## 8th Seattle Children's and Microsoft SIDS Research Summit – March 26-27, 2025

| Day One: Wednes      | sday. March 26th   |  |
|----------------------|--|--|
| 8:30 - 9:00          | Breakfast  |  |
| 9:00 – 9:10          | Welcome to the SIDS Summit! Introduction and Overview  | John Kahan, President of Aaron Matthew SIDS Research<br>Guild of Seattle Children's  |
| 9:10 – 9:20          | Al for Good  | Juan Lavista, Corporate Vice President and Chief Data<br>Scientist, Al for Good Research Lab, Microsoft  |
| 9:20 – 9:30          | Integrated approach to SIDS research   | Jan-Marino (Nino) Ramirez, PhD, Director, Norcliffe Foundation Center for Integrative Brain Research (CIBR) at Seattle Children's Research Institute |
| Session 1: Infant    | Mortality (Session Chair: Marta Cohen)   |  |
| 9:30 – 9:50          | COVID-19 pandemic-era changes in sudden unexpected infant death  | Darren Tanner, PhD, Al for Good Research Lab,<br>Microsoft   |
| 9:50 – 10:10         | The Status of CDR in the US  | Abby Collier, MS, National Center for Fatality Review & Prevention   |
| 10:10 – 10:20        | Break  |  |
| 10:20 – 10:40        | The 8-week window. New insights for protecting babies from SIDS  | Ricardo Erazo-Toscano, PhD, Seattle Children's Research<br>Institute   |
| 10:40 - 11:00        | Immunisation and Sudden Unexpected Infant Death  | Ed Mitchell, DSc, University of Auckland   |
| 11:00 – 11:20        | Preconception Health and Health-Related Behavior   | Barbara M. Ostfeld, PhD, Department of Pediatrics<br>Program Director, SIDS Center of New Jersey, Rutgers<br>Medical School                          |
| 11:20 – 11:40        | Moving the Needle in the Northwest   | Liz Montgomery, Northwest Infant Survival & SIDS Alliance, USA   |
| 11:40 – 12:00        | A Historical Perspective of SIDS/SUID Deaths in African American Infants   | LaRhonda Osborn, Child Mortality Prevention<br>Coordinator, Tacoma-Pierce County Health Dept.  |
| 12:00 – 13:00        | Lunch  |  |
| Session 2: Promo     | ting Safe Infant Care Awareness (Session Chair: Ed Mitchell)   |  |
| 13:00 – 13:20        | Biomechanical Innovations for Understanding Infant Respiration   | Erin Mannen, Assistant Professor of Mechanical & Biomedical Engineering, Boise State University  |
| 13:20 – 13:40        | 1. Reducing the risk of sudden infant death: addressing asylum challenges in safe maternal and infant care practices 2. Cultural values, customs, traditions and beliefs influence child care practices which can affect the risk of sudden infant death syndrome (SIDS) | Shereen Hamadneh, PhD, AABU University, Jordan   |
| 13:40 – 14:00        | Sound Sleep, Safe Sleep: A Way to Improve Safe Sleep<br>Adherence?   | Rachel Moon, MD, University of Virginia School of Medicine   |
| 14:00 – 14:20        | ACES Approach to Education as Seen in Our Safe or Not Safe<br>Photo Module   | Devon George, MSN, RN, Chief Program Officer, Cribs for Kids   |
| 14:20 – 14:40        | Changing the Narrative of Safe Sleep and Breastfeeding: CBOs and Families as Messengers and Supporters   | Destiny Stokes, Program Director, First Candle   |
| 14:40 – 14:50        | Break  |  |
| Session 3: Insight   | s into the Physiological and Pathological Determinants of SUID I   |  |
| 14:50 – 15:10        | GFAP expression in the brain during human postnatal development  | Lauren Luijerink, PhD, University of Sydney, NSW   |
| 15:10 – 15:30        | Relationship between microglia, astrocytes and cell death in the infant brain, and differences according to SUDI category  | Rita Machaalani, PhD, University of Sydney, NSW  |
| 15:30 – 15:50        | Vitamin D deficiency in SIDS: a potential risk factor?   | Professor Marta Cohen OBE, MD, FRCPath, DMJ<br>(Pathol), Dip Med Ed, Sheffield Children's, UK  |
| 15:50 – 16:10        | Possible Reasons for an Association between Immunisations and SIDS   | Paul Goldwater, MD, MBBS, FRACP, FRCPA, Adelaide<br>Medical School, University of Adelaide, SA   |
| 16:10 – 16:30        | SIDS: New Hypotheses   | Thomas Hegyi MD, Rutgers Robert Wood Johnson<br>Medical School   |
| 16:30 – 16:50        | Non-chemoreceptor means to support breathing and blood pressure during sleep   | Ron Harper, PhD, University of California, LA  |
| 16:50 – 17:10        | Engaging Medical Examiners in SIDS/SUID Research<br>Endeavors  | Melissa Blessing, DO, Iowa Carver College of Medicine  |
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| <i>8:30 – 9:00</i> | Breakfast  |   |
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|                    | ts into the Physiological and Pathological Determinants of SUID I  | Part 2 (Session Chair: Heather MacLeod)   |
| 9:00 – 9:20        | Uncovering diaphragm cramp in SIDS and other sudden unexpected deaths  | Dov Jordan Gebien, MD, MSc, Ontario, CA and Michael<br>Eisenhut, MD, Luton & Dunstable University Hospital,<br>Luton UK   |
| 9:20 – 9:40        | Association between hypoplasia of the arcuate nucleus and the pre-Bötzinger nucleus in SIDS  | Lucrezia Timotei, University of Italy, Bologna  |
| 9:40 – 10:00       | Decoding Cerebellar Cellular and Molecular Dynamics in SIDS<br>Across Developmental and Corrected Ages                             | Javid Ghaemmaghami, MS, Children's National Hospital  |
| 10:00 – 10:20      | Redefining catecholaminergic polymorphic ventricular tachycardia (CPVT) as a neurocardiac condition                                | Molly O'Reilly, PhD, Department of Clinical and Experimental Cardiology, Amsterdam UMC  |
| Session 5: Genet   | ics (Session Chair: Savannah Lusk)   |   |
| 10:20 – 10:40      | Aligning on Case Definitions and Collaborating for Power   | Heather MacLeod, SDY Case Registry Senior Project<br>Manager, Meghan Faulkner, MA, Michigan Public Healti<br>Institute and Erik Buczkowski, MPH, Michigan Public<br>Heath Institute |
| 10:40 - 10:50      | Break  |   |
| 10:50 – 11:10      | Boosting GPT Models for SIDS Genomics Analysis   | Erdal Cosgun, PhD, Sr. Data Science Lead, Genomics team at Microsoft Research   |
| 11:10 – 11:30      | Burden analysis of whole genome sequencing data reveals pathways involved in SUID  | Lindsay Clark, PhD, Seattle Children's Research Institute   |
| 11:30 – 11:50      | Insights into the physiological relevance of genetic variants  | Jan-Marino (Nino) Ramirez, PhD, Director, Center for Integrative Brain Research (CIBR) at Seattle Children's Research Institute   |
| 11:50 – 12:10      | The genetic analysis process at Robert's Program   | Catherine Brownstein, PhD, MPH, Boston Children's<br>Hospital, Harvard Medical School   |
| 12:10 – 12:30      | Cytokines in SIDS  | Michael Klintschar, MD, Hannover Medical School,<br>Germany   |
| 12:30 – 13:30      | Lunch  |   |
|                    | Il Models (Session Chair: Russell Ray)   |   |
| 13:30 – 13:40      | The Isabel Davis Center for Safe Children  | Russell Ray, PhD, Baylor College of Medicine  |
| 13:40 – 14:00      | Physiology at scale – lessons learned and implementation of high throughput neonate autoresuscitation screening to model SIDS risk | Christopher Ward, PhD, Baylor College of Medicine   |
| 14:00 - 14:20      | Building Machine Learning Analysis Pipelines for Generating Data-Driven Discoveries in SIDS Research                               | Andersen Chang, PhD, Baylor College of Medicine   |
| 14:20 – 14:40      | Mu opioid receptors and their splice variants in neonatal autoresuscitation  | Nicoletta Memos, PhD, Baylor College of Medicine  |
| 14:40 – 15:00      | The Role of Htr1B in the Neonatal Autoresusitation Reflex and Sudden Infant Death  | Dipak Patel, PhD candidate, Baylor College of Medicine  |
| 15:00 – 15:10      | Break  |   |
| 15:10 – 15:30      | The Pendulum Between Breath and Death: Serotonin and Noradrenaline in SUID   | Savannah Lusk, PhD, Baylor College of Medicine  |
| 15:30 – 15:50      | Reversing the serotonopathy of SIDS: clues from animal models  | Kevin Cummings, PhD, University of Missouri   |
| 15:50 – 16:10      | Developmental progression of respiratory dysfunction in a mouse model of Dravet syndrome   | Dan Mulkey, PhD, University of Connecticut  |
| Session 7: Prom    | oting Safe Infant Care Awareness Part 2 (Session Chair: Jan-Mar  |   |
| 16:10 – 16:30      | Maternal Depression in the Prenatal Period: Associated Factors and Planned Infant Sleep Behaviors                                  | Fern Hauck, MD, University of Virginia School of Medicine   |
| 16:30 – 16:40      | Closing Remarks  | John Kahan, President of Aaron Matthew SIDS Research<br>Guild of Seattle Children's and Nino Ramirez, PhD,<br>Seattle Children's Research Institute                                 |

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