 2014 Characterization of Genes Found in Human Hypertension Genome-Wide Association Studies, Clinical Pharmacy Specialist - Hematology/Oncology at Clement J. Zablocki VA Medical Center

Shauna Rasmussen, MCW, 2012 - 2017 Characterization and utilization of immune compromised rats as an allogeneic rat hepatocyte transplant model, Assistant Academic Research Scientist at Emory University, Emory University

Maribel Marquez, MCW, 2015 - 2020 Evaluation of patient specific variants of uncertain significance through genome engineered model systems, As of 2023: Senior Scientist, Allector

Mark Vanden-Avond, MCW, 2020 - Present

PhD Committees

Eric Weh, MCW, 2011 - 2014 Investigating the molecular mechanisms of Peters' Plus Syndrome, Research Investigator, Ophthalmology and Visual Sciences, University of Michigan

Andrew Weyer, MCW, 2012 - 2016

Allison Beaty-Sarkis, MCW, 2012 - 2014 Genetic Dissection of Blood Pressure in the Dahl SS Rat Using Sequence Data, Head of Product and Customer Service, Arcensus

Kirk Twaroski, MCW, 2012 - 2016 Transient Inhibition of Canonical WNT Signaling Mediated by FGF2-? Induced Expression of NKD1 is Required for Hepatic Specification, Kirk Twaroski - Product Manager - FUJIFILM Cellular Dynamics

Shraddha Nayak, MCW, 2013 - 2015 Development of a Novel Adora2b Transgenic Rat and Role of A2B Adenosine Receptors in Hypertension, Biomedical Illustrator, self employed

Nathan Rudemiller, MCW, 2014 - 2015 Utilizing Genetic Manipulation to Elucidate Inflammatory Mechanisms of Salt-Sensitive Hypertension, Researcher, BioAgilytix

Madeleine Puissant, MCW, 2014 - 2015 Identifying molecular determinants of cellular and whole animal CO2/pH chemosensitivity in the rat: major roles for medullary raphe neuromodulators and inwardly rectifying potassium channels, MD/PhD-trained neurophysiologist and emergency medicine physician, Maine Health

Mark Paterson, MCW, 2015 - 2019 miR-146b-5p and sex-specific renocardiac pathology in the 5/6Nx rat, Assistant Professor, Concordia University

Jennifer Tinklenberg, MCW, 2019 - 2022 Mitochondrial Abnormalities in Mouse Models of Muscle Disease, Postdoctoral Fellow, Paccak Lab, University of Minnesota

Nnamdi Uche, MCW, 2019 - 2023 A personalized medicine approach for disease modeling using human iPSC-derived cardiomyocytes that reverses redox-dependent mitochondrial dysfunction and prevents cancer treatment-related cardiotoxicity, Postdoctoral Researcher at Northwestern University

Rebecca Slick, MCW, 2019 - 2022 Utilizing omics data to identify candidate biomarkers in congenital muscle diseases, Post-doctoral fellow in the Ervasti Lab at UMN

Nathan Meinhardt, MCW, 2020 - Present

Natalia Mathieu, MCW, 2022 - 2024 Role of ?-arrestin2 in the Regulation of Blood Pressure and Fluid Homeostasis in the Brain

Jerrell Lovett, MCW, 2022 - Present

Postdoctoral Students

Michael Harrison, M.D., Ph.D., MCW, 2012 - 2016 Mentor, Sr. Director, Strategic Initiatives & Community Engagement at BioForward

Christopher McDermott-Roe, Ph.D., MCW, 2013 - 2017 Mentor, Senior Research Scientist at Broad Institute of MIT and Harvard

PROGRAMMATIC DEVELOPMENTS:

Educational Programs

Faculty

2017 - 2018 IDP shared curriculum

BIBLIOGRAPHY

Refereed Journal Publications/Original Papers

1. Cui Z, Geurts AM, Liu G, Kaufman CD, Hackett PB. Structure-function analysis of the inverted terminal repeats of the sleeping beauty transposon. J Mol Biol. 2002 May 17;318(5):1221-35.
2. Geurts AM, Yang Y, Clark KJ, Liu G, Cui Z, Dupuy AJ, Bell JB, Largaespada DA, Hackett PB. Gene transfer into genomes of human cells by the sleeping beauty transposon system. Mol Ther. 2003 Jul;8(1):108-17.
3. Clark KJ, Geurts AM, Bell JB, Hackett PB. Transposon vectors for gene-trap insertional mutagenesis in vertebrates. Genesis. 2004 Aug;39(4):225-33.
4. Liu G, Geurts AM, Yae K, Srinivasan AR, Fahrenkrug SC, Largaespada DA, Takeda J, Horie K, Olson WK, Hackett PB. Target-site preferences of Sleeping Beauty transposons. J Mol Biol. 2005 Feb 11;346(1):161-73.
5. Geurts AM, Hackett CS, Bell JB, Bergemann TL, Collier LS, Carlson CM, Largaespada DA, Hackett PB. Structure-based prediction of insertion-site preferences of transposons into chromosomes. Nucleic Acids Res. 2006;34(9):2803-11. PMCID: PMC1464413
6. Feng D, Yang C, Geurts AM, Kurth T, Liang M, Lazar J, Mattson DL, O'Connor PM, Cowley AW Jr. Increased expression of NAD(P)H oxidase subunit p67(phox) in the renal medulla contributes to excess oxidative stress and salt-sensitive hypertension. Cell Metab. 2012 Feb 08;15(2):201-8. PMCID: PMC3280886
7. Geurts AM, Wilber A, Carlson CM, Lobitz PD, Clark KJ, Hackett PB, McIvor RS, Largaespada DA. Conditional gene expression in the mouse using a Sleeping Beauty gene-trap transposon. BMC Biotechnol. 2006 Jun 26;6:30. PMCID: PMC1557845
8. Geurts AM, Collier LS, Geurts JL, Oseth LL, Bell ML, Mu D, Lucito R, Godbout SA, Green LE, Lowe SW, Hirsch BA, Leinwand LA, Largaespada DA. Gene mutations and genomic rearrangements in the mouse as a result of transposon mobilization from chromosomal concatemers. PLoS Genet. 2006 Sep 29;2(9):e156. PMCID: PMC1584263
9. Balciunas D, Wangensteen KJ, Wilber A, Bell J, Geurts A, Sivasubbu S, Wang X, Hackett PB, Largaespada DA, McIvor RS, Ekker SC. Harnessing a high cargo-capacity transposon for genetic applications in vertebrates. PLoS Genet. 2006 Nov 10;2(11):e169. PMCID: PMC1635535
10. Mattson DL, Lund H, Guo C, Rudemiller N, Geurts AM, Jacob H. Genetic mutation of recombination activating gene 1 in Dahl salt-sensitive rats attenuates hypertension and renal damage. Am J Physiol Regul Integr Comp Physiol. 2013 Mar 15;304(6):R407-14. PMCID: PMC3602820
11. Michalkiewicz M, Michalkiewicz T, Geurts AM, Roman RJ, Slocum GR, Singer O, Weihrauch D, Greene AS, Kaldunski M, Verma IM, Jacob HJ, Cowley AW Jr. Efficient transgenic rat production by a lentiviral vector. Am J Physiol Heart Circ Physiol. 2007 Jul;293(1):H881-94.
12. Rangel-Filho A, Lazar J, Moreno C, Geurts A, Jacob HJ. Rab38 modulates proteinuria in model of hypertension-associated renal disease. J Am Soc Nephrol. 2013 Feb;24(2):283-92. PMCID: PMC3559491
13. Chen CC, Geurts AM, Jacob HJ, Fan F, Roman RJ. Heterozygous knockout of transforming growth factor-?1 protects Dahl S rats against high salt-induced renal injury. Physiol Genomics. 2013 Feb 04;45(3):110-8. PMCID: PMC3568879
14. Lu B, Geurts AM, Poirier C, Petit DC, Harrison W, Overbeek PA, Bishop CE. Generation of rat mutants using a coat color-tagged Sleeping Beauty transposon system. Mamm Genome. 2007 May;18(5):338-46.
15. Katter K, Geurts AM, Hoffmann O, Mátés L, Landa V, Hiripi L, Moreno C, Lazar J, Bashir S, Zidek V, Popova E, Jerchow B, Becker K, Devaraj A, Walter I, Grzybowksi M, Corbett M, Filho AR, Hodges MR, Bader M, Ivics Z, Jacob HJ, Pravenec M, Bosze Z, Rülicke T, Izsvák Z. Transposon-mediated transgenesis, transgenic rescue, and tissue-specific gene expression in rodents and rabbits. FASEB J. 2013 Mar;27(3):930-41. PMCID: PMC3574282
16. Hackett CS, Geurts AM, Hackett PB. Predicting preferential DNA vector insertion sites: implications for functional genomics and gene therapy. Genome Biol. 2007;8 Suppl 1(Suppl 1):S12. PMCID:

PMC2106846
17. Geurts AM, Cost GJ, Freyvert Y, Zeitler B, Miller JC, Choi VM, Jenkins SS, Wood A, Cui X, Meng X, Vincent A, Lam S, Michalkiewicz M, Schilling R, Foeckler J, Kalloway S, Weiler H, Ménoret S, Anegon I, Davis GD, Zhang L, Rebar EJ, Gregory PD, Urnov FD, Jacob HJ, Buelow R. Knockout rats via embryo microinjection of zinc-finger nucleases. Science. 2009 Jul 24;325(5939):433. PMCID: PMC2831805
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22. Chen YG, Forsberg MH, Khaja S, Ciecko AE, Hessner MJ, Geurts AM. Gene targeting in NOD mouse embryos using zinc-finger nucleases. Diabetes. 2014 Jan;63(1):68-74. PMCID: PMC3868049
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24. Xu D, Guo H, Xu X, Lu Z, Fassett J, Hu X, Xu Y, Tang Q, Hu D, Somani A, Geurts AM, Ostertag E, Bache RJ, Weir EK, Chen Y. Exacerbated pulmonary arterial hypertension and right ventricular hypertrophy in animals with loss of function of extracellular superoxide dismutase. Hypertension. 2011 Aug;58(2):303-9. PMCID: PMC3170043
25. Chen CC, Geurts AM, Jacob HJ, Fan F, Roman RJ. Heterozygous knockout of transforming growth factor-?1 protects Dahl S rats against high salt-induced renal injury. Physiol Genomics. 2013 Feb 04;45(3):110-8. PMCID: PMC3568879
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29. Rudemiller N, Lund H, Jacob HJ, Geurts AM, Mattson DL, PhysGen Knockout Program. CD247 modulates blood pressure by altering T-lymphocyte infiltration in the kidney. Hypertension. 2014 Mar;63(3):559-64. PMCID: PMC3945169
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49. Nayak S, Khan MA, Wan TC, Pei H, Linden J, Dwinell MR, Geurts AM, Imig JD, Auchampach JA. Characterization of Dahl salt-sensitive rats with genetic disruption of the A2B adenosine receptor gene: implications for A2B adenosine receptor signaling during hypertension. Purinergic Signal. 2015 Dec;11(4):519-31. PMCID: PMC4648794
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