# Kristen Benninger

# PRESENT TITLE AND AFFILIATION

Assistant Professor Department of Pediatrics Research Centers Columbus, Ohio

# **EDUCATION**

2007 Miami University Bachelor of Science Health and Sports Studies

2012 The University of Toledo Doctor of Medicine

2015 Nationwide Children's Hospital Pediatric Residency

2018 The Ohio State University Masters of Medical Science

2018 Nationwide Children's Hospital Neonatology Fellow

## **ACADEMIC APPOINTMENTS**

2018 to present Assistant Professor of Pediatrics, Division of Neonatology, Nationwide Children's Hospital Nationwide Children's Hospital

# **ACADEMIC ADMINISTRATIVE RESPONSIBILITIES**

## NCH/OSU

Physician lead of the Ohio Perinatal Research Network (OPRN) neurodevelopmental follow-up research team

## NATIONAL

- NICHD Neonatal Research Network Follow-Up PI
- Founder and Co-Lead of the CHNC Newborns with Substance Exposure Focus Group

# **PUBLICATIONS**

# JOURNAL ARTICLE

- 1. Benninger KL, Zidron AM, Newton J, Tallikar AA, Maitre NL. An App for Developmental Surveillance of Neonatal Abstinence Syndrome: Development and Usability Study.
- Raig ET, Jones NB, Varker KA, Benniger K, Go MR, Biber JL, Lesinski GB, Carson WE 3rd: VEGF secretion is inhibited by interferon-alpha in several melanoma cell lines. Journal of interferon & cytokine research : the official journal of the International Society for Interferon and Cytokine Research 28 (9): 553-61, 2008 Sep.
- 3. Lesinski GB, Benninger K, Kreiner M, Quimper M, Young G, Carson WE 3rd: Bortezomib pre-treatment prolongs interferon-alpha-induced STAT1 phosphorylation in melanoma cells. Cancer immunology, immunotherapy : CII 58 (12): 2031-7, 2009 Dec.
- Mundy-Bosse BL, Lesinski GB, Jaime-Ramirez AC, Benninger K, Khan M, Kuppusamy P, Guenterberg K, Kondadasula SV, Chaudhury AR, La Perle KM, Kreiner M, Young G, Guttridge DC, Carson WE 3rd: Myeloid-derived suppressor cell inhibition of the IFN response in tumor-bearing mice. Cancer research 71 (15): 5101-10, 2011 Aug 1.
- 5. Benninger KL, Ruess L, Slaughter LA, Maitre NL, Rusin JA: Neonatal Vein of Labbé Infarction Size is Associated With Long-Term Language Outcomes. Pediatric neurology 72: 70-75.e1, 2017 Jul.
- 6. Abdi HH, Maitre NL, Benninger KL, Hester ME, Slaughter JL: Gabapentin Use for Hospitalized Neonates. Pediatric neurology 97: 64-70, 2019 Aug.
- Benninger KL, Maitre NL, Ruess L, Rusin JA: MR Imaging Scoring System for White Matter Injury after Deep Medullary Vein Thrombosis and Infarction in Neonates. AJNR. American journal of neuroradiology 40 (2): 347-352, 2019 Feb.
- Benninger KL, Borghese T, Kovalcik JB, Moore-Clingenpeel M, Isler C, Bonachea EM, Stark AR, Patrick SW, Maitre NL: Prenatal Exposures Are Associated With Worse Neurodevelopmental Outcomes in Infants With Neonatal Opioid Withdrawal Syndrome. Frontiers in pediatrics 8: 462, 2020.
- Benninger KL, Inder TE, Goodman AM, Cotten CM, Nordli DR, Shah TA, Slaughter JC, Maitre NL: Perspectives from the Society for Pediatric Research. Neonatal encephalopathy clinical trials: developing the future. Pediatric research, 2020 Mar 27.
- Maitre NL, Benninger KL, Neel ML, Haase JA, Pietruszewski L, Levengood K, Adderley K, Batterson N, Hague K, Lightfoot M, Weiss S, Lewandowski DJ, Larson H: Standardized Neurodevelopmental Surveillance of High-risk Infants Using Telehealth: Implementation Study during COVID-19. Pediatric quality & safety 6 (4): e439, 2021 Jul-Aug.
- Benninger KL, Benninger TL, Moore-Clingenpeel M, Ruess L, Rusin JA, Maitre NL: Deep Medullary Vein White Matter Injury Global Severity Score Predicts Neurodevelopmental Impairment. Journal of child neurology 36 (4): 253-261, 2021 Mar.
- Benninger KL, Purnell J, Conroy S, Jackson K, Batterson N, Neel ML, Hester ME, Maitre NL: Intrauterine drug exposure as a risk factor for cerebral palsy. Developmental medicine and child neurology 64 (4): 453-461, 2022 Apr.
- Neel ML, de Silva A, Taylor HG, Benninger K, Busch T, Hone E, Moore-Clingenpeel M, Pietruszewski L, Maitre NL: Exceeding expectations after perinatal risks for poor development: associations in term- and preterm-born preschoolers. Journal of perinatology : official journal of the California Perinatal Association 42 (4): 491-498, 2022 Apr.
- Benninger KL, Richard C, Conroy S, Newton J, Taylor HG, Sayed A, Pietruszewski L, Nelin MA, Batterson N, Maitre NL: One-Year Neurodevelopmental Outcomes After Neonatal Opioid Withdrawal Syndrome: A Prospective Cohort Study. Perspectives of the ASHA special interest groups 7 (4): 1019-1032, 2022 Aug.
- 15. Benninger KL, Peng J, Ho ML, Newton J, Wang DJJ, Hu HH, Stark AR, Rusin JA, Maitre NL: Cerebral perfusion and neurological examination characterise neonatal opioid withdrawal syndrome: a prospective cohort study. Archives of disease in childhood. Fetal and neonatal edition 107 (4): 414-420, 2022 Jul.
- 16. Bose Brill S, Juckett LA, D'Amico Gordon R, Thomas N, Bunger A, Fareed N, Voisin C, Flores P, Mao S,

Benninger KL, Grobman W, Panchal B, Gillespie S, Lorenz A: Developing a multimodal maternal infant perinatal outpatient delivery system: the MOMI PODS program. Frontiers in global women's health 4: 1232662, 2023.

- 17. Melemed AL, Slaughter JL, Benninger KL, Conroy S: Is erythropoietin beneficial and safe as an adjunctive therapy to therapeutic hypothermia in newborns with hypoxic ischemic injury?. Journal of perinatology : official journal of the California Perinatal Association 43 (12): 1552-1555, 2023 Dec.
- Mietzsch U, Kolnik SE, Wood TR, Natarajan N, Gonzalez FF, Glass H, Mayock DE, Bonifacio SL, Van Meurs K, Comstock BA, Heagerty PJ, Wu TW, Wu YW, Juul SE: Evolution of the Sarnat exam and association with 2-year outcomes in infants with moderate or severe hypoxic-ischaemic encephalopathy: a secondary analysis of the HEAL Trial. Archives of disease in childhood. Fetal and neonatal edition, 2023 Nov 27.
- 19. Devlin LA, Hu Z, Merhar SL, Ounpraseuth ST, Simon AE, Lee JY, Das A, Crawford MM, Greenberg RG, Smith PB, Higgins RD, Walsh MC, Rice W, Paul DA, Maxwell JR, Fung CM, Wright T, Ross J, McAllister JM, Crowley M, Shaikh SK, Christ L, Brown J, Riccio J, Wong Ramsey K, Braswell EF, Tucker L, McAlmon K, Dummula K, Weiner J, White JR, Newman S, Snowden JN, Young LW: Influence of Eat, Sleep, and Console on Infants Pharmacologically Treated for Opioid Withdrawal: A Post Hoc Subgroup Analysis of the ESC-NOW Randomized Clinical Trial. JAMA pediatrics, 2024 Apr 15.
- Neel ML, Bora S, Brachio SS, Duncan A, Vanderbilt D, Benninger K, Kendrick-Allwood S, Maitre NL: Challenges and Opportunities in High-Risk Infant Follow-Up: Progress from the 2022 Networking Session at the Pediatric Academic Societies. The Journal of pediatrics 270: 113971, 2024 Mar 12.
- 21. Morell AS, Monsell SE, Cornet MC, Wisnowski JL, McKinstry RC, Mathur AM, Li Y, Glass HC, Gonzalez FF, Mayock DE, Benninger KL, Van Meurs KP, Lampland AL, Wu TW, Riley D, Mietzsch U, Chalak L, Flibotte J, Weitkamp JH, Ahmad KA, Yanowitz TD, Baserga M, Merhar S, Rao R, Sokol GM, Comstock BA, Heagerty PJ, Juul SE, Wu YW: Genetic and Congenital Anomalies in Infants With Hypoxic-Ischemic Encephalopathy. Pediatric neurology 154: 44-50, 2024 May.

# OTHER

- Wu YW, Comstock BA, Gonzalez FF, Mayock DE, Goodman AM, Maitre NL, Chang T, Van Meurs KP, Lampland AL, Bendel-Stenzel E, Mathur AM, Wu TW, Riley D, Mietzsch U, Chalak L, Flibotte J, Weitkamp JH, Ahmad KA, Yanowitz TD, Baserga M, Poindexter BB, Rogers EE, Lowe JR, Kuban KCK, O'Shea TM, Wisnowski JL, McKinstry RC, Bluml S, Bonifacio S, Benninger KL, Rao R, Smyser CD, Sokol GM, Merhar S, Schreiber MD, Glass HC, Heagerty PJ, Juul SE: Trial of Erythropoietin for Hypoxic-Ischemic Encephalopathy in Newborns. The New England journal of medicine 387 (2): 148-159, 2022 Jul 14.
- Juul SE, Voldal E, Comstock BA, Massaro AN, Bammler TK, Mayock DE, Heagerty PJ, Wu YW, Numis AL: Association of High-Dose Erythropoietin With Circulating Biomarkers and Neurodevelopmental Outcomes Among Neonates With Hypoxic Ischemic Encephalopathy: A Secondary Analysis of the HEAL Randomized Clinical Trial. JAMA network open 6 (7): e2322131, 2023 Jul 3.
- 3. Benninger KL, McAllister JM, Merhar SL: Neonatal Opioid Withdrawal Syndrome: An Update on Developmental Outcomes. Clinics in perinatology 50 (1): 17-29, 2023 Mar.

# **RESEARCH SUPPORT**

# ACTIVE

5UG1HD068278-11, NICHD NICHD Cooperative Multicenter Neonatal Research Network-(UG1) Ohio State Principal investigator (multiple PI) 3395973 Apr 01, 2011 to Mar 31, 2023

030-92053-933 Mar 01, 2018 to Jul 31, 2022 NCHF-Cardinal Health Foundation (Maitre PI, Benninger Co-I): Standardized Testing for NAS and Neuroimaging Correlates of NAS and Adverse Outcomes **Co-Principal Investigator** 800 250590AA01 Jul 01, 2019 to Jul 30, 2021 The Opioid Innovation Fund Principal Investigator 550000 U38OT000316 Mar 01, 2020 to Jul 31, 2022 MATernaL and Infant NetworK to Understand Outcomes Associated with Treatment of Opioid Use **Disorder During Pregnancy (MAT-**LINK) Co-Investigator 10 UG1 HD068278-06, NICHD Sep 01, 2020 to Aug 01, 2025 Pragmatic, Randomized, Blinded Trial to Shorten Pharmacological Treatment of Newborns with Neonatal Opioid Withdrawal Syndrome Co-Investigator 10 1 U01 NS092764-01A1 NINDS Jun 01, 2021 to Nov 01, 2021 High-dose Erythropoietin for Asphyxia and Encephalopathy (HEAL) Co-Investigator 10 The Ohio State University Aug 20, 2021 to Aug 26, 2022 Addiction Innovation Initiative Grant Maternal-Fetal Transfer and Amniotic Fluid Accumulation of Buprenorphine and its Metabolites in Opioid Dependent Pregnant Individuals Co-Investigator

10

N/A The Robert F. Wolfe and Edgar T. Wolfe Foundation award Principal Investigator 127000

#### N/A

COOL PRIME (Cooling Comparative Effectiveness Prospective Study In Infants with Mild Encephalopathy) Co-Investigator 717362 700313-0224-00 PIVOTAL UH3 Co-Investigator

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## APPROVED

SPC-1000012914 | GR133697 Pregnant People-Infant Linked Longitudinal Surveillance (Component A)

Co-Investigator

170693

## N/A

The Darbepoetin Kindergarten Development Study (Darbe-KIDS) Co-Investigator 654540

# PENDING

1K23DA058763-01A1 Optimizing Developmental Outcomes in Early Childhood After Neonatal Opioid Withdrawal Syndrome Principal Investigator 0 NA

HIE Childhood Outcome Study Co-Investigator

# SERVICE ACTIVITIES

Jul 01, 2022 to Jun 30, 2029

Apr 10, 2023 to present

Sep 30, 2023 to Aug 29, 2027

Apr 01, 2024 to Apr 01, 2028

#### NCH/OSU

- Member, Nationwide Children's Hospital Neonatology Fellowship Recruitment Team
- Member, Nationwide Children's Hospital Neonatology Residency Recruitment Team
- Member, Nationwide Children's Hospital NAS Taskforce Committee
- Member, Nationwide Children's Hospital C4C/H7B NAS Committee
- Member, IT Research & Innovation Advisory Council
- Member, Search Committee- Director, Center for Bio-Behavioral Health

#### AWARDS AND HONORS

August 2009 Lucas County Medical Alliance Community Service Scholarship Lucas County Medical Alliance Lucas County, OH

May 2016 Nationwide Children's Hospital Department of Pediatrics Advanced Degree Funding Award Nationwide Children's Hospital Columbus, OH

May 2018 2018 Nationwide Children's Hospital Fellow Research Award Nationwide Children's Hospital Columbus, OH

August 2018 Clinician Scientist Annual NICHD Conference Nationwide Children's Hospital Potomac. MD

December 2019 Neurodevelopmental Research Affinity Group Nationwide Children's Hospital and The Ohio State University Columbus, OH

June 2021 Kenyon Biomedical and Scientific Writing Program Nationwide Children's Hospital Kenyon, OH

August 2021 Pediatric Research Award Nationwide Children's Hospital, The Robert F. and Edgar T. Wolfe Foundation Grant Columbus, OH

November 2022 Invited Member, American Pediatric Society and Society for Pediatric Research Journeys & Frontiers in Pediatric Research Program 2022-2023 APS and SPR

various

September 2023 2023 American Speech-Language-Hearing Association (ASHA) Journals Editor's Award ASHA

various

## EDITORIALS AND REVIEW ACTIVITIES

#### JOURNAL REVIEWER

July 2019 to present BMC Pediatrics Journal Reviewer

February 2020 to present Journal of Child Neurology Journal Reviewer

April 2020 to present Scientific Reports Journal Reviewer

October 2020 to present Pediatric Research Journal Reviewer

October 2022 to present Journal of Pediatrics Reviewer

## OTHER

June 2021 to June 2021 2021 Fellow Research Award judge

June 2022 to June 2022 2022 Fellow Research Day Judge

May 2023 to May 2023 2023 Fellow Research Award judge

May 2024 to present 2024 CHNC Annual Symposium Abstract Reviewer

May 2024 to May 2024 2024 Fellow Research Award judge

#### PROFESSIONAL MEMBERSHIPS AND ACTIVITIES

March 2018 to present Member Nationwide Children's Hospital Women in Medicine Group

May 2019 to October 2021 Junior Member Society for Pediatric Research April 2020 to present Member Newborn Brain Society

May 2020 to present Member Nationwide Children's Hospital Pediatric Primary Care Research Affinity Group

June 2021 to present Nationwide Children's Hospital Follow-up PI NICHD Neonatal Research Network

October 2021 to present Member Society for Pediatric Research

January 2022 to present Member The Children's Hospitals Neonatal Consortium, Hypoxic Ischemic Encephalopathy focus group

# **TEACHING ACTIVITIES**

Nov 13, 2019 to present "Modes of Ventilation." Nationwide Children's Hospital Neonatology Fellow Physiology Lecture Series Fellows

Sep 03, 2018 to present "Time Management for Physicians [Facilitator, Organizer, Presenter]." Nationwide Children's Hospital GME Fellow Core Curriculum Lecture Series.

Fellows

Jul 26, 2022 to present Diagnosis and Prognosis after Neural Insults Lecture Fellows

Jun 18, 2019 to present Follow-up Care of the Premature Infant, For General Pediatricians." Nationwide Children's Hospital Pediatric Residency Lecture Series Residents

Jun 15, 2021 to present Follow-up care of the premature infant, Nationwide Children's Hospital Residency Lecture Series

Residents

Nov 01, 2023 to present Hammersmith Infant Neurological Examination Training Physicians, nurse practitioners, PT, OT

Nov 21, 2019 to present Hammersmith Infant Neurological Examination Training, University of Virginia Medical Center. Physicians, PT, OT, SLP

Aug 12, 2022 to present Hammersmith Neonatal Neurological Examination Training for PIVOTAL trial

various

Nov 22, 2019 to present Hammersmith Neonatal Neurological Examination Training, University of Virginia Medical Center Physicians, PT, OT, SLP

May 06, 2020 to present NeoFlip: Neonatal Resuscitation Fellows

Jul 25, 2022 to present Neurodevelopmental Follow-up Lecture Fellows

May 05, 2021 to present Neurodevelopmental Outcomes and Strategies for Neuroprotection Fellows

May 21, 2021 to present Neurodevelopmental outcomes and strategies for neuroprotection, Nationwide Children's Hospital Neonatology Fellow Didactic Series Fellows

Jul 10, 2020 to present NICU Follow-up and Neurodevelopmental Outcomes Fellows

Jul 16, 2021 to present NICU follow-up and neurodevelopmental research, Nationwide Children's Hospital Fellowship Orientation Lecture Series Fellows

Jun 08, 2023 to present Preemie Neuro Conditions: Intraventricular Hemorrhage and Periventricular Leukomalacia Residents

Feb 18, 2020 to present Time Management for Physicians, Nationwide Children's Hospital GME Fellows College Fellows

Dec 17, 2020 to present Time Management for Physicians, Nationwide Children's Hospital GME Fellows College Fellows

Sep 07, 2021 to present Time management for physicians, workshop presented at the Nationwide Children's Hospital GME Fellows College Fellows

Sep 06, 2022 to present Time management for physicians, workshop presented at the Nationwide Children's Hospital GME Fellows College Fellows

Sep 05, 2023 to present Time management for physicians, workshop presented at the Nationwide Children's Hospital GME Fellows College Fellows

Nov 05, 2021 to present Time management for physicians, workshop presented at the Nationwide Children's Hospital Residency Program Retreat Residents

#### **CONFERENCES AND SYMPOSIA**

#### NCH/OSU

June 13, 2019 Neural Correlates of Cerebral Blood Flow in Infants with Neonatal Abstinence Syndrome NCH Pediatric Grand Rounds Poster of the week

October 15, 2019 Nationwide Children's Hospital Clinical Therapy Programs Training Conference: Hammersmith Neonatal Neurological Examination Clinical Workshop [Facilitator]. Clinical Workshop

Cillical Workshop

December 03, 2020 Optimizing Developmental Outcomes after Neonatal Opioid Withdrawal Syndrome- Invited presentation for the Neurodevelopmental Research Affinity Group Lecture

August 05, 2022 NCH Poster Day: Sensory Profiles in Infants with Neonatal Opioid Withdrawal Syndrome (presented by trainee)

#### Abstract Poster

August 30, 2023 Neonatology Grand Rounds: Optimizing Care Through Evidence Based Practices for NAS/NOWS Grand Rounds

## LOCAL/REGIONAL

September 02, 2016 2016 Midwest Society for Pediatric Research Annual Meeting: Larger Size of Neonatal Vein of Labbe Infarction is Associated with Worse Language Outcomes Abstract Poster

April 05, 2019 2019 Pediatric Outcomes of Neonatal Abstinence Syndrome Conference: Neonatal Abstinence Syndrome: What It Is and Its Impact on Development

Lecture

August 24, 2019 Kids Belong 2019: The Effects of Prenatal Exposure Lecture

November 21, 2019 Correlates of the HNNE and Innovative Neuroimaging Biomarkers in Infants with NAS

Lecture

January 07, 2021 Neonatal Abstinence Syndrome: Ohio Department of Health Early Childhood Education Program

Lecture

September 30, 2022 2022 MWSPR: Sensory Profiles in Infants with Neonatal Opioid Withdrawal Syndrome (presented by trainee student, I was senior author)

Abstract Oral

October 12, 2023 Sociodemographic or clinical factors impacting sensory profiles in infants with neonatal opioid withdrawal syndrome

Abstract Poster

October 13, 2023 2023 MSPR: Correlation of sensory profiles and early childhood development in infants with neonatal opioid withdrawal syndrome Abstract Oral

#### NATIONAL

October 03, 2014 2014 American Academy of Pediatrics National Conference: Cognitive Outcomes As Measured By the Bayley Are Excellent in Extremely Preterm Infants Abstract Poster

November 03, 2016 2016 AAP Section Neonatal-Perinatal Medicine: Perinatal and Developmental Medicine Symposium: Larger Size of Neonatal Vein of Labbe Infarction is Associated with Worse Language Outcomes

Abstract Poster

October 04, 2018 2018 Children's Hospitals Neonatal Consortium: MR Imaging Assessment Tool for White Matter Injury after Deep Medullary Vein Thrombosis and Infarction in Neonates

Abstract Poster

April 14, 2019 2019 Implementation of Early Detection and Intervention for Cerebral Palsy Conference: Hammersmith Neonatal Neurological Examination Clinical Workshop

Clinical Workshop

June 22, 2022 99th Perinatal and Developmental Medicine Symposium: Hammersmith Neonatal Neurological Examination and General Movements Assessment to Predict Outcomes after Neonatal Encephalopathy Abstract Poster

November 14, 2023 Perinatal opioid use disorder program lessons learned and best practices – seven clinical sites, u.s.

Abstract Poster

#### INTERNATIONAL

April 02, 2015 2015 Pediatric Academic Societies Annual Meeting: Cognitive Outcomes As Measured By the Bayley Are Excellent in Extremely Preterm Infants Abstract Poster

April 12, 2019 2019 Implementation of Early Detection and Intervention for Cerebral Palsy Conference: Motor Function Assessments Lecture

April 27, 2019 2019 Pediatric Academic Societies Annual Meeting: Deep Medullary Vein Thrombosis Global Severity Score Predicts Neurosensory Impairment

Abstract Poster

April 30, 2019 2019 Pediatric Academic Societies Annual Meeting: Neural Correlates of Cerebral Blood Flow and Arterial Transit Times in Infants with Neonatal Abstinence Syndrome

Abstract Poster

# July 31, 2020

2020 Pediatric Academic Societies Annual Meeting: In Infants with Neonatal Abstinence Syndrome, MRI-Derived Cerebral Perfusion Reflects Hammersmith Neonatal Neurologic Examination Findings Abstract Oral

December 01, 2020

Interviewed on Pediapod (podcast from Pediatric Research) December 2020 episode about Perspectives from the Society for Pediatric Research: Neonatal encephalopathy clinical trials: developing the future manuscript (https://www.nature.com/collections/fcbjjbchaa/2020archive)

Podcast

April 30, 2021

2021 Pediatric Academic Societies Postgraduate Course: Neonatal Neurology: HIE-focused Project-Based Learning Lecture

December 12, 2021

Work featured on The Incubator Podcast episode #34- Journal Club 17 on December 12, 2021 about Cerebral perfusion and neurological examination characterize neonatal opioid withdrawal syndrome: a prospective cohort study manuscript published in ADC F&N (https://the-incubator-podcast.ghost.io/untitled/)

Podcast

April 23, 2022 2022 Pediatric Academic Societies Annual Meeting: Development and Implementation of a Tablet Device-Based Application for Developmental Surveillance of Neonatal Abstinence Syndrome

Abstract Oral

April 23, 2022 Development and Implementation of a Tablet Device-Based Application for Developmental Surveillance of Neonatal Abstinence Syndrome

Abstract Oral

April 24, 2022 2022 Pediatric Academic Societies Annual Meeting: Neurodevelopmental Follow-Up Trainee Networking Session Panel Discussion February 09, 2023 2023 SMFM Annual Meeting: Maternal-fetal biodisposition of buprenorphine and its metabolites in opioid dependent pregnant individuals

Abstract Poster

June 18, 2023 2023 Early Cerebral Palsy Health Summit: Research Updates: What's new on the HINE Lecture

May 06, 2024 Association of Neurosedative Exposures and Neurodevelopmental Outcomes in Infants with Severe Bronchopulmonary Dysplasia Abstract Oral

May 06, 2024 Missing the point? Comparison between parental and medical perspectives of neurodevelopmental impairment in children born with congenital heart disease

Abstract Oral

## STATE LICENSURE AND CERTIFICATIONS

#### LICENSURE

January 2014 Ohio (Active)

## CERTIFICATIONS

January 2014 Basic Life Suport, American Heart Association

January 2014 Advanced Cardiovascular Life Support, American Heart Association

August 2015 Prechtl's Method on the Qualitative Assessment of General Movements

June 2016 Hammersmith Infant Neurologic Examination Training

September 2018 Hammersmith Neonatal Neurologic Examination Training

October 2020 Neonatal-Perinatal Medicine

November 2021 Neonatal Resuscitation Program

September 2022 Pediatric Advanced Life Support

## **PROFESSIONAL DEVELOPMENT**

February 2019 Physician's Time Management and Fellow Core Curriculum Book Club (organizer and facilitator) Nationwide Children's Hospital Columbus, Ohio

April 2019 Flourishing in Work and Life: How to Achieve Your Professional and Personal Goals PAS 2019 Baltimore, MD

I have reviewed the curriculum vitae for completeness and accuracy and agree with its content.

Signature \_\_\_\_\_

Date \_\_\_\_\_