

Curriculum Vitae

Irina Burd, MD, PhD
Professor and Chair, Department of Obstetrics, Gynecology and Reproductive Sciences
University of Maryland

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Contact Information

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Foreign Languages: Russian (native), Ukrainian (native)

Education

Undergraduate

1993-1995 B.A., Biology, Rutgers University (Summa Cum Laude)
1997-2003 M.D., Ph.D., Rutgers-Robert Wood Johnson Medical School, New Brunswick, NJ
Title of Thesis: "Crosslinked gonadotropin partial agonists."

Post Graduate Education and Training

2003-2007 Residency, Obstetrics and Gynecology, Thomas Jefferson University Hospital, Philadelphia, PA
2007-2010 Fellowship, Maternal Fetal Medicine, University of Pennsylvania, Philadelphia, PA

Certifications

2010 – Present American Board of Obstetrics and Gynecology (ABOG), Obstetrics and Gynecology board certified
2013 – Present ABOG, Maternal-Fetal Medicine Sub-Specialty board certified

Medical, other state/government licensure

2011 Active, Maryland
2010 Inactive, New Jersey
2007 Inactive, Pennsylvania

Employment History

Academic Appointments

2010-2011 Instructor, Obstetrics and Gynecology, Maternal Fetal Medicine, University of Pennsylvania/Philadelphia
2011-2014 Assistant Professor, Gynecology and Obstetrics, Johns Hopkins University School of Medicine/Baltimore
2011-2014 Assistant Professor, Neurology, Johns Hopkins University School of Medicine/Baltimore
2014-2020 Associate Professor, Gynecology and Obstetrics, Johns Hopkins University School of Medicine/Baltimore
2014-2020 Associate Professor, Neurology, Johns Hopkins University School of Medicine/Baltimore
2020-2022 Professor (tenure), Gynecology and Obstetrics, Johns Hopkins University School of Medicine/Baltimore

2020-2022	Professor, Neurology, Johns Hopkins University School of Medicine/Baltimore
2020-Present	Professor, Department of Population, Family and Reproductive Health, Johns Hopkins University School of Public Health/Baltimore
2022	Professor and Chair, University of Maryland School of Medicine/Baltimore

Other Employment

2003-2007	Resident physician, Department of Obstetrics and Gynecology, Thomas Jefferson University Hospital/Philadelphia
2006-2007	Administrative Chief Resident, Department of Obstetrics and Gynecology, Thomas Jefferson University Hospital/Philadelphia
2007-2010	Fellow, Maternal Fetal Medicine, Department of Obstetrics and Gynecology, Hospital of University of Pennsylvania/Philadelphia

Professional Society Memberships

1998-Present	Fellow, American Congress of Obstetricians and Gynecologists (ACOG)
2006-Present	Member, Society for Maternal Fetal Medicine (SMFM)
2008-Present	Member, Society for Reproductive Investigation (SRI)
2013-Present	Member, Perinatal Research Society
2014-Present	Member, American Society for Reproductive Immunology
2021-Present	Fellow, American Gynecological and Obstetrical Society (AGOS)

Honors and Awards

1995	Athenaum Honor Society Award (Rutgers University)
1995	Gerard S. Weissman Memorial Prize in Biology (Rutgers University)
1998	Merck/AFAR Scholarship in Pharmacology of Aging
2002	Honorable Mention Manuscript, Residency Competition, Primary Care Update for Ob/Gyns
2002	Research Achievement Award (Rutgers-RWJMS)
2002	President, Arnold P. Gold Foundation Humanism in Medicine Honor Society (Rutgers-RWJMS)
2003	Academic Excellence in Obstetrics and Gynecology Award (Rutgers-RWJMS)
2003-2005	Ob-Gyn Excellence in Teaching Awards (Thomas Jefferson University)
2005	American College of Surgeons Certificate of Appreciation for Exemplary Teaching
2005	Arnold P. Gold Foundation Resident Award for Humanism in Medicine and Excellence in Teaching
2005	Berlex Best Teaching Resident Award
2006	Administrative Chief, Department of Obstetrics and Gynecology, Thomas Jefferson Univ Hosp
2006	S. Leon Israel Award for Excellence in Research (Obstetrical Society of Philadelphia)
2007	Research Award, Thomas Jefferson University, Department of Ob/Gyn
2007	Howard Lees Kent Memorial Prize for Outstanding Scholarship, Thomas Jefferson University, Department of Ob/Gyn
2009-2012	American Board of Obstetrics and Gynecology/American Association of Obstetricians and Gynecologists Foundation (ABOG/AAOGF) Scholar
2009-2011	NIH Loan Repayment Award
2010	Ikaria Early Career Investigator Award (The Perinatal Research Society)
2010	Thomas Boggs Award (Philadelphia Perinatal Society)
2011	Pfizer SRI President's Presenter Award, Mentor, Society for Reproductive Investigation
2012	Johns Hopkins University Clinician Scientist Award (K12)
2012	Passano Foundation Clinician Scientist Award
2013	Super Doctors Rising Star, Maryland, Virginia and Washington DC area, rated by Washington Post
2014	Dr. John Gusdon Memorial New Investigator Award, Mentor (American Society for Reproductive Immunology)
2015	Dr. John Gusdon Memorial New Investigator Award, Mentor (American Society for Reproductive Immunology)

2017	Dr. John Gusdon Memorial New Investigator Award, Mentor (American Society for Reproductive Immunology)
2016	Pfizer SRI President's Presenter Award, Mentor, Society for Reproductive Investigations
2016	Johns Hopkins Discovery Award
2017	James W. Kennedy Award (AAOGF)
2018	<i>American Journal for Reproductive Immunology</i> Award, American Society for Reproductive Immunology (ASRI)
2019	Mead Johnson Award Speaker, Perinatal Research Society
2021	President's Achievement Award, Society for Reproductive Investigation
2022	ASRI Distinguished Service Award

Clinical Activities

Clinical Activities

Board certified Maternal Fetal Medicine physician with full scope of practice, dedicating 20% to clinical care with clinical expertise in fetal neurosonology and fetal echocardiography. Development of Fetal Neurosonology program at the Johns Hopkins Hospital generated referral nationally and internationally. Research focus is in fetal programming (immune and neuroimmune) with exposure to intrauterine inflammation and infection.

Scope of Clinical Practice

2010-Present	Maternal fetal ultrasound ~960 scan per year Leadership/administrative role 30% FTE
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Administrative Service

Institutional Service

2011-present	Director, Integrated Research Center for Fetal Medicine Johns Hopkins University, School of Medicine
2012-present	Director of Research, Division of Maternal Fetal Medicine
2012-present	Member, Pathobiology Graduate Group
2013-present	Member, Johns Hopkins Medicine Research Council
2013	Member, Emerging Women's Leadership Program
2014-present	Member, Maternal- Fetal Tissue Committee
2015-present	Member, Johns Hopkins Medicine Institutional Review Board, eIRB-X
2017-present	Director, Maternal-Fetal Medicine Fellowship Program
2017-present	Director, Combined Maternal Fetal-Medicine/Genetics Fellowship Program Johns Hopkins University School of Medicine
2017-present	Member, Graduate Medical Education Committee
2017-present	Director, Fetal Neurosonography Program
2020-2021	Member, Genetics Department Chair Search Committee
2020-2021	Member, Johns Hopkins Leadership Development Program
2020-2022	Member, School of Medicine COVID-19 Research Restart Committee (JHSOM)
2021-2022	Member, Department of Gynecology and Obstetrics Promotions Committee (JHSOM)

Local and National Service

1998-Present	American Congress of Obstetricians and Gynecologists (ACOG)
1998- 2000	ACOG District III (New Jersey, Pennsylvania, Delaware) Medical Student Consortium, member
2004- 2005	ACOG Junior Fellows District III
2005-2006	Vice Chair and Chair Elect (ACOG)
2007-2008	Chair (ACOG)

	2005-2008	Member, ACOG Junior Fellow College National Advisory Council
	2005-2006	Participant, ACOG Congressional Leadership Conference
	2006	Participant, Future Leaders in Obstetrics and Gynecology Conference
	2007	Participant, ACOG National Leadership Institute
	2008	Director for the Course at the Annual Clinical Meeting “ABC’s of applying for subspecialty fellowship,” ACOG Annual Meeting.
2006- Present		Society for Maternal Fetal Medicine (SMFM)
2013-2016		Prematurity Scientific Forum (PSF)
2013		Faculty (PSF)
2014		Vice Chair and Chair Elect (PSF)
2015-2016		Chair (PSF)
2017-2020		Member, SMFM Research Committee
2019		Co-organizer and Moderator, “State of Science Symposium: Intrauterine Growth Restriction.”
2019		Moderator, “Basic Science,” Society for Maternal Fetal Medicine Annual Meeting, Las Vegas, NV.
2020		Moderator, “Basic Science,” Society for Maternal Fetal Medicine Annual Meeting, Dallas, TX.
2021-Present		Member, SMFM Fellowship Committee
2022		Planning committee member, First Year Fellows’ Retreat
2008- Present		Society for Reproductive Investigation (SRI)
2014-Present		Abstract Reviewer, Poster Judge, member of the Scientific Committee
2015		Moderator, “Understanding Perinatal Injury” Minisymposium at the Society for Reproductive Investigations Annual Meeting
2016-2019		Member, SRI Publications Committee
2016		Moderator, Scientific Session, Society for Reproductive Investigations annual meeting, Montreal, Canada.
2017-2021		Member, SRI Program Committee
2019		Moderator, “Hot topics” Society for Reproductive Investigations, Paris, France
2020-2021		Co-Chair, SRI Membership and Nominations Committee
2020-Present		Chair, SRI CME Committee
2020		Program Director for the Annual Meeting (Vancouver, Canada)
2020-Present		Council member
2021		Program Director for the Annual Meeting (Boston, MA)
2021-2022		Chair, SRI Membership and Nominations Committee
2022		Moderator, Satellite Symposium “Placenta,” Society for Reproductive Investigations, Colorado, USA.
2013-Present		Perinatal Research Society
2014-2016		Council member
2018-2019		President Elect
2019-2021		President
2021-2022		Past President
2013-Present		NIH service
2013		<i>Ad hoc</i> grant reviewer, NIH Study Section “Translational Research in Obstetric and Pediatric Pharmacology”
2014-2021		Member, NICHD CHHD-B Study Section “Obstetrics and Maternal-Fetal Biology”
2014		<i>Ad hoc</i> grant reviewer, NICHD Study Section “Pregnancy and Neonatology”
2015		<i>Ad hoc</i> grant reviewer, NICHD Study Section “Human Placenta Project (U01)”
2015		<i>Ad hoc</i> grant reviewer, NICHD Special Emphasis Panel (P01)
2016		<i>Ad hoc</i> grant reviewer, NICHD Study Section “Human Placenta Project (R01)”
2016		<i>Ad hoc</i> grant reviewer, NIAID Study Section “Zika (R21)”
2016, 2017		Chair, NICHD RFA Study Section “Human Placenta Project (R01/R21)”
2017		Chair, NICHD RFA Study Section “Opioid Addiction in Pregnancy (R01),” Chair
2016-2021		Chair, NICHD CHHD-B Study Section “Obstetrics and Maternal-Fetal Biology,\”

2019 Chair, NICHD RFA Study Section “Opioid Addiction in Pregnancy (PL1)”
 2020 Chair, NICHD RFA “WRHR (K12)”
 2014- Present American Society for Reproductive Immunology
 2016 Congress Co-Chair (Annual Meeting)
 2016-2018 Council member
 2018- By-Laws Committee, Fellowship committee, Membership Committee, Nominations Committee, Public Affairs Committee
 2018-2021 President Elect
 2021, 2022 Scientific Program Committee
 2021-Present President
 2016 Moderator, “Zika: Community Roundtable,” South Carolina Zika Preparedness Symposium, Charleston, South Carolina.
 2019-Present Member, March of Dimes Advisory Council
 2021 Chair, March of Dimes, Grant Review Panel
 2020-Present Member, Burroughs Wellcome Fund Advisory Council
 2022 Co-organizer, “Assessing Real World Use of Pharmaceuticals Among Pregnant and Lactating People,” FDA-CERSI Conference, Virtual.

International Service

2012, 2013, 2014 *Ad hoc* grant reviewer, Neurological Foundation of New Zealand
 2014-Present *Ad hoc* grant reviewer, Binational Science Foundation (United States/Israel)
 2015 Session Chair, Scientific Session, China Placenta Project, Guongzhou, China.
 2015 Member, Advisory Committee for 2nd European Preterm Birth Congress (Moderator of Scientific Session on Perinatal Brain Injury), Gothenberg, Sweden.
 2015-2020 Member, International Advisory Committee for Sino-American Center for Translational Medicine (Conferences and Research), Beijing, China.
 2016 Session Chair, Scientific Session, China Placenta Project, Shenzhen, China.

Editorial Activities

2017-2021 Editor-in-Chief, *Maternal Health, Neonatology and Perinatology* (BioMed Central Journal)

Editorial Board Appointments

2014-Present Associate Editor, *Frontiers in Pediatrics*
 2014-Present Associate Editor, *Frontiers in Pharmacology*
 2017 Topic Editor, “Prenatal beginnings for better health” (under *Frontiers in Pediatrics* and *Frontiers in Pharmacology*)
 2016-2021 Academic Editor, *PlosONE*
 2017 Special Issue Editor, “Immunoperinatology” (under *American Journal of Reproductive Immunology*)
 2018-Present Associate Editor, Reproductive Sciences
 2018- Present Associate Editor, *American Journal of Reproductive Immunology*
 2019-2021 Editorial Board member, *Scientific Reports*

Journal peer review activities

2006-Present Reviewer, *American Journal of Obstetricians and Gynecologists* (2x/year)
 2008-Present Reviewer, *Obstetrics and Gynecology* (2x/year)
 2010- Present Reviewer, *JAMA* (2x/year)
 2012-Present Reviewer, *Journal of Immunology* (2x/year)
 2016-Present Reviewer, *Nature Communications* (2x/year)
 2016-Present Reviewer, *Science Translational Medicine* (2x/year)

Teaching Service

Basic Science Instruction

7/17	“Zika Infection.” Bloomberg School of Public Health Course 223.684.11 <u>Vector Borne Diseases in the Tropics</u> , Baltimore, MD.
7/18	“Zika Infection.” Bloomberg School of Public Health Course 223.684.11 <u>Vector Borne Diseases in the Tropics</u> , Baltimore, MD.
7/19	“Zika Infection.” Bloomberg School of Public Health Course 223.684.11 <u>Vector Borne Diseases in the Tropics</u> , Baltimore, MD.
7/21	“Zika Infection.” Bloomberg School of Public Health Course 223.684.11 <u>Vector Borne Diseases in the Tropics</u> , Baltimore, MD.

Clinical Instruction

Local

7/2016-Present Responsible for MFM Fellows’ Curriculum (Wednesday’s at 2PM; six fellows)

International

2014-2017 “From Bench to Bedside”; Learner level: medical students, physicians, and physician-scientists. One-week educational workshop. Number of participants varied from year to year (30-53). Countries represented: Saudi Arabia, UAE, China, and Greece.

Mentoring

Pre-doctoral Advisees /Mentees

2010-2011	Kirstin Leitner, UPenn Medical Student, mentor
2012-2014	Lauren Thomaier, JHU Medical Student, mentor
2012Summer	Bridget Kajs, Texas A&M University undergraduate student, mentor
2013Summer	Molly Green, HS Student, mentor
2015Summer	Jared Welling, Cornell University undergraduate student, mentor
2016-2017	Candice Gard, JHU undergraduate student, mentor
2017-2018	Nita Nair, JHU undergraduate student, mentor
2018-2019	Anna Shin, JHU medical student, Dean’s year of research, mentor
2020-2022	Minnie Jang, JHU medical student, research mentor

Post-doctoral Advisees /Mentees

2011-2013	Haitham Baghlaf, MD, post-doc fellow, peer-reviewed publication, mentor.
2011-2013	Elizabeth Nigrini, MD, MFM fellow, peer-reviewed publication, patent, mentor.
2012-2013	Sarah Wheeler, MD, resident, invited review/peer-reviewed publication, mentor.
2012-2014	Tahani Dada, MD, post-doc fellow, peer-reviewed publications, mentor.
2012-2013	Gofran Tarabulsi, MD, post-doc fellow, mentor/advisor.
2012-2013	Mofedah AlShammery, MD, post-doc fellow peer-reviewed publications, mentor.
2012-2013	Shorouq AlRebh, MD, post-doc fellow, peer-reviewed publication, mentor
2012-2013	Fahad Mansouri, MD, post-doc fellow, peer-reviewed publication, co-mentor
2014	Lauren Thomaier, MD, resident, peer-reviewed publication, mentor.
2013-2015	Virginia Mensah, MD, resident, peer-reviewed publication, mentor.
2013-2016	Jason Rosenzweig, PhD, post-doc fellow peer-reviewed publication, mentor.
2013-Present	Jun Lei, PhD, post-doc Fellow and Research Associate (faculty), Peer reviewed publications, mentor.
2013-2014	Alissa Carver, MD, MFM Fellow, University of Texas Medical Branch at Galveston, publication, mentor.

2014-2017	Michael Tsimis, MD, MFM Fellow, Publications, mentor (NIH T32).
2014-2015	Maria Andrikopolou, MD, PhD; post-doc fellow, peer-reviewed publications, mentor.
2014-2018	Cristina Paules Tejero, MD; MFM Fellow, University of Zaragoza, manuscript and PhD co-mentor.
2015-2018	Andrew Thagard, MD, Madigan Army Center, peer-reviewed manuscripts, DoD grant, mentor.
2015-2016	Wareef Fallatah, MD, post-doc fellow, peer-reviewed publications, mentor.
2015-2016	Christina Cordeiro, MD, resident, peer-reviewed publications, mentor.
2015-2016	Antonio Saad, MD, MFM Fellow, University of Texas Medical Branch at Galveston, publications, mentor.
2015-2017	Pranita Kudchikar, MD, MFM Fellow, University of New Mexico, Oral Presentation at SMFM. publication in preparation: mentor (<i>Pregnancy Foundation</i> grant to spend 8 weeks in my laboratory)
2015-2018	Dan Wu, PhD, Faculty, multiple peer-reviewed manuscripts, mentor.
2015-2018	Solange Elondou, MD, MFM Fellow, oral and poster presentations, manuscript, mentor.
2016-2017	Yahya Shabi, MD, post-doc Fellow, peer-reviewed manuscripts, mentor.
2016- 2018	Meghan Vermillion, DVM; PhD co-Mentor (NIH T32) – <i>Nature Communications</i> manuscript, co-mentor.
2016-2019	Christopher Novak, MD; MFM Fellow, mentor, Oral and Poster presentations, several manuscripts, mentor.
2016-2019	Laura Newell, MD; Hematology Attending, OHSU, BRWICH co-mentor, K23 mentor.
2016-2017	Lu Zhong, MD; MFM specialist; post-doc fellow, manuscript, received collaborative Chinese grant, mentor.
2017-Present	Meredith Kelleher, PhD, OHSU; K99/R00 mentor, peer-reviewed manuscript, mentor.
2017-2020	Maide Ozen, MD, Neonatology Faculty, JHU; peer-reviewed publications, mentor.
2017-2018	Bei Jia, MD, post-doc fellow, peer-reviewed publications, mentor.
2017-2019	Jeon Lee, MD, PhD, post-doc fellow; several peer-reviewed publications/Korean Government grant, mentor.
2018-2019	Su Li, MD, PhD, post-doc fellow, peer-reviewed manuscript mentor.
2018-2019	Jie Dong, MD, PhD, post-doc fellow, peer-reviewed manuscript, mentor.
2018-2020	Quan Na, MD, PhD, post-doc fellow, peer-reviewed mentor.
2018-Present	Anna Chudnovets, MD, post-doc fellow, peer-reviewed publications, mentor.
2019-2020	Angi Shaddeau, MD, MFM fellow, DoD grant, peer-reviewed publication, mentor.
2019-Present	Jin Liu, MD, post-doc fellow, peer-reviewed publications, mentor
2019-Present	Yang Liu, MD, post-doc fellow, peer-reviewed publications, mentor
2019- Present	Anna Powell, MD, Faculty, BRWCH (K12) and K23 mentor.

Thesis committees

10/15	Naoko Kozuki, “Accuracy of Home-Based Obstetric Ultrasound in Rural Nepal,” member of PhD thesis committee.
03/17	Wenxuan Liang, “Fiber-optic Two-photon Endomicroscopy: Technology and Application,” member of PhD thesis committee, co-mentor.
04/18	Meghan Vermillion, “Pregnancy and Viral Pathogenesis: Exploring Mechanisms of Disease through Mouse Models,” co-mentor and member of PhD thesis committee, co-mentor.
02/19	Mae Aldossari, “Public Health Priorities and Awareness in Saudi Arabia,” member and Chair of DrPh thesis committee.
4/21	Patrick Creisher, PharmD, “Influenza A determinants of maternal health,” member of PhD thesis committee and oral examination, co-mentor.

Advisory role on NIH T32 and K12 committees

2020 – Present	Member, JHU SOM WRHR (K12) Internal Advisory Committee
2020 – Present	Member, JHU BRWCH (K12) Internal Advisory Committee
2020 – Present	University of California San Diego WRHR (K12) External Advisor

2020 – Present Member, University of Colorado Pediatric T32 External Advisory Committee

Educational Program Building

9/1/2011 – 6/30/2018 Director, Program for post-doctorate research training of Saudi Arabian physicians

Educational Materials

2015-Present A.D.A.M educational materials for U.S. National Library of Medicine

E.g., https://medlineplus.gov/ency/presentations/100196_4.htm

2019 Association of Professors of Gynecology and Obstetrics video library for teaching basic science in Obstetrics and Gynecology to medical students nationally

E.g., <https://www.youtube.com/watch?v=rIbHbwPaCd4> (15,923 views on 8/22/

Grant Support

Active Grants

10/1/2018 - 9/30/2023 **IL-1 β regulation of Zika-mediated adverse perinatal outcomes**

1R01HD097608-01

NICHD

\$609,548 (total per year)

PI: Burd/Klein

PD/PI, 20%

The goal of this study is to test the hypothesis that the extent of perinatal neurologic injury following intrauterine ZIKV infection is determined by the state of placental inflammation, which can then be reversed by targeting maternal IL-1 β signaling. These studies are the direct extension of my work on NICHD K08 “IL-1 β regulation of perinatal brain injury.” Unlike the K08 and 1R01HD1031240-01A1 (nanomedicine approaches) studies, employing an endotoxin, a component of gram negative bacteria, these R01 studies aim to demonstrate the generalizability of the key findings (how placental inflammatory determinants impact fetal programming) of my prior work and aim to extrapolate to a viral infections (i.e., Zika virus and SARS-Cov2, as NICHD-approved expanded aims) *in utero*.

4/1/18-03/31/24

IL-36 responses in *Staphylococcus aureus* driven skin inflammation

R01AR073665

NIH/NIAMS

PI: Archer

\$360,113/year

Co-I, 5%

4/01/2019 – 3/31/2024 **Intergenerational link of cardiometabolic risk: Integrate multi-omics with birth cohort**

R01HD098232-01

NICHD

\$465,803/year

PI: Wang X/Liang L

Co, I, 3%

04/13/21 – 03/31/26 **Nanomedicine approaches for prevention of inflammation-induced preterm birth**

1R01HD1031240-01A1

NICHD

\$629,685 (total per year)

PI: Burd/Ensign

PI, 20%

The major goal of this study is to explore nanomedicine approaches to address fundamental questions regarding route of administration, pharmacokinetics, as well as validating existing drug classes that may be reformulated and repurposed for improved targeting to the female reproductive tract. If these preclinical studies progress as expected, we will have identified novel, effective methods for prevention of inflammation-induced preterm birth that also support fetal and neonatal immunological and neuro-immunological programming and development.

6/1/2021-5/31/2023 **Defining SARS-CoV-2 vaccine-induced immunity in pregnant and lactating people**
FDA-CERSI
CERSI Collaborators: Burd, Klein, Cox, Pekosz, Mostafa
FDA collaborators: Sewell, Wesley
Co-PI, 2.5%

10/1/2021-9/30/2026 **7/24 Healthy Brain and Child Development National Consortium**
U01DA055350-01
NIDA
\$969,101 (total per year)
PI: Burd/Volk/Kaufman
PI, 5%
The Healthy Brain and Child Development National Consortium (HBCD-NC) will follow 7,500 mothers and their children from 24 locations across the U.S. from before birth to 10 years of age to better understand which harmful and protective environments exert the greatest impact on child development. This study will help to improve the health and development of children across the nation.

Completed grants

7/1/09 – 6/30/12 **Excitotoxicity as a Mechanism of Neuronal Damage in Inflammation-Induced Preterm Birth**
NO NUMBER
Foundation of the American Board of Obstetrics and Gynecology/American Association of Obstetricians and Gynecologists Foundation
\$300,000
PI: Burd
75% effort

7/1/12-4/30/17 **IL1 β Regulation of Perinatal Brain Injury**
K08 HD073315-05
NICHD
\$135,540/year
PI: Burd
75% effort

6/1/13 – 5/30/16 **Towards of molecular point-of-care diagnosis: Using umbilical cord blood**
[NO NUMBER]
Gerber Foundation
\$270,000
PI: Yang
Co-Investigator, 5% effort
The major goal of this project is perform an exploratory validation study to evaluate performance and operational characteristics of novel PCR-HRMA assay using umbilical cord blood.

10/1/14-9/30/16 **CHAP Study (multi-sites)**
U01 HL120338-01A1
NHLBI
\$45,644
PI: Tita
Johns Hopkins University Site PI, 5% effort

7/1/16-6/30/17 **ASRI Conference**
March of Dimes
NO NUMBER
\$5,000
PI: Burd

9/1/2011 – 6/30/2018 **Post-doctorate research training of Saudi Arabian physicians**
[NO NUMBER]
Ministry of Higher Education of Saudi Arabia/Saudi Arabian Cultural Mission
\$6,776,428/over 7 years (72 fellows rotated through this program)
PI: Burd
3%
The major goals of this project is to train Saudi Arabian physicians to conduct research through 1-2 year full time positions, to conduct collaborative projects through other departments within institution and other institutions in order to increase the scientific output and funding.

7/1/17-6/30/18 **Novel immunomodulatory therapy to prevent fetal neurologic sequelae associated with Zika infection**
AAOGF Bridge Fund
\$75,000
PI: Burd

8/1/14-5/30/18 **Effect of pharmacologic interventions on inflammation-induced brain injury in a preterm labor murine model: Long term neurologic implications of intrauterine magnesium sulfate and betamethasone exposure**
SG5P Grant
Department of Defense
\$48,000/year (to JHU)
PI: Thagard
Site PI, 5% effort

7/1/17-10/30/18 **Association of Professors of Gynecology and Obstetrics (APGO) Medical Education Endowment Fund Grant Program to develop a series of short videos with companion teaching scripts covering basic sciences topics to vertically integrate into the Obstetrics and Gynecology Clerkship**
[NO NUMBER]
\$50,000
PI: Hueppchen
Co-I, 2%

2/15/18-1/31/21 **SRI Meeting: Training and Development in the Reproductive Sciences**
1R13HD095655-01
NICHD
\$6,000
PI: England
Co-I, 2%

7/1/16- 1/31/19 **In-utero characterization of embryonic mouse brain development and injury using MRI**
R21 NS098018
NINDS
PI: Wu
\$157,392
The major goal of this project is to establish an integrated imaging platform for in utero monitoring of the embryonic mouse brain development and injury (in utero LPS model).
Co-I, 10%

7/1/14 – 6/30/19 **Effect of Supplementation of Fluoride on Maternal Periodontal Health, Preterm Delivery, and Perinatal Well-Being**
[NO NUMBER]
Hartwell-Groves Foundation
\$400,000/year
PI, 10% effort

7/1/2018-6/30/2019 **Maternal stress and preterm birth: role of genome and epigenome**
R03HD096136-01
NICHD
\$81,850/year
PI: Hong
Co-I, 2% effort

7/1/17-06/30/19 **Impact of immune changes of pregnancy on tuberculosis**
R01HD081929
NICHD
PI: Gupta
\$411,265
Co-I, 2.5%

10/11/16-3/31/19 **Collection of samples from pregnant women for the evaluation of preeclampsia biomarkers**
[NO NUMBER]
Progenity
PI: Burd
\$58,000
PI, 2%

4/01/2016 – 3/31/2021 **Preterm birth, maternal and cord blood metabolome, and child metabolic risk**
2R01HD041702-12
NICHD
\$565,740
PI: Wang, X/Hu, F
Co-I, 3%

7/1/16- 6/30/21 **Prenatal stress and antidepressant effects on offspring brain development**
RO1 MH106806A1
NIMH
\$432,017
PI: Bonnin
Site PI, 10%

4/1/2019 - 3/31/2022 **Placental determinants of neonatal immune function in maternal HIV infection**
1R21HD099000-01
NICHD

\$212,510 (total per year)
PI: Burd/Mathad
PI, 10%

- 6/1/2020-5/31/2022 **Assessing real world use of pharmaceuticals among pregnant and lactating people**
FDA-CERSI
CERSI Collaborators: Burd, Ladd-Acosta, Volk, Wang, Fallin
FDA collaborators: Johnson, Leishear, Liu, Nugent
Co-PI, 3%
- 04/01/2018-03/31/22 **Maternal-fetal AHR signaling in the pathogenesis and treatment of necrotizing enterocolitis**
1R01DK117186-01
NICHD
PI: Hackam
Co-I, 1%
- 9/1/17-8/31/22 **Early life origins of ASD: Role of maternal and cord blood metabolome, placental histology and fetal growth trajectory**
HRSA126480
PI: Wang
Co-I, 3%

INTRAMURAL FUNDING - previous

- 7/1/16-06/30/17 **ORigins of Health and Resilience in Development (ORCHARD) cohort**
NO NUMBER
JHU Discovery Award
\$125,000
PI: Burd/Wills-Karp/Fallin/X.Wang
- 1/1/12 – 12/31/12 **IL1 β Regulation of Perinatal Brain Injury**
NO NUMBER
Passano Foundation/JHU Clinician Scientist Award
\$80,000
PI: Burd
75% effort

Patents, Inventions and Copyrights

- 12/7/12 Investigator, “Biomarkers for Perinatal Brain Injury”, Patent #9696309
5/16/13 Investigator, “Stem Cells as an Individualized Maternal Therapy for Prevention of Prematurity”,
International Application No. PCT/US2013/041287
5/15/15 Investigator, “Novel Fluoride Prenatal Dietary Supplement,” Provisional application No. 62162198

Publications

Peer-reviewed original research

1. **Burd I**, Nevadunsky NS, Tran NQ, Bachmann GA: Impact of physician gender on sexual history taking in multispecialty practice. *Journal Sex Med* 2006 3: 194-200.

2. Ness A, Dias T, Damus K, **Burd I**, Berghella V: Impact of the recent randomized trials on the use of progesterone to prevent preterm birth: a 2005 follow-up survey. *Am J Obstet Gynecol* 2006 195(4): 1174-9.
3. Gonzalez J, Ofori E, **Burd I**, Chai J, Elovitz MA: Maternal mortality from systemic illness: Unraveling the contribution of the immune response. *Am J Obstet Gynecol*, Apr 2009 430(4): e1-8.
4. **Burd I**, Srinivas S, Paré E, Dharan V, Wang E. Is sonographic assessment of fetal weight influenced by formula selection? *J Ultrasound Med*. 2009 Aug;28(8):1019-24.
5. **Burd I**, Chai J, Gonzalez J, Elovitz MA: Beyond white matter damage: Fetal neuronal injury in a mouse model of preterm birth. *Am J Obstet Gynecol* Sep 2009 279: e1-8.
6. **Burd I**, Ness A, DiMuzio P, Ren GY, Tulenko TN: Effect of Clostridium Botulinum toxin A on pregnant human myometrial contractility *in vitro*. *Repro Sci* Oct 2009 16(10): 1001-4.
7. **Burd I**, Breen K, Friedman A, Chai J, Elovitz MA: Magnesium sulfate reduces inflammation-associated brain injury in fetal mice. *Am J Obstet Gynecol* 2010 Mar;202(3):292.e1-9.
8. **Burd I**, Bentz A, Gonzalez J, Chai J, Cohen A, Yudkoff M, Monnerie H, Le Roux P, Elovitz MA: Inflammation-induced preterm birth alters neuronal morphology in the mouse fetal brain. *Journal of Neuroscience Research* 2010 Jul;88(9):1872-81.
9. **Burd I**, Brown A, Chai J, Gonzalez J, Elovitz MA: A mouse model of chorioamnionitis at term: Elucidating mechanisms of adverse neurological outcomes. *Repro Sci* 2011 Sep;18(9):900-7.
10. Elovitz MA, Brown AG, Breen K, Anton L, Maubert M, **Burd I**. Intrauterine inflammation, insufficient to induce parturition, still evokes fetal and neonatal brain injury. *Int J Devl Neurosc* 2011 Oct;29(6):663-71.
11. Werner EF, Han CS, **Burd I**, Lipkind HS, Copel JA, Bahtiyar MO, Thung SF. Evaluating the cost-effectiveness of prenatal surgery for myelomeningocele: a decision analysis. *Ultrasound Obstet Gynecol*. 2012 Aug;40(2):158-64.
12. Breen K, Brown A, **Burd I**, Elovitz MA. TLR-4 dependent and independent mechanisms of fetal brain injury in the setting of preterm birth. *Reprod Sci*. 2012 Aug;19(8):839-50.
13. Mainigi MA, Olalere D, **Burd I**, Sapienza C, Bartolomei M, Coutifaris C. Peri-implantation hormonal milieu: elucidating mechanisms of abnormal placentation and fetal growth. *Biol Reprod*. 2014 Feb 13;90(2):26.
14. Dada T, Rosenzweig J, Shammery M, Firdaus, W, Al Rebh S, Borbiev T, Tekes A, Zhang J, Alqahtani E, Mori S, Pletnikov M, Johnston MV, **Burd I**. Mouse model of intrauterine inflammation: Sex-specific differences in long-term neurologic and immune sequelae. *Brain Behav Immun*. 2014 May; 38:142-50.
15. Leitner K, Al Shammery M, McLane M, Johnston M, Elovitz M, **Burd I**. IL-1 receptor blockade prevents fetal cortical brain injury but not preterm birth in a mouse model of inflammation-induced preterm birth and perinatal brain injury. *Am J Reprod Immunol*. 2014 May;71(5):418-26.
16. Carver AR, Andrikopoulou M, Lei J, Tamayo E, Gamble P, Hou Z, Zhang J, Mori S, Saade GR, Costantine MM, **Burd I**. Maternal pravastatin prevents altered fetal brain development in a preeclamptic CD-1 mouse model. *PLoS One*. 2014 Jun 25;9(6): e100873.
17. **Burd I**, Zhang F, Dada T, Mishra M, Borbiev T, Lesniak W, Baghlaif H, Kannan S, Kannan R. Fetal uptake of intraamniotically delivered dendrimers in a mouse model of intrauterine inflammation and preterm birth. *Nanomedicine*. 2014 Aug;10(6):1343-51.
18. Graham E, Adami R, McKinney S, Anderson C, **Burd I**, Witter F. Diagnostic accuracy of fetal heart rate monitoring in the identification of neonatal encephalopathy. *Obstet Gynecol*. 2014 Sep; 124(3):507-13.
19. Adler D, Simon E, Lei J, Dada T, Borbiev T, Johnston MV, Kadam S, **Burd I**. Circadian cycle dependent EEG biomarkers of pathogenicity in adult mice following prenatal exposure to in utero inflammation. *Neuroscience*. 2014 Sep 5; 275:305-13.
20. Graham E, Adami R, McKenney S, **Burd I**, Witter F. In reply. *Obstet Gynecol*. 2014 Dec;124(6):1211-2.
21. Lei J, Firdaus W, Rosenzweig JM, Alrebh S, Bakhshwin A, Borbiev T, Fatemi A, Blakemore K, Johnston MV, **Burd I**. Murine model: Maternal administration of stem cells for prevention of prematurity. *Am J Obstet Gynecol*. 2015 May;212(5):639.e1-10.
22. Wu D, Lei J, Rosenzweig JM, **Burd I**, Zhang J. In utero localized diffusion MRI of the embryonic mouse brain microstructure and injury. *J Magn Reson Imaging*. 2015 Sep;42(3):717-28.
23. Dell'Ovo V, Rosenzweig J, **Burd I**, Merabova N, Darbinian N, Goetzl L. An animal model for chorioamnionitis at term. *Am J Obstet Gynecol*. 2015 Sep;213(3):387.e1-10.
24. **Burd I**, Welling J, Kannan G, Johnston MV. Excitotoxicity as a common mechanism for fetal neuronal injury with hypoxia and intrauterine inflammation. *Adv Pharmacol*. 2016;76:85-101.
25. Tsimis ME, Johnson CT, Raghunathan RS, Northington FJ, **Burd I**, Graham EM. Risk factors for periventricular white matter injury in very low birthweight neonates. *Am J Obstet Gynecol*. 2016 Mar;214(3):380.e1-6.

26. Aina-Mumuney A, Hwang K, Sunwoo N, **Burd I**, Blakemore K. The impact of maternal body mass index and gestational age on the detection of uterine contractions by tocodynamometry: A retrospective study. *Reprod Sci*. 2016 May;23(5):638-43.
27. Cordeiro C, Savva Y, Argani C Vaidya, Argani, C, Hong, X, Wang, X, **Burd I**. Mathematical modeling of the biomarker milieu to characterize preterm birth and predict adverse neonatal outcomes. *Am J Reprod Immunol*. 2016 May;75(5):594-601.
28. Mainigi M, Rosenzweig JM, Lei J, Mensah V, Thomaier L, Talbot CC Jr, Olalere D, Ord T, Rozzah R, Johnston MV, **Burd I**. Peri-implantation hormonal milieu: Elucidating mechanisms of adverse neurodevelopmental outcomes. *Reprod Sci*. 2016 Jun;23(6):785-94.
29. Johnson CT, **Burd I**, Raghunathan R, Northington FJ, Graham EM. Perinatal inflammation/infection and its association with correction of metabolic acidosis in hypoxic-ischemic encephalopathy. *J Perinatol*. 2016 Jun;36(6):448-52.
30. Saad A, Hegde S, Kechichian T, Gamble P, Rahman M, Stutz SJ, Anastasio NC, Alshehri W, Lei J, Mori S, Kajs B, Cunningham KA, Saade G, **Burd I**, Costantine M. Is There a causal relation between maternal acetaminophen administration and ADHD? *PLoS One*. 2016 Jun 13;11(6):e0157380
31. Graham EM, **Burd I**, Everett AD, Northington FJ. Blood biomarkers for evaluation of perinatal encephalopathy. *Front Pharmacol*. 2016 Jul 13;7:196.
32. Zhang F, Nance E, Zhang Z, Jasty V, Kambhampati SP, Mishra MK, **Burd I**, Romero R, Kannan S, Kannan RM. Surface functionality affects the biodistribution and microglia-targeting of intra-amniotically delivered dendrimers. *J Control Release*. 2016 Sep 10;237:61-70.
33. McKenney SL, Mansouri FF, Everett AD, Graham EM, **Burd I**, Sekar P. Glial fibrillary acidic protein as a biomarker for brain injury in neonatal CHD. *Cardiol Young*. 2016 Oct;26(7):1282-9.
34. Sheller-Miller S, Lei J, Saade G, Salomon C, **Burd I**, Menon R. fetomaternal trafficking of exosomes in murine pregnancy models. *Front Pharmacol*. 2016 Nov 15;7:432.
35. Saad AF, Alshehri W, Lei J, Kechichian TB, Gamble P, Alhejaily N, Shabi Y, Saade GR, Costantine MM, **Burd I**. Maternal fructose consumption disrupts brain development of offspring in a murine model of autism spectrum disorder. *Am J Perinatol*. 2016 Dec;33(14):1357-1364.
36. Lei J, Zhong W, Almalki A, Zhao H, Arif H, Rozzah R, Al Yousif G, Alhejaily N, Wu D, McLane M, **Burd I**. Maternal glucose supplementation in a murine model of chorioamnionitis alleviates dysregulation of autophagy in fetal brain. *Reprod Sci*. 2017 Jan 1:1933719117734321.
37. Sussan TE, Sudini K, Talbot CC Jr, Wang X, Wills-Karp M, **Burd I**, Biswal S. Nrf2 regulates gene-environment interactions in an animal model of intrauterine inflammation: Implications for preterm birth and prematurity. *Sci Rep*. 2017 Jan 10;7:40194. doi: 10.1038/srep40194.
38. Paules C, Pueyo V, Martí E, de Vilchez S, **Burd I**, Calvo P, Oros D. Threatened preterm labor is a risk factor for impaired cognitive development in early childhood. *Am J Obstet Gynecol*. 2017 Feb;216(2):157.e1-157.e7.
39. Helfrich BB, Chilukuri N, He H, Cerda SR, Hong X, Wang G, Pearson C, **Burd I**, Wang X. Maternal vascular malperfusion of the placental bed associated with hypertensive disorders in the Boston Birth Cohort. *Placenta*. 2017 Feb 20.
40. Vermillion M, Lei J, Shabi Y, Baxter V, Crilly N, McLane M, Griffin D, Pekosz A, Klein SL, **Burd I**. Intrauterine Zika virus infection of pregnant immunocompetent mice models transplacental transmission and adverse perinatal outcomes. *Nat Commun* 2017 Feb 21;8:14575.
41. Albalawi A, Brancusi F, Askin F, Ehsanipoor R, Wang J, **Burd I**, Sekar P. Placental characteristics of fetuses with congenital heart disease. *J Ultrasound Med*. 2017 Mar 4. doi: 10.7863/ultra.16.04023.
42. Lei J, Paules C, Nigrini E, Rosenzweig JM, Bahabry R, Farzin A, Yang S, Northington FJ, Oros D, McKenney S, Johnston MV, Graham EM, **Burd I**. Umbilical Cord Blood NOS1 as a Potential Biomarker of Neonatal Encephalopathy. *Front Pediatr*. 2017 May 22;5:112.
43. Groff SM, Fallatah W, Yang S, Murphy J, Crutchfield C, Marzinke M, Kurtzberg J, Lee CKK, **Burd I**, Farzin A. Effect of maternal obesity on maternal-fetal transfer of preoperative cefazolin at cesarean section. *J Pediatr Pharmacol Ther*. 2017 May-Jun;22(3):227-232.
44. Hong X, Hao K, Ji H, Peng S, Sherwood B, Di Narzo A, Tsai HJ, Liu X, **Burd I**, Wang G, Ji Y, Caruso D, Mao G, Bartell TR, Zhang Z, Pearson C, Heffner L, Cerda S, Beaty TH, Fallin MD, Lee-Parritz A, Zuckerman B, Weeks DE, Wang X. Genome-wide approach identifies a novel gene-maternal pre-pregnancy BMI interaction on preterm birth. *Nat Commun*. 2017 Jun 9;8:15608.

45. Lei J, Rosenzweig JM, Mishra M, Alshehri W, Brancusi F, McLane M, Almalki A, Bahabry R, Arif H, Rozzah R, Alyousif G, Shabi Y, Alhehaily N, Zhong W, Facciabene A, Kannan S, Kannan RM, **Burd I**. Maternal dendrimer-based therapy for inflammation-induced preterm birth and perinatal brain injury. *Sci Rep*. 2017 Jul 21;7(1):6106.
46. Tsimis ME, Lei J, Rosenzweig JM, Arif H, Shabi Y, Alshehri W, Talbot CC, Baig-Ward KM, Segars J, Graham EM, **Burd I**. P2X7 receptor blockade prevents preterm birth and perinatal brain injury in a mouse model of intrauterine inflammation. *Biol Reprod*. 2017 Aug 1;97(2):230-239.
47. Kelley MH, Wu WW, Lei J, McLane M, Xie H, Hart KD, Pereira L, ***Burd I**, Maylie J. Functional changes in hippocampal synaptic signaling in offspring survivors of a mouse model of intrauterine inflammation. *J Neuroinflammation*. 2017 Sep 5;14(1):180. *corresponding author
48. Estrada SM, Thagard AS, Lane AD, Dehart MJ, **Burd I**, Napolitano PG, Ieronimakis N. Bacterial endotoxin exposure invokes transcriptional changes in embryonic murine neural stem cells. *Am J Obstet Gynecol*. 2017 Oct;217(4):488-489.
49. Newell LF, Holtan SG, Yates JE, Pereira L, Tyner JW, ***Burd I**, Bagby GC. PlGF enhances TLR-dependent inflammatory responses in human mononuclear phagocytes. *Am J Reprod Immunol*. 2017 Oct;78(4). *co-mentor on OHSU BRWCH (K12).
50. Wu D, Lei J, Jia B, Xie H, Zhu Y, Xu J, Mori S, Zhang J, **Burd I**. In vivo assessment of the placental anatomy and perfusion in a mouse model of intrauterine inflammation. *J Magn Reson Imaging*. 2017 Oct 5.
51. Lei J, Xie L, Zhao H, Gard C, Clemens JL, McLane MW, Feller MC, Ozen M, Novak C, Alshehri W, Alhehaily N, Shabi Y, Rosenzweig JM, Facciabene A, **Burd I**. Maternal CD8+ T-cell depletion alleviates intrauterine inflammation-induced perinatal brain injury. *Am J Reprod Immunol*. 2017 Dec 4.
52. Thagard AS, Slack JL, Estrada SM, Kazanjian AA, Chan S, **Burd I**, Napolitano PG, Ieronimakis N. Long-term impact of intrauterine neuroinflammation and treatment with magnesium sulphate and betamethasone: Sex-specific differences in a preterm labor murine model. *Sci Rep*. 2017 Dec 20;7(1):17883.
53. Ji Y, Riley AW, Lee LC, Volk H, Hong X, Wang G, Angomas R, Stivers T, Wahl A, Ji H, Bartell TR, **Burd I**, Paige D, Fallin MD, Zuckerman B, Wang X. A prospective birth cohort study on maternal cholesterol levels and offspring attention deficit hyperactivity disorder: New insight on sex differences. *Brain Sci*. 2017 Dec 23;8(1). pii: E3.
54. Hong X, Sherwood B, Ladd-Acosta C, Peng S, Ji H, Hao K, **Burd I**, Bartell TR, Wang G, Tsai HJ, Liu X, Ji Y, Wahl A, Caruso D, Lee-Parritz A, Zuckerman B, Wang X. Genome-wide DNA methylation associations with spontaneous preterm birth in US blacks: findings in maternal and cord blood samples. *Epigenetics*. 2018;13(2):163-172.
55. Ozen M, Zhao H, Kalish F, Yang Y, Folkins A, **Burd I**, Wong RJ, Stevenson DK. Heme oxygenase-1 deficiency results in splenic T-cell dysregulation in offspring of mothers exposed to late gestational inflammation. *Am J Reprod Immunol*. 2018 Feb 27.
56. Novak CM, Ozen M, McLane M, Alqutub S, Lee JY, Lei J, **Burd I**. Progesterone improves perinatal neuromotor outcomes in a mouse model of intrauterine inflammation via immunomodulation of the placenta. *Am J Reprod Immunol*. 2018 Mar 1.
57. Novak CM, Eke AC, Ozen M, **Burd I**, Graham EM. Risk factors for neonatal hypoxic-ischemic encephalopathy in the absence of sentinel events. *Am J Perinatol*. 2018 Mar 26.
58. Wu D, Xu J, Lei J, McLane M, van Zijl PC, **Burd I**. Dynamic glucose enhanced MRI of the placenta in a mouse model of intrauterine inflammation. *Placenta*. 2018 Sep;69:86-91. doi: 10.1016/j.placenta.2018.07.012. Epub 2018 Jul 20.
59. Ji Y, Riley AW, Lee LC, Hong X, Wang G, Tsai HJ, Mueller NT, Pearson C, Thermitus J, Panjwani A, Ji H, Bartell TR, **Burd I**, Fallin MD, Wang X. Maternal biomarkers of acetaminophen use and offspring attention deficit hyperactivity disorder. *Brain Sci*. 2018 Jul 3;8(7).
60. Novak CM, Lee JY, Ozen M, Tsimis ME, Kucirka LM, McLane MW, Xie L, Kelleher M, Xie H Jia B, Lei J, **Burd I**. Increased placental T-cell trafficking results in adverse neurobehavioral outcomes in offspring exposed to sub-chronic maternal inflammation. *Brain, Behavior, and Immunity* 2018.
61. Eloundou SN, Lee J, Wu D, Lei J, Feller MC, Ozen M, Zhu Y, Hwang M, Jia B, Xie H, Clemens JL, McLane MW, AlSaggaf S, Nair N, Wills-Karp M, Wang X, Graham EM, Baschat A, **Burd I**. Placental malperfusion in response to intrauterine inflammation and its connection to fetal sequelae. *PLoS One*. 2019 Apr 3;14(4):e0214951. doi: 10.1371/journal.pone.0214951. eCollection 2019.
62. Jia B, Zong L, Lee JY, Lei J, Zhu Y, Xie H, Clemens JL, Feller MC, Na Q, Dong J, McLane MW, Jones-Beatty K, **Burd I**. Maternal supplementation of low dose fluoride alleviates adverse perinatal outcomes following exposure to intrauterine inflammation. *Sci Rep*. 2019 Feb 22;9(1):2575. doi: 10.1038/s41598-018-38241-8.

63. [Lei J](#), [Vermillion MS](#), [Jia B](#), [Xie H](#), [Xie L](#), [McLane MW](#), [Sheffield JS](#), [Pekosz A](#), [Brown A](#), [Klein SL](#), [Burd I](#). IL-1 receptor antagonist therapy mitigates placental dysfunction and perinatal injury following Zika virus infection. *JCI Insight*. 2019 Feb 28;4(7). pii: 122678. doi: 10.1172/jci.insight.122678. eCollection 2019 Apr 4.
64. [Lee JY](#), [Shin NE](#), [Na Q](#), [Dong J](#), [Chudnovets A](#), [Li S](#), [Novak CM](#), [McLane MW](#), [Lei J](#), [Burd I](#). Exposure to systemic and intrauterine inflammation leads to decreased pup survival via different placental mechanisms. *J Reprod Immunol*. 2019 Jul 2;133:52-62.
65. [Lee JY](#), [Li S](#), [Shin NE](#), [Na Q](#), [Dong J](#), [Jia B](#), [Jones-Beatty K](#), [McLane MW](#), [Ozen M](#), [Lei J](#), [Burd I](#). Melatonin for prevention of placental malperfusion and fetal compromise associated with intrauterine inflammation-induced oxidative stress in a mouse model. *J Pineal Res*. 2019 Jun 24:e12591
66. [Velasquez JC](#), [Zhao Q](#), [Chan Y](#), [Galindo LCM](#), [Simasotchi C](#), [Wu D](#), [Hou Z](#), [Herod SM](#), [Oberlander TF](#), [Gil S](#), [Fournier T](#), [Burd I](#), [Andrews AM](#), [Bonnin A](#). *In utero* exposure to citalopram mitigates maternal stress effects on fetal brain development. *ACS Chem Neurosci*. 2019 Jun 24.
67. [Lee JY](#), [Song H](#), [Dash O](#), [Park M](#), [Shin NE](#), [McLane MW](#), [Lei J](#), [Hwang JY](#), [Burd I](#). Administration of melatonin for prevention of preterm birth and fetal brain injury associated with premature birth in a mouse model. *Am J Reprod Immunol*. 2019 May 27:e13151.
68. [Dong J](#), [Shin N](#), [Lee JY](#), [Jia B](#), [Chudnovets A](#), [McLane MW](#), [Li S](#), [Na Q](#), [Lei J](#), [Burd I](#). Maternal inflammation leads to different mTORC1 activity varied by anatomic locations in mouse placenta. *Biol Reprod*. 2019 Aug 12.
69. [Ozen M](#), [Xie H](#), [Shin N](#), [Al Yousif G](#), [Clemens J](#), [McLane MW](#), [Lei J](#), [Burd I](#). Magnesium sulfate inhibits inflammation through P2X7 receptors in human umbilical vein endothelial cells. *Pediatr Res*. 2019 Sep 7. doi: 10.1038/s41390-019-0557-7.
70. [Raghavan R](#), [Helfrich BB](#), [Cerdeira SR](#), [Ji Y](#), [Burd I](#), [Wang G](#), [Hong X](#), [Fu L](#), [Pearson C](#), [Daniele Fallin M](#), [Zuckerman B](#), [Wang X](#). Preterm birth subtypes, placental pathology findings, and risk of neurodevelopmental disabilities during childhood. *Placenta*. 2019 Aug;83:17-25. doi: 10.1016/j.placenta.2019.06.374. Epub 2019 Jun 14.
71. [Wu D](#), [Lei J](#), [Xie H](#), [Dong J](#), [Burd I](#). Diffusion MRI revealed altered inter-hippocampal projections in the mouse brain after intrauterine inflammation. *Brain Imaging Behav*. 2020 Mar 9. doi: 10.1007/s11682-019-00246-w.
72. [Al Hamayel NA](#), [Baghlaf H](#), [Blakemore K](#), [Crino JP](#), [Burd I](#). Significance of abnormal umbilical artery Doppler studies in normally grown fetuses. *Matern Health Neonatol Perinatol*. 2020 Feb 20;6:1. doi: 10.1186/s40748-020-0115-7. eCollection 2020.
73. [Zhao H](#), [Xie L](#), [Clemens JL](#), [Zong L](#), [McLane MW](#), [Arif H](#), [Feller MC](#), [Jia B](#), [Zhu Y](#), [Facciabene A](#), [Ozen M](#), [Lei J](#), [Burd I](#). Mouse Bone Marrow-Derived Mesenchymal Stem Cells Alleviate Perinatal Brain Injury Via a CD8⁺ T Cell Mechanism in a Model of Intrauterine Inflammation. *Reprod Sci*. 2020 Jan 29. doi: 10.1007/s43032-020-00157-y.
74. [Estrada SM](#), [Thagard AS](#), [Dehart MJ](#), [Damicis JR](#), [Dornisch EM](#), [Ippolito DL](#), [Burd I](#), [Napolitano PG](#), [Ieronimakis N](#). The orphan nuclear receptor Nr4a1 mediates perinatal neuroinflammation in a murine model of preterm labor. *Cell Death Dis*. 2020 Jan 6;11(1):11. doi: 10.1038/s41419-019-2196-7.
75. [Zierden HC](#), [Ortiz Ortiz JI](#), [Dimitrion P](#), [Laney V](#), [Bensouda S](#), [Anders NM](#), [Scardina M](#), [Hoang T](#), [Ronnett BM](#), [Hanes J](#), [Burd I](#), [Mahendroo M](#), [Ensign LM](#). Characterization of an Adapted Murine Model of Intrauterine Inflammation-Induced Preterm Birth. *Am J Pathol*. 2020 Feb;190(2):295-305. doi: 10.1016/j.ajpath.2019.10.013. Epub 2019 Dec 16.
76. [Ge CJ](#), [Polan RM](#), [Baranano KW](#), [Burd I](#), [Baschat AA](#), [Blakemore KJ](#), [Ahn ES](#), [Jelin EB](#), [Jelin AC](#). Acceleration and plateau: two patterns and outcomes of isolated severe fetal cerebral ventricular dilation. *J Matern Fetal Neonatal Med*. 2019 Oct 16:1-7. doi: 10.1080/14767058.2019.1677590.
77. [Chudnovets A](#), [Lei J](#), [Na Q](#), [Dong J](#), [Narasimhan H](#), [Klein SL](#), [Burd I](#). Dose-dependent structural and immunological changes in the placenta and fetal brain in response to systemic inflammation during pregnancy. *Am J Reprod Immunol*. 2020 Apr 19:e13248. doi: 10.1111/aji.13248. [Epub ahead of print]
78. [Al Hamayel NA](#), [Baghlaf H](#), [Blakemore K](#), [Crino JP](#), [Burd I](#). Significance of abnormal umbilical artery Doppler studies in normally grown fetuses. *Matern Health Neonatol Perinatol*. 2020 Feb 20;6:1. doi: 10.1186/s40748-020-0115-7.
79. [Kelleher MA](#), [Lee JY](#), [Roberts V](#), [Novak CM](#), [Baschat AA](#), [Morgan TK](#), [Novy MJ](#), [Rasanen JP](#), [Frias AE](#), [Burd I](#). Maternal Azithromycin therapy for *Ureaplasma parvum* intra-amniotic infection improves fetal hemodynamics in a non-human primate model. *Am J Obstet Gynecol*. 2020 Apr 25. pii: S0002-9378(20)30463-4. doi: 10.1016/j.ajog.2020.04.015. [Epub ahead of print]
80. [Ge CJ](#), [Mahle AC](#), [Burd I](#), [Jelin EB](#), [Sekar P](#), [Jelin AC](#). Fetal CHD and perinatal outcomes. *Cardiol Young*. 2020 May;30(5):686-691. doi: 10.1017/S1047951120000785. PMID: 32308170

81. Dong J, Lei J, Elsayed NA, Lee JY, Shin N, Na Q, Chudnovets A, Jia B, Wang X, **Burd I**. The effect of intrauterine inflammation on mTOR signaling in mouse fetal brain. *Dev Neurobiol*. 2020 Apr 25. 2020. PMID: 32333505
82. Kuiper JR, Stapleton HM, Wills-Karp M, Wang X, **Burd I**, Buckley JP. Predictors and reproducibility of urinary organophosphate ester metabolite concentrations during pregnancy and associations with birth outcomes in an urban population. *Environ Health*. 2020 May 24;19(1):55. doi: 10.1186/s12940-020-00610-0. PMID: 32448197
83. Jiramongkolchai K, Repka MX, Tian J, Aucott SW, Shepard J, Collins M, Kraus C, Clemens J, Feller M, **Burd I**, Roizenblatt M, Goldberg MF, Arevalo JF, Gehlbach P, Handa JT. Lower foetal haemoglobin levels at 31- and 34-weeks post menstrual age is associated with the development of retinopathy of prematurity : PacFiHER Report No. 1 PacFiHER Study Group (Preterm Infants and Fetal Haemoglobin in ROP). *Eye (Lond)*. 2020 May 14. doi: 10.1038/s41433-020-0938-5. PMID: 32409707
84. Lee JY, Na Q, Shin NE, Shin HE, Kang Y, Chudnovets A, Lei J, Song H, **Burd I**. Melatonin for prevention of fetal lung injury associated with intrauterine inflammation and for improvement of lung maturation. *J Pineal Res*. 2020 Aug 1:e12687. doi: 10.1111/jpi.12687. *J Pineal Res*. 2020.PMID: 32737901
85. Hong X, Surkan P, Zhang B, Keiser A, Ji Y, Ji H, **Burd I**, Bustamante-Helfrich B, Ogunwole S, Tang WY, Liu L, Pearson C, Cerda S, Zuckerman B, Hao L, Wang X. Genome-wide association study identifies a novel maternal gene × stress interaction associated with spontaneous preterm birth. *Pediatr Res*. 2020 Jul 29. doi: 10.1038/s41390-020-1093-1. *Pediatr Res*. 2020.PMID: 32726798
86. Banfield E, Fulton W, **Burd I**, Kovler ML, Sodhi CP, Hackam DJ. The role of *in utero* endotoxin exposure in the development of inflammatory bowel disease in mice. *Am J Reprod Immunol*. 2020 Jul 14:e13302. doi: 10.1111/aji.13302. PMID: 32662549
87. Olapaju B, Ahmed S, Hong X, Wang G, Summers A, Cheng TL, **Burd I**, Wang X. Maternal Hypertensive Disorders in Pregnancy and Postpartum Plasma B Vitamin and Homocysteine Profiles in a High-Risk Multiethnic U.S., Population. *J Womens Health (Larchmt)*. 2020 Dec;29(12):1520-1529. PMID: 33252313
88. Sherer ML, Lei J, Creisher P, Jang M, Reddy R, Voegtline K, Olson S, Littlefield K, Park HS, Ursin RL, Ganesan A, Boyer T, Brown DM, Walch SN, Antar AAR, Manabe YC, Jones-Beatty K, Golden WC, Satin AJ, Sheffield JS, Pekosz A, Klein SL, **Burd I**. Dysregulated immunity in SARS-CoV-2 infected pregnant women. *medRxiv*. 2020 Nov 16:2020.11.13.20231373. PMID: 33236024
89. Hong X, Zhang B, Liang L, Zhang Y, Ji Y, Wang G, Ji H, Clish CB, **Burd I**, Pearson C, Zuckerman B, Hu FB, Wang X. Postpartum plasma metabolomic profile among women with preeclampsia and preterm delivery: implications for long-term health. *BMC Med*. 2020 Oct 13;18(1):277. PMID: 33046083
90. Zierden HC, Ortiz JI, DeLong K, Yu J, Li G, Dimitrion P, Bensouda S, Laney V, Bailey A, Anders NM, Scardina M, Mahendroo M, Mesiano S, **Burd I**, Wagner G, Hanes J, Ensign LM. Enhanced drug delivery to the reproductive tract using nanomedicine reveals therapeutic options for prevention of preterm birth. *Sci Transl Med*. 2021 Jan 13;13(576):eabc6245. PMID: 33441428
91. Sherer ML, Lei J, Creisher PS, Jang M, Reddy R, Voegtline K, Olson S, Littlefield K, Park HS, Ursin RL, Ganesan A, Boyer T, Elsayed N, Brown DM, Walch SN, Antar AAR, Manabe YC, Jones-Beatty K, Golden WC, Satin AJ, Sheffield JS, Pekosz A, Klein SL, **Burd I**. Pregnancy alters interleukin-1 beta expression and antiviral antibody responses during severe acute respiratory syndrome coronavirus 2 infection. *Am J Obstet Gynecol*. 2021 Mar 30:S0002-9378(21)00208-8. PMID: 33798476
92. Jiramongkolchai K, Repka MX, Tian J, Aucott SW, Shepard J, Collins M, Clemens J, Feller M, **Burd I**, Roizenblatt M, Smith K, Arevalo JF, Gehlbach PL, Handa JT. Effects of fetal haemoglobin on systemic oxygenation in preterm infants and the development of retinopathy of prematurity PacFiHER Report No. 2. PacFiHER study group (preterm infants and foetal haemoglobin in retinopathy of prematurity). *Br J Ophthalmol*. 2021 Oct 7:bjophthalmol-2021-319546. doi: 10.1136/bjophthalmol-2021-319546. Online ahead of print. PMID: 34620603
93. Liu J, Liu Y, Panda S, Liu A, Lei J, **Burd I**. Type 1 Cytotoxic T Cells Increase in Placenta after Intrauterine Inflammation. *Front Immunol*. 2021 Sep 8;12:718563. doi: 10.3389/fimmu.2021.718563. eCollection 2021.PMID: 34566975
94. Olapaju B, Hong X, Wang G, Summers A, **Burd I**, Cheng TL, Wang X. Birth outcomes across the spectrum of maternal age: dissecting aging effect versus confounding by social and medical determinants. *BMC Pregnancy Childbirth*. 2021 Sep 1;21(1):594. doi: 10.1186/s12884-021-04077-w.PMID: 34470614
95. Na Q, Chudnovets A, Liu J, Lee JY, Dong J, Shin N, Elsayed N, Lei J, **Burd I**. Placental Macrophages Demonstrate Sex-Specific Response to Intrauterine Inflammation and May Serve as a Marker of Perinatal Neuroinflammation. *J Reprod Immunol*. 2021 Sep;147:103360. doi: 10.1016/j.jri.2021.103360. Epub 2021 Jul 29.PMID: 34390

96. Liu Y, Na Q, Liu J, Liu A, Oppong A, Lee JY, Chudnovets A, Lei J, Sharma R, Kannan S, Kannan RM, **Burd I**. Dendrimer-Based N-Acetyl Cysteine Maternal Therapy Ameliorates Placental Inflammation via Maintenance of M1/M2 Macrophage Recruitment. *Front Bioeng Biotechnol*. 2022 Jan 28;10:819593. doi: 10.3389/fbioe.2022.819593. eCollection 2022. PMID: 35155393 Free PMC article.
97. Costantine MM, Sibai B, Bombard AT, Sarno M, West H, Haas DM, Tita AT, Paidas MJ, Clark EAS, Bogges K, Grotegut C, Grobman W, Su EJ, **Burd I**, Saade G, Chavez MR, Paglia MJ, Merriam A, Torres C, Habli M, Macones G, Wen T, Bofill J, Palatnik A, Edwards RK, Haeri S, Oberoi P, Mazloom A, Cooper M, Lockton S, Hankins GD. Performance of a Multianalyte 'Rule-Out' Assay in Pregnant Individuals With Suspected Preeclampsia. *Hypertension*. 2022 Jul;79(7):1515-1524. doi: 10.1161/HYPERTENSIONAHA.122.19038. Epub 2022 May 12. PMID: 35545947 Free PMC article.
98. Cojocar L, Pahlavan A, Tadbiri H, Seung H, Reddy R, Mangione ME, Uribe K, Ufua M, Stockett AM, Jones-Beatty K, **Burd I**, Turan OM, Turan S. Temporal Trend of COVID-19 Clinical Severity and the Ethnic/Racial Disparity: A Report from the Maryland Study Group. *Am J Perinatol*. 2022 Sep 15. doi: 10.1055/s-0042-1757391. PMID: 36108638
99. Lu J, Ahmad R, Nguyen T, Cifello J, Hemani H, Li J, Chen J, Li S, Wang J, Achour A, Chen J, Colie M, Lustig A, Dunn C, Zukley L, Chia CW, **Burd I**, Zhu J, Ferrucci L, Weng NP. Heterogeneity and transcriptome changes of human CD8⁺ T cells across nine decades of life. *Nat Commun*. 2022 Sep 1;13(1):5128. PMID: 36050300

Review Articles

1. **Burd I**, Mass S, Karshenboyem A, Bachmann GA: An ACOG-Affiliated Medical Student Obstetrics and Gynecology Club. *Obstet Gynecol* 1999 94(6): 1051-3.
2. **Burd I**, Bachmann GA. Androgen replacement in menopause. *Curr Womens Health Rep*. 2001 Dec;1(3):202-5.
3. Choe JS, Nevadunsky NS, **Burd ID**, Bachmann GA: Clinical Evaluation of Women Previously Treated for Breast Cancer: An Algorithm for the Primary Care Physician. *Primary Care Update for OB/GYNS*. 2003 10(1): 1-8.
4. Bachmann GA, Rosen R, Arnold LD, **Burd I**, Rhoads GG, Leiblum SR, Avis N: Chronic Vulvar and Gynecologic Pain: Prevalence and Characteristics in a Self-Reported Survey. *Journal of Rep Med* January 2006 51(1): 3-6.
5. Pemberton LK, **Burd I**, Wang E. An appraisal of ultrasound fetal biometry in the first trimester. *Reports in Medical Imaging* 2010;3 11–15.
6. Werner EF, Wheeler S, **Burd I**. Creating decision trees to assess cost-effectiveness in clinical research. *J Biostatistics and Biometrics* 2012.
7. **Burd I**, Balakrishnan B, Kannan S. Models of fetal brain injury, intrauterine inflammation, and preterm birth. *Am J Reprod Immunol*. 2012 Apr;67(4):287-94.
8. Andrikopoulou M, Almalki A, Farzin A, Cordeiro CN, Johnston MV, **Burd I**. Perinatal biomarkers of prematurity: Early identification of neurologic injury. *Int J Dev Neurosci*. 2014 Aug; 36:25-31.
9. Rosenzweig JM, Lei J, **Burd I**. Interleukin-1 receptor blockade in perinatal brain injury. *Front Pediatr*. 2014 Oct 7;2:108.
10. Johnson CT, Farzin A, **Burd I**. Current management and long-term outcomes following chorioamnionitis. *Obstet Gynecol Clin North Am*. 2014 Dec;41(4):649-69.
11. Tsimis ME, Abu Al-Hamayel N, Germaine H, **Burd I**. Prematurity: present and future. *Minerva Ginecol*. 2015 Feb;67(1):35-46.
12. Cordeiro CN, Tsimis M, **Burd I**. Infections and Brain Development. *Obstet Gynecol Surv*. 2015 Oct;70(10):644-55.
13. Jelin AC, Salmeen K, Gano D, **Burd I**, Thiet MP. *Perinatal neuroprotection update*. F1000Res. 2016 Aug 9;5. pii: F1000 Faculty Rev-1939.
14. Nayak S, Lei J, Pekosz A, Klein S, **Burd I**. Pathogenesis and Molecular Mechanisms of Zika Virus. *Semin Reprod Med*. 2016 Sep;34(5):266-272.
15. **Burd I**, Griffin D. The chasm between public health and reproductive research: what history tells us about Zika virus. *J Assist Reprod Genet*. 2016 Apr;33(4):439-40.
16. Nayak S, Welling J, **Burd I**. Maternal immunomodulation therapy for prevention of preterm birth and prematurity-related morbidity: the new era of immuno-perinatology. *Curr Pharm Des*. 2017;23(40):6125-6131.
17. Hwang M, Riggs BJ, Katz J, Seyfert D, Northington F, Shenandoah R, **Burd I**, McArthur J, Darge K, Thimm MA, Huisman TAGM. Advanced pediatric neurosonography techniques: contrast-enhanced ultrasonography, elastography, and beyond. *J Neuroimaging*. 2018 Mar;28(2):150-157.

18. Ozen M, **Burd I**. Immunoperinatology. *Am J Reprod Immunol*. 2018 Mar 8.
19. Ozen M, Novak C, **Burd I**. Placenta immune infiltrates and perinatal outcomes. *Am J Reprod Immunol*. 2018 Mar 25:e12850.
20. Lei J, Calvo P, Vigh R, **Burd I**. Journey to the center of the fetal brain: Environmental exposures and autophagy. *Front Cell Neurosci*. 2018 May 3;12:118-119.
21. Novak CM, Sheffield JS, Burd I. Zika virus: Future reproductive concerns. *Am J Reprod Immunol*. 2017 Feb;77(2).
22. Ellery SJ, Kelleher M, Grigsby P, **Burd I**, Derks JB, Hirst J, Miller SL, Sherman LS, Tolcos M, Walker DW. Antenatal prevention of cerebral palsy and childhood disability: Is the impossible possible? *J Physiol*. 2018 Jun 21.
23. Al-Haddad BJS, Oler E, Armistead B, Elsayed NA, Weinberger DR, Bernier R, **Burd I**, Kapur R, Jacobsson B, Wang C, Mysorekar I, Rajagopal L, Adams Waldorf KM. The fetal origins of mental illness. *Am J Obstet Gynecol*. 2020.
24. Dong J, Shin N, Chen S, Lei J, **Burd I**, Wang X. Is there a definite relationship between placental mTOR signaling and fetal growth? *Biol Reprod*. 2020 May 13:ioaa070. PMID: 32401303.
25. Shaddeau AK, **Burd I** Antenatal Monitoring After Preterm Prelabor Rupture of Membranes. *Obstet Gynecol Clin North Am*. 2020 Dec;47(4):625-632.PMID: 33121649.
26. Chudnovets A, Liu J, Narasimhan H, Liu Y, **Burd I**. Role of Inflammation in Virus Pathogenesis during Pregnancy. *J Virol*. 2020 Dec 22;95(2):e01381-19PMID: 33115865.
27. Narasimhan H, Chudnovets A, **Burd I**, Pekosz A, Klein SL. Animal models of congenital zika syndrome provide mechanistic insight into viral pathogenesis during pregnancy. *PLoS Negl Trop Dis*. 2020 Oct 22;14(10):e0008707.. eCollection 2020 Oct PMID: 33091001.
28. Sharma S, Burd I, Liao A Special issue on COVID-19 and pregnancy: Consequences for maternal and neonatal health. *Am J Reprod Immunol*. 2020 Nov;84(5):e13354. doi: 10.1111/aji.13354.PMID: 33001481.
29. Prochaska E, Jang M, **Burd I**. COVID-19 in pregnancy: Placental and neonatal involvement. *Am J Reprod Immunol*. 2020 Nov;84(5):e13306. PMID: 32779810.
30. Elsayed NA, Boyer TM, **Burd I**. Fetal Neuroprotective Strategies: Therapeutic Agents and Their Underlying Synaptic Pathways. *Front Synaptic Neurosci*. 2021 Jun 23;13:680899. doi: 10.3389/fnsyn.2021.680899. eCollection 2021.PMID: 34248595 Free PMC article.
31. Zucker E, **Burd I**. P2X7 receptor as a potential therapeutic target for perinatal brain injury associated with preterm birth. *Exp Neurol*. 2022 Aug 17;357:114207. doi: 10.1016/j.expneurol.2022.114207. PMID: 35985555
32. Kirschen GW, Panda S, **Burd I**. Congenital Infection Influence on Early Brain Development Through the Gut-Brain Axis. *Front Neurosci*. 2022;16:894955. doi: 10.3389/fnins.2022.894955. eCollection 2022. PMID: 35844234
33. Creisher PS, Lei J, Sherer ML, Dziedzic A, Jedlicka AE, Narasimhan H, Chudnovets A, Campbell AD, Liu A, Pekosz A, **Burd I**, Klein SL. Downregulation of transcriptional activity, increased inflammation, and damage in the placenta following *in utero* Zika virus infection is associated with adverse pregnancy outcomes. *Front Virol*. 2022 Feb;2:782906. doi: 10.3389/fviro.2022.782906. Epub 2022 Feb 22. PMID: 35573818
34. Barañano K, **Burd I**. CNS Malformations in the Newborn. *Matern Health Neonatol Perinatol*. 2022 Jan 17;8(1):1. doi: 10.1186/s40748-021-00136-4. PMID: 35039085 \

Underline is used to highlight mentees

Editorials

1. Kim E, Costantine M, Baschat AA, **Burd I**. Editorial: Prenatal Beginnings for Better Health. *Front Pharmacol*. 2018 4;9:457.
2. Klein SL, Creisher PS, **Burd I**. COVID-19 vaccine testing in pregnant females is necessary. *J Clin Invest*. 2021 Mar 1;131(5):e147553. PMID: 33444286
3. **Burd I**, Kino T, Segars J. The Israeli study of Pfizer BNT162b2 vaccine in pregnancy: considering maternal and neonatal benefits. *J Clin Invest*. 2021 Jun 8:150790. doi: 10.1172/JCI150790. PMID: 34101621

Book Chapters

1. Bachmann GA, Ebert GA, **Burd ID**.: Vulvovaginal Complaints. In: Lobo RA. Treatment of the Postmenopausal Woman. New York: Lippincott Williams and Wilkins 1999.
2. Bachmann GA, **Burd ID**, Ebert GA.: Menopausal Sexuality. Lobo RA, Kesley J and Marcus R. Menopause: Biology and Pathobiology. San Diego: Academic Press 2000.

3. **Burd ID**. Intrauterine Fetal Demise. BERGHELLA: Maternal-Fetal Medicine: Evidenced-based Guidelines. Taylor & Francis 2006.
4. **Burd ID**, Silver DF, Rosenblum NG.: Abnormal Pap Smear During Pregnancy. BERGHELLA: Obstetrics: Evidenced-based Guidelines. Taylor & Francis 2006.
5. **Burd ID**, Silver DF, Rosenblum NG.: The Adnexal Mass in Pregnancy. BERGHELLA: Obstetrics: Evidenced-based Guidelines. Taylor & Francis 2006.
6. O'Neill AM, **Burd ID**, Sabogal JC, Seibel J, Weiner S. Studd J.: Doppler Ultrasound in Obstetrics: Current Advances. Progress in Obstetrics and Gynecology. Churchill Livingstone, 17th Edition 2006.
7. Wayock C, Nigrini E, Graham E, Johnston MV, **Burd, I**. Magnesium in inflammation-induced fetal brain injury. Magnesium in Human Health and Disease. Humana Press/Springer 2011.
8. Wheeler SM, Burd I. Neurologic diseases in pregnancy. Johns Hopkins Manual of Gynecology and Obstetrics Wolters Klower, 5th Edition 2015.
9. Angarita A, Burd I. Neurologic diseases in pregnancy. Johns Hopkins Manual of Gynecology and Obstetrics Wolters Klower, 6th Edition 2019.

Books

Costantine M, Baschat AA, **Burd I**. Prenatal Beginnings for Better Health. eBook. *Front Pharmacol*. 2018 4;9:457.

Assessment/Evaluation Instruments

1. Katsnelson M, Wolf A, Sewell C, **Burd ID**. A novel module for obstetrics and gynecology resident doctor education. *Med Educ* 2010; Nov;44(11):1135-1136.

Media

Appeared on Radio and TV: *NPR's Diane Rehm Show, ABC news, Voice of America*

Major Invited Speeches

Local

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| 9/11 | “Excitotoxicity as a mechanism of fetal neuronal injury in inflammation-induced preterm birth.” Johns Hopkins University Neuroimmunology Seminar, Baltimore, MD. |
| 3/12 | “Utilizing a mouse model of intrauterine inflammation: From Bench to bedside.” Johns Hopkins University Gyn/OB Grand Rounds, Baltimore, MD. |
| 5/12 | “Mentoring and networking: How does it work in residency.” Nagey Research Symposium Symposium, ACOG Maryland, Baltimore, MD. |
| 11/12 | “Immunomodulatory maternal therapy for preterm labor and inflammation-associated perinatal brain injury.” Johns Hopkins University Neuroimmunology Seminar, Baltimore, MD. |
| 10/13 | “Magnesium Sulfate for Fetal Neuroprotection.” MedStar St. Mary’s Hospital Obstetrics and Gynecology Grand Rounds, Leonardtown, MD. |
| 3/16 | “Translational Research in Maternal Fetal Medicine.” Johns Hopkins Department of Gynecology and Obstetrics Grand Rounds, Baltimore, MD |
| 3/17 | “Inflammation, infection and fetal brain.” HEAD talk, Department of Neurology, Johns Hopkins University, Baltimore, MD. |
| 10/17 | “Fetal Neurosonology Program at Johns Hopkins.” Prince George’s Medical Center Obstetrics and Gynecology Grand Rounds, MD. |
| 4/18 | “A Journey to the Center of the Fetal Brain Through Animal Research.” Biomedical Research Awareness Day (BRAD) Symposium, Baltimore, MD. |
| 5/18 | “ <i>In vivo</i> assessment of the placental anatomy and perfusion: A key to fetal neurodevelopment” Bloomberg School of Public Health Placenta Symposium, Baltimore, MD. |
| 4/21 | “Dysregulation of maternal immunity in COVID-19: Implication for the fetus.” Department of Pediatrics Grand Rounds, Johns Hopkins School of Medicine, Baltimore, MD. |
| 10/21 | “High resolution imaging of the placenta: Implications for neonatal origins of health and disease.” Fetal Therapy Grand Rounds, Johns Hopkins School of Medicine, Baltimore, MD |

National

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| 11/06 | “Effect of Botox on human myometrium: Implications for future tocolytic research.” Obstetrical Society of Philadelphia Meeting, Philadelphia. PA. |
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- 5/08 “Toll like receptor 4 is essential for fetal neuronal injury in inflammation-induced preterm birth.” University of Pennsylvania Center for Research in Reproduction and Women’s Health Annual Retreat, Philadelphia, PA.
- 11/09 “Inflammation, infection and preterm birth: Consequences for fetal neurons.” UMDNJ-Robert Wood Johnson Medical School Ob/Gyn Grand Rounds, Piscataway, NJ.
- 4/10 “Magnesium sulfate to prevent adverse neurological injury: Providing biological evidence in a mouse model of preterm birth.” Kristine Sandberg Knisely Symposium, Children’s Hospital of Philadelphia, Philadelphia, PA.
- 5/10 “Magnesium sulfate reduces inflammation-associated brain injury in fetal mice: Evidence for the clinical intervention.” Philadelphia Perinatal Society Meeting, Philadelphia, PA.
- 9/09 “Inflammation-induced preterm birth: Consequences for fetal neurons.” The Perinatal Research Society Annual Meeting, New Paltz, NY.
- 7/10 “Excitotoxicity as a mechanism of fetal neuronal injury in preterm birth.” American Association of Obstetricians and Gynecologists Foundation Retreat. National Institute of Health (NIH), Bethesda, MD.
- 7/11 “Perinatal brain injury: Lessons from adult neuroinflammatory disorders.” University of Texas Medical Branch at Galveston Grand Rounds, Galveston, TX.
- 10/11 “Perinatal brain injury: Lessons from adult neuroinflammatory disorders.” Medical University at South Carolina Grand Rounds, Charleston, SC.
- 11/11 “Models of fetal brain injury and preterm delivery.” American Society for Reproductive Immunology/Clinical Reproductive Immunology Symposium. Providence, RI.
- 6/12 “Animal models of inflammation during pregnancy.” Education Course “Maternal and Fetal Immunology.” Teratology Society Annual Meeting, Baltimore, MD.
- 9/12 “Excitotoxicity as a mechanism of fetal cortical injury with intrauterine inflammation.” American Gynecological and Obstetrical Society Annual Meeting, Washington, DC.
- 11/12 “Inflammation-associated fetal brain injury: Is prenatal IL-1 β blockade the solution?” Division of Reproductive Sciences Research Seminar, Department of OB/GYN, Yale University, New Haven, CT.
- 11/12 “Cell therapy for perinatal injury from hypoxia-ischemia and prematurity.” OMICS group 2nd World Congress on Cell Science & Stem Cell Research, San Antonio, TX.
- 2/13 “Intrauterine inflammation, preterm birth and neurologic injury.” Society for Maternal Fetal Medicine Annual Meeting. Prematurity Scientific Forum. San Francisco, CA.
- 9/13 “Intrauterine inflammation, preterm birth and perinatal neurologic injury.” Oregon Health Sciences University Obstetrics and Gynecology Grand Rounds, Portland, OR.
- 1/14 “Immunomodulatory maternal therapy for preterm labor and inflammation-associated perinatal brain injury.” Brown University, Department of Pathobiology Seminar, Providence, RI.
- 1/14 “Intrauterine inflammation and long-term sequelae: Is there a role for maternal immunomodulation.” Perinatal Research Branch Grand Rounds, NICHD, Detroit, MI.
- 2/14 “Preventing Prematurity: From bedside to bench to bedside.” Society for Maternal Fetal Medicine Annual Meeting. Prematurity Scientific Forum. New Orleans, LA.
- 4/14 “Intrauterine inflammation and long-term sequelae: Is there a role for maternal immunomodulation.” Madigan Army Medical Center Grand Rounds, Tacoma, WA.
- 5/14 “Magnesium sulfate for neuroprophylaxis: What is the evidence?” University of New Mexico Obstetrics and Gynecology Grand Rounds, Albuquerque, NM.
- 9/14 “Immunomodulatory maternal therapy for preterm labor and inflammation-associated perinatal brain injury.” Shriners Childrens Hospital Seminar, Philadelphia, PA.
- 2/15 “Biomarkers for Prematurity: Past, Present and Future”. Society for Maternal Fetal Medicine Annual Meeting.” Prematurity Scientific Forum. San Diego, CA.
- 3/15 “Understanding prenatal brain injury: Lessons from animal models.” Society for Reproductive Investigations Annual Meeting, San Francisco, CA.
- 5/15 “Maternal immunomodulation: what is the role of IL-1 receptor?” Rosalind Franklin University of Medicine and Science, Department of Immunology Seminar, Chicago, IL.

- 8/15 "Intrauterine inflammation and offspring neurologic sequelae: Mechanisms and consequences." University of Washington, Department of Obstetrics and Gynecology Grand Rounds, Seattle, WA.
- 2/16 "Introduction: Prematurity research priorities." Society for Maternal Fetal Medicine Annual Meeting." Prematurity Scientific Forum. Atlanta, GA.
- 11/16 "Intrauterine infection and inflammation: Journey to the center of the fetal brain." Yale University, Department of Obstetrics, Gynecology and Reproductive Sciences Seminar. New Haven, CT.
- 11/16 "Magnesium sulfate use for fetal neuroprotection." 89th Perinatal and Development Medicine Symposium, American Academy of Pediatrics, Marco Island, FL.
- 12/16 "Perinatal Infection and Inflammation: Effects on Fetal Brain Development." Zikha Neurogenetic Institute Seminar. Los Angeles, CA.
- 1/17 "Intrauterine infection and inflammation: Journey to the center of the fetal brain." Brown University Pediatric Research Colloquium, Providence, RI
- 2/17 "Infection and fetal brain development." National Neo Conference, Orlando, FL
- 3/17 "Intrauterine infection and inflammation: Journey to the center of the fetal brain." Society for Reproductive Investigations Annual Meeting, Fetal Physiology Satellite Meeting, Orlando, FL.
- 4/17 "Intrauterine inflammation and infection: Journey to the center of the fetal brain." Reproductive Sciences Seminar, University of Colorado, CO.
- 6/17 "Magnesium sulfate for fetal neuroprotection." Ohio State University, Department of Obstetrics and Gynecology Grand Rounds, Columbus, OH.
- 9/17 "Zika infection: Ceasefire at the expense of normal fetal development." American Society for Reproductive Investigations 37th Annual Meeting, Chicago, IL.
- 3/18 "Viral Injury of the Fetal Brain: Ceasefire at the Expense of Normal Development." Society for Reproductive Investigations Annual Meeting Mini-symposium, San Diego, United States.
- 8/18 "Novel immunomodulatory therapy for Zika infection." American Board of Obstetrics and Gynecology (ABOG)/AAOGF Research Retreat, University of Alabama, Birmingham, AL.
- 10/18 "Intrauterine inflammation and infection: Transplacental signals and neurodevelopment." CRRWH Seminar, University of Pennsylvania Perelman School of Medicine, Philadelphia, PA
- 11/18 "Magnesium sulfate for fetal neuroprotection." Rutgers – Robert Wood Johnson Medical School, Department of Obstetrics and Gynecology Grand Rounds, New Brunswick, NJ.
- 2/19 "Intrauterine growth restriction and long-term neurodevelopmental outcomes: The Evidence." Society for Maternal Fetal Medicine Annual Meeting." State of Science Symposium. Las Vegas, NV.
- 6/19 "Reproductive immunology meets imaging." *American Journal for Reproductive Immunology Award Lecturer*, American Society for Reproductive Immunology Annual Meeting, Grand Rapids, MI.
- 9/19 "Immunoperinatology: Placental determinants of neonatal health and disease." *Mead Johnson Award Speaker*, Perinatal Research Society, Minneapolis, MN.
- 10/20 "Immunoperinatology: Placental determinants of neonatal health and disease." UT Southwestern Medical School Department of Obstetrics and Gynecology Virtual Grand Rounds, Dallas, TX.
- 5/21 "High resolution imaging of placenta." Clinical Immunology Workshop. American Society for Reproductive Immunology 40th Annual Meeting, Virtual meeting.
- 6/21 "Immunoperinatology: Placental determinants of neonatal health and disease." Louisiana State University Department of Obstetrics and Gynecology Virtual Grand Rounds, Baton Rouge, LA.
- 9/21 "The role of maternal IL-1 β cascade in fetal and neonatal outcomes following the *in utero* exposure to infection and/or inflammation." University of Pittsburgh Department of Infectious Diseases and Microbiology Virtual Seminar, Pittsburgh, PA
- 3/22 "Immunoperinatology: From Bench to Bedside." Yale University Department of Obstetrics and Gynecology Seminar, New Haven, CT
- 4/22 "Immunoperinatology: From Bench to Bedside." University of Colorado Perinatal Research Center Seminar, Denver, CO.
- 5/22 "Fetal Neuroprotection." SMFM Fellows' Lecture Series, Virtual.

5/22 ‘COVID-19 and pregnancy.’ Clinical Course at the American Society for Reproductive Immunology Annual Meeting, Nashville, TN.

International

- 10/12 “Animal models of intrauterine inflammation: Our future is a non-human primate model.” Jazan University Research Seminar, Jazan, Saudi Arabia.
- 1/12 “Fetal medicine: New paradigms for prenatal diagnosis and treatment.” ARAMCO (SAMSO) Hospital Grand Rounds, Dammam, Saudi Arabia.
- 4/14 “Post-graduate education system in the United States” International Conference on Higher Education in Kingdom of Saudi Arabia, Riyadh, Kingdom of Saudi Arabia.
- 9/15 “Prematurity: Past, present and future of biomarker research.” Chinese Human Placenta Project Conference, Guangzhou, China.
- 3/16 “What is the Zika epidemic and what do we know about its pathogenicity.” Society for Reproductive Investigations Annual Meeting, Montreal, Canada.
- 5/16 “Maternal immunomodulation for prevention of perinatal brain injury.” European Academy of Childhood Disabilities Annual Meeting, Stockholm, Sweden.
- 12/16 “Intrauterine infection and inflammation: Journey to the center of the fetal brain.” Chinese Human Placenta Project 2nd Annual Conference, Shenzhen, China.
- 3/18 “Magnesium sulfate for fetal neuroprophylaxis” University of Zaragoza, Department of Obstetrics and Gynecology Grand Rounds, Zaragoza, Spain.
- 6/18 “Maternal immunomodulation for prevention of adverse perinatal outcomes: The new era of immunoperinatology.” Fudan University Reproductive Immunology Symposium, Shanghai, China.
- 8/18 “Intrauterine inflammation and infection: Transplacental signals and neurodevelopment.” PREBIC Australasian Symposium on Preterm Birth and Prematurity, Seoul, South Korea.
- 9/18 “Intrauterine inflammation and infection: Transplacental signals and neurodevelopment.” World Cerebral Palsy Alliance Conference, Changsha, China.
- 5/20 “Immunoperinatology: Placental determinants of neonatal health and disease.” IMMUNOLOGY 2020, Honolulu, Hawaii (cancelled).
- 5/21 “Immunoperinatology: Placental determinants of neonatal health and disease.” IMMUNOLOGY 2021, Virtual meeting.
- 4/21-1/22, 8/22 Monthly Obstetrics Guideline Review, Ukrainian Outreach Virtual Grand Rounds, Virtual.
- 3/22 “Enhanced drug delivery approaches to ameliorate placental inflammation and perinatal brain injury.” Society for Reproductive Investigation Satellite Symposium at the 69th Annual Meeting, Denver, CO.