



# Montreal Children's Hospital 2024 NICU Research Achievements



To check all the  
achievements



**67**

## Publications and presentations

In 2024, our investigators published **67** articles and **67** abstracts

## Grants and Awards

Our talented team has received multiple awards and grants for their efforts in improving the outcome and wellbeing of our patients and their families.

**\$9,260,022**  
Grants



**78**



## Invited talks and Authorships

This year our investigators were invited to partake in different talks and authorships

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NICU research — scan  
the QR code!



Research and innovation in the MCH-  
NICU is made possible thanks to the  
support of the Montreal Children's  
Hospital Foundation



A special thank you to the NICU team members, our patients, and their families for helping us improve quality of care by participating in our research

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**DEAR COLLEAGUES,**

It is with great pleasure that we present to you the Montreal Children’s Hospital Neonatal Intensive Care Unit 2024 Research Accomplishments. We are humbled by the productivity and hard work of all our team. Research serves as a catalysis for clinical innovation and improving quality of care and we can safely say that we are moving the needle forward!



In this report you will find the list of publications, presentations, grants, and awards that we have contributed to in the past year. Subjects range from repairing brain injuries, to cardiovascular health of preterm infants, and improving family support.



Creating a successful research environment requires participation and trust from all stakeholders ranging from scientists, research teams, clinical teams, and families — thank you to all of you for making this possible.

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**MARC BELTEMPO**  
**MD, FRCPC, MSc**

Neonatologist, Montreal Children’s Hospital, McGill University Health Centre  
Associate Director of Research, Division of Neonatology  
Scientist, Research Institute of the McGill University Health Centre

## THE 2024 TEAM



**Gabriel Altit**  
*Investigator*



**Marie Brossard-Racine**  
*Investigator*



**Jessica Duby**  
*Investigator*



**Jarred Garfinkle**  
*Investigator*



**May Khairy**  
*Investigator*



**François Olivier**  
*Investigator*



**Kathryn Paquette**  
*Investigator*



**Guilherme Sant'Anna**  
*Investigator*



**Wissam Shalish**  
*Investigator*



**Pia Wintermark**  
*Investigator*



**Marc Beltempo**  
*Investigator, Associate  
Director*



**Richard Gosselin**  
*Director*

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## ABSTRACTS PUBLISHED

1. Hazan Mea, J., Plessas-Azurduy, P., Sonea, T., Kanaprach, P., Michel Macias, C., Moore, S. S., Wutthigate, P., Simoneau, J., Villegas Martinez, D., Villeneuve, A., Lapointe, A., Sant'Anna, G., & **Altit, G.** (2024, December 3). Evaluating the Impact of Dexamethasone on Lung Ultrasound Scores in Extremely Preterm Infants with Evolving BPD [Poster presentation]. **Department of Medicine Research Symposium 2024**, 12:00–1:00 PM, Montreal, Canada.
2. Hazan Mea J\*, Villegas Martinez D, Mardakis S, Remmer E, Cavallé-Garrido T, **Altit G.** (2024, November 14). Healthcare Professionals' Views on Music as a Comfort Measure during Targeted Neonatal Echocardiography [Poster presentation]. **Réseau Air, Intersectorialité, Recherche Respiratoire et Sonore (AIRS) Congrès 2024**, Poster 5, 5:00-6:00pm, Montreal, Canada.
3. Nogara S\*, Michel-Macias C\*, Moore SS\*, Hebert A, Nouraeyan N, Drolet C, Lapointe A, Villeneuve A, Bensouda B, Villegas Martinez D, Simoneau J, Cavalle-Garido T, Dancea A, Sant'Anna G, **Altit G.** Left ventricular dimensions at 36 weeks corrected age in extremely preterm newborns: a prospective 4D-echocardiography study. **XXX Congresso Nazionale Società Italiana di Neonatologia**. October 31, 2024. Padova Congress, Padova, Italia. Poster presentation.
4. Hazan Mea J\*, Villegas Martinez D, Mardakis S, Remmer E, Cavallé-Garrido T, **Altit G.** Music as a comfort measure during targeted neonatal echocardiography: perspectives from healthcare professionals. **Congrès provincial de la recherche mère-enfant 2024**. October 29, 2024. CHU de Québec, Québec City, Québec.
5. Magri A\*, Roofigari N\*, Kanaprach P \*, Michel-Macias C\*, Mazzarello M\*, Mir M\*, Wutthigate P\*, Moore SS\*, Simoneau J, Villegas Martinez D, Dancea A, Bertolizio G, **Altit G.** Correlation between renal and cerebral saturations and Doppler indices of systemic perfusion in congenital heart defects in newborns. **Congrès provincial de la recherche mère-enfant 2024**. October 29, 2024. CHU de Québec, Québec City, Québec. Poster presentation.
6. Hazan Mea J\*, Martinez DV, Mardakis S, Remmer E, Cavalle-Garido T, **Altit G.** (2024, August) Impact of Music Therapy during Targeted Neonatal Echocardiography - A Survey of Neonatal Healthcare Professionals. 2024 RI-MUHC Summer Student Research Day. Montreal, Canada.
7. Kanaprach P\*, Michel-Macias C\*, Mazzarello M\*, Rampakakis E, Mir M\*, Wutthigate P\*, Simoneau J, Villegas D, Shemie SD, Brossard-Racine M, Dancea A, Bertolizio G, Moore SS\*, **Altit G.** (2024,

- August) Resistive index values of the anterior cerebral artery are associated with the instantaneous levels of cerebral saturation in newborns with congenital heart defects. 2024 RI-MUHC Summer Student Research Day. Montreal, Canada.
8. Sahussarungsi S\*, Wuthigate P, Simoneau J, Ohayon A, Martinez DV, Henin C, Cavalle T, Dancea A, Mawad W, **Altit G.** (2024, August) Feasibility of 3D-Echocardiography for LV and LA performance and dimensions in the immediate postnatal neonatal period - a prospective study. 2024 RI-MUHC Summer Student Research Day. Montreal, Canada.
  9. Aita M., Laporte G., Breton-Piette A., De CliBord-Faugère G., Lavallée A., Le May S., **Altit G.**, Larone Juneau A., Remmer E., Lippé S., Tremblay S., Héon M. (2024, June). Neonatal nurses' acceptability and feasibility of the NeuroN-QI intervention. 33rd Annual Meeting of the European Society of Paediatric and Neonatal Intensive Care (ESPNIC), Rome, Italy, June 11th-14<sup>th</sup> 2024.
  10. Kanaprach P\*, Michel-Macías C\*, Mazzarello M\*, Rampakakis E, Mir M\*, Wuthigate P\*, Simoneau J, Villegas D, Shemie SD, Brossard-Racine M, Dancea A, Bertolizio G, Moore SS\*, **Altit G.** (2024, August) Resistive index values of the anterior cerebral artery are associated with the instantaneous levels of cerebral saturation in newborns with congenital heart defects. Presentation by the supervised student Pasinee Kanaprach. **NeoHeart 2024**, New York City, United States.
  11. Daneshmand M, Dasari H, Alkatat A, **Altit G**, Grandi S, Nerenberg K, Daskalopoulou S, Malhamé I. (2024, May) Scoping review protocol: Assessment of Persistent Postpartum Hypertension. Maurice McGregor Cardiovascular Research Day, McGill University, Montreal, Quebec (Poster).
  12. Michel Macias C\*, Moore SS\*, Nunes G\*, Villegas Martinez D, Dancea A, Wuthigate P\*, Simoneau J, Beltempo M, Sant'Anna G, **Altit G.** Small left ventricle in extreme of prematurity and postnatal growth. Presentation by supervised student Carolina Michel-Macias. **Pediatric Academic Societies' (PAS) Annual Meeting 2024**, May 2-6th, 2024, Toronto, Canada. (Poster).
  13. Michel-Macías C\*, Rampakakis E, Mazzarello M\*, Mir M\*, Moore SS\*, Wuthigate P\*, Simoneau J\*, Villegas D, Shemie SD, Brossard-Racine M, Dancea A, Bertolizio G, **Altit G.** Cerebral and Renal Saturations Progressively Decrease In Neonates With Congenital Heart Defects And Diastolic Steal Prior To Intervention Period: A Prospective Study. Presentation by the supervised student Carolina Michel-Macias, **PAS Annual Meeting 2024**, May 2-6th, 2024, Toronto, Canada. (Poster).
  14. Kanaprach P\*, Michel-Macías C\*, Mazzarello M\*, Rampakakis E, Mir M\*, Wuthigate P\*, Simoneau J, Villegas D, Shemie SD, Brossard-Racine M, Dancea A, Bertolizio G, Moore SS\*, **Altit G.** Resistive index values of the anterior cerebral artery are associated with the instantaneous levels of cerebral saturation in newborns with congenital heart defects. Presentation by the supervised student Pasinee Kanaprach. **PAS Annual Meeting 2024**, May 2-6th, 2024 Toronto, Canada.
  15. Sahussarungsi S\*, Wuthigate P\*, Simoneau J\*, Ohayon A\*, Villegas Martinez D, Henin C, Cavalle T, Dancea A, Mawad W, **Altit G.** Feasibility of 3D-Echocardiography for LV performance and dimensions in the immediate postnatal neonatal period – a prospective study. Presentation by the supervised student Sariya Sahussarungsi. **PAS Annual Meeting 2024**, May 2-6th, 2024, Toronto, Canada. (Poster).
  16. Jomleh H, Castro Gomez MJ, Rampakakis E, Lapointe A, **Altit G**, Gilbert G, Steinhorn R, Haefeli WE, Wintermark P\*. Assessing myelination evolution to study neurorestoration in the neonatal hypoxic-ischemic brain. **PAS) Annual Meeting 2024**, May 2-6th, 2024, Presentation by doctorate student Hossein Jomleh (Supervised by Dr. Pia Wintermark), Toronto, Canada.
  17. Cohen O, Poleg N, Herzlich J, Mendelsohn R, Marom R, Mangel L, Mandel D, **Altit G**, Moore SS. Heart Rate and Brain Injury in Infants with Hypoxic Ischemic Encephalopathy. **PAS Annual Meeting 2024**, Poster by the supervised student Shiran Moore. May 2-6, in Toronto, Canada.

18. Magri A\*, Roofigari N\*, Kanaprach P \*, Michel-Macias C\*, Mazzarello M\*, Mir M\*, Wutthigate P\*, Moore SS\*, Simoneau J, Villegas Martinez D, Dancea A, Bertolizio G, **Altit G**. Correlation between renal and cerebral saturations and Doppler indices of systemic perfusion in congenital heart defects in newborns. **Neonatal Cardiology Research Day**. November 7, 2024. Shriner’s Hospital, Montreal, Quebec.
19. Sahussarungsi S\*, Wutthigate P\*, Simoneau J\*, Ohayon A\*, Villegas Martinez D, Henin C, Cavalle T, Dancea A, Mawad W, **Altit G**. Feasibility of 3D-Echocardiography for LV performance and dimensions in the immediate postnatal neonatal period – a prospective study. **Neonatal Cardiology Research Day**. November 7, 2024. Shriner’s Hospital, Montreal, Quebec.
20. Roofigari N\*, Magri A\*, Kanaprach P\*, Michel-Macias C\*, Mazzarello M\*, Mir M\*, Wutthigate P\*, Moore SS\*, Simoneau J, Villegas Martinez D, Dancea A, Bertolizio G, Cavalle-Garrido T, **Altit G**. Systemic Doppler velocities in newborns with congenital heart defects – a prospective study. **Neonatal Cardiology Research Day**. November 7, 2024. Shriner’s Hospital, Montreal, Quebec.
21. Hazan Mea J\*, Plessas-Azurduy P\*, Sonea T\*, Kanaprach P\*, Michel-Macias C\*, Moore SS\*, Wutthigate P\*, Simoneau J, Villegas Martinez D, Villeneuve A, Lapointe A, Sant’Anna G, **Altit G**. Effect of Dexamethasone on Lung Ultrasound Scores in Extremely Preterm Infants with Evolving BPD. **Neonatal Cardiology Research Day**. November 7, 2024. Shriner’s Hospital, Montreal, Quebec.
22. Lopez C\*, Brassard M, Mawad W, Villegas Martinez D, Gutierrez R, Raboison MJ\*, Altit G\*. Échocardiographie de strain dans l’évaluation de la croissance des hypoplasies ventriculaires gauches chez le fœtus. **Neonatal Cardiology Research Day**. November 7, 2024. Shriner’s Hospital, Montreal, Quebec.
23. Roofigari N\*, Magri A\*, Kanaprach P\*, Michel-Macias C\*, Mazzarello M\*, Mir M\*, Wutthigate P\*, Moore SS\*, Simoneau J, Villegas Martinez D, Dancea A, Bertolizio G, Cavalle-Garrido T, **Altit G**. Systemic Doppler velocities in newborns with congenital heart defects – a prospective study. **Targeted Neonatal Echocardiography Quebec Collaborative 2024**. October 16, 2024. CHU Sainte-Justine, Montreal, Quebec.
24. Kanaprach P\*, Michel Macias C\*, Moore SS\*, Wutthigate P\*, Hebert A, Nouraeyan N, Drolet C, Lapointe A, Villeneuve A, Bensouda B, Villegas Martinez D, Simoneau J, Cavalle-Garrido T, Dancea A, Sant’Anna G, **Altit G**. Micro-preemies and evaluation of right ventricular function and pulmonary pressure at 4 months corrected age. **Targeted Neonatal Echocardiography Quebec Collaborative 2024**. October 16, 2024. CHU Sainte-Justine, Montreal, Quebec. Won Best Oral Presentation.
25. Hazan Mea J\*, Villegas Martinez D, Mardakis S, Remmer E, Cavallé-Garrido T, **Altit G**. Music as a comfort measure during targeted neonatal echocardiography: perspectives from healthcare professionals. **Targeted Neonatal Echocardiography Quebec Collaborative 2024**. October 16, 2024. CHU Sainte-Justine, Montreal, Quebec.
26. Magri A\*, Roofigari N\*, Kanaprach P \*, Michel-Macias C\*, Mazzarello M\*, Mir M\*, Wutthigate P\*, Moore SS\*, Simoneau J, Villegas Martinez D, Dancea A, Bertolizio G, **Altit G**. Correlation between renal and cerebral saturations and Doppler indices of systemic perfusion in congenital heart defects in newborns. **Targeted Neonatal Echocardiography Quebec Collaborative 2024**. October 16, 2024. CHU Sainte-Justine, Montreal, Quebec. Won Best Oral Presentation.
27. Sahussarungsi S\*, Wutthigate P\*, Simoneau J\*, Ohayon A\*, Villegas Martinez D, Henin C, Cavalle T, Dancea A, Mawad W, **Altit G**. Feasibility of 3D-Echocardiography for LV performance and dimensions in the immediate postnatal neonatal period – a prospective study. **Targeted Neonatal Echocardiography Quebec Collaborative 2024**. October 16, 2024. CHU Sainte-Justine, Montreal, Quebec.

28. Sahussarungsi S\*, Wutthigate P\*, Simoneau J\*, Ohayon A\*, Villegas Martinez D, Henin C, Cavalle T, Dancea A, Mawad W, **Altit G**. Feasibility of 3D-Echocardiography for LV performance and dimensions in the immediate postnatal neonatal period – a prospective study. **2024 RI-MUHC Summer Student Research Day**. Afternoon Oral Presentations. August 14th, 2024, Montreal, Canada.
29. Dimmer A\*, **Altit G**, Beauseigle S, Koclas L, **Paquette K**, Sant’Ana A, Shapiro A, Poenaru D, Puligandla P. Clinical Care Trajectory Assessment of Children with Congenital Diaphragmatic Hernia and Neurodevelopmental Impairment. Pediatric Academic Societies’ **American Pediatric Surgical Association (APSA) Annual Meeting 2024**. May 18<sup>th</sup> 2024, Phronix, Arizona, USA.
30. Castro Gomez MJ, Jomleh H, Rampakakis E, Lapointe A, **Altit G**, Gilbert G, Steinhorn R, Haefeli WE, Wintermark P\*. Evolution of fractional anisotropy over the first month of life in the context of hypoxic-ischemic encephalopathy, hypothermia and sildenafil. **PAS Annual Meeting 2024**, May 2-6th, 2024 Toronto, Canada. Oral presentation by doctoral student Maria Jose C. Gomez (supervised by Dr. Pia Wintermark). Publication number: 2150.4.
31. Heguy, C.\*, Palmis, S.\*, Karat, B., Gilbert, G., Saint-Martin, C., **Shalish, W.**, Duerden, E. G., & **Brossard-Racine, M.** (2024). Association between hippocampal subfield development and socio-emotional outcomes in preterm infants. [Abstract]. In: Organization for Human Brain Mapping, Abstract Book 5: OHBM 2024 Annual Meeting. Aperture Neuro, 4(Suppl 1). <https://doi.org/10.52294/001c.120595>
32. Palmis, S.\*, Heguy, C.\*, Rampakakis, E, **Wintermark, P.**, Rohlicek, C., Saint-Martin, C., Gilbert, G., **Brossard-Racine, M.** (2024). Early life adversity differently affects cerebellar growth in NICU survivors. [Abstract]. In: Organization for Human Brain Mapping, Abstract Book 3: OHBM 2024 Annual Meeting. Aperture Neuro, 4(Suppl 1). <https://doi.org/10.52294/001c.120593>
33. Heguy, C.\*, Palmis, S.\*, Karat, B., Gilbert, G., Saint-Martin, C., Duerden, E. G., **Shalish, W.**, & **Brossard-Racine, M.** (2024). Are severe cardiorespiratory events associated with hippocampal subfield development in very preterm-born infants? [Abstract]. In: Healthy Brains Healthy Lives (HBHL). Healthy Brains Healthy Lives 2024 Symposium, McGill Journal of Medicine, 21(1). <https://doi.org/10.26443/mjm.v21i1.1140>
34. Heguy, C.\*, Palmis, S.\*, Karat, B., Gilbert, G., Saint-Martin, C., **Shalish, W.**, Duerden, E. G., & **Brossard-Racine, M.** (2024, June 23-27). Association between hippocampal subfield development and socio-emotional outcomes in preterm infants. 2024 Organization for Human Brain Mapping (OHBM) Annual Meeting. Seoul, South Korea.
35. Palmis, S.\*, Héguay, C.\*, Rampakakis, E., **Wintermark, P.**, Rohlicek, C., Saint-Martin, C., Gilbert, G., & **Brossard-Racine, M.** (2024, June 23-27). Early life adversity differently affects cerebellar growth in NICU survivors. 2024 Organization for Human Brain Mapping (OHBM) Annual Meeting. Seoul, South Korea.
36. Dionne, E.\*, Majnemer, A., Beauchamp, M., & **Brossard-Racine, M.** (2024, May 13 – 17). Habiletés visuoperceptuelles des enfants ayant un Trouble Développementale de la Coordination. 91e congrès de l’Acfas. Ottawa, ON, Canada.
37. Heguy, C.\*, Palmis, S.\*, Karat, B., Gilbert, G., Saint-Martin, C., Duerden, E. G., **Shalish, W.**, & **Brossard-Racine, M.** (2024, May 8-9). Are severe cardiorespiratory events associated with hippocampal subfield development in very preterm-born infants? 2024 Healthy Brains, Healthy Lives Symposium. Montreal, QC, Canada.
38. Palmis, S.\*, Hill, L.D.\*, Vahidi, H., Gallagher, A., Duerden, E.G. & **Brossard-Racine, M.** (2024, May 8-9). Social determinants of children's neurodevelopment – A scoping review. Pediatric Academic Societies 2024 Annual Meeting. Toronto, ON, Canada.

39. Heguy, C.\*, Palmis, S.\*, Karat, B., Gilbert, G., Saint-Martin, C., Duerden, E. G., **Shalish, W., & Brossard-Racine, M.** (2024, May 4). Do neonatal respiratory morbidities influence hippocampal development in preterm-born infants? Pediatric Academic Societies Meeting. Toronto, On, Canada.
40. Jeanne E\*, Yoo JY, Lv S, Sant'Anna GM, Weese-Mayer DE, Rogers J, Shalish W. *A novel wireless, wearable acoustic sensor for the monitoring of respiratory airflow in preterm infants.* Oral Presentation at the Perinatal & Child Health Research Annual Meetings. June 2024.
41. Jeanne E\*, Yoo JY, Lv S, Sant'Anna GM, Weese-Mayer DE, Rogers J, Shalish W. *A novel wireless, wearable acoustic sensor for the monitoring of respiratory airflow and respiratory efforts in preterm infants: Phase 2 of an observational international collaborative pilot study.* Work in Progress Poster Presentation at Pediatric Academic Societies, Toronto, Canada. May 2024.
42. Senechal E, Radeschi D, Kearney RE, Shalish W, Sant'Anna GM. Advanced wireless wearable skin sensors in the NICU: Parents perspectives. Poster Presentation at Pediatric Academic Societies, Toronto, Canada. May 2024.
43. Senechal E, Radeschi D, Shalish W, Kearney RE, Sant'Anna GM. Advanced wireless wearable skin sensors in the NICU: Health care professionals perspectives. Poster Presentation at Pediatric Academic Societies, Toronto, Canada. May 2024.
44. Tremblay J\*, Azevedo V, Pinto S, Radeschi D, Senechal E, Ikhlef L, Jeanne E, Cambell E, Diamond M, Lv S, Kearney RE, Shalish W, Sant'Anna G. Advanced wireless sensors for neonatal care in the delivery room: the AWARD simulation study. Work in Progress Poster Presentation at Pediatric Academic Societies, Toronto, Canada. May 2024.
45. Radeschi D, Senechal E, Shalish W, Sant'Anna G, Kearney RE. Accuracy of bradycardia and tachycardia detection using wireless heart rate monitoring in the Neonatal Intensive Care Unit. Work in Progress Poster Presentation at Pediatric Academic Societies, Toronto, Canada. May 2024.
46. Knake LA, Mudireddy A, Shalish W, Rios DR, Blum J, Abramoff M, Sonka M. A pilot study evaluating the sole use of continuous ventilator and vital sign data to predict extubation success in neonates. Poster Presentation at Pediatric Academic Societies, Toronto, Canada. May 2024.
47. Launay A, Remner E, Labelle C, Camacho A, **Duby J.** Family Driven Feeding: A Quality Improvement Initiative. 38<sup>th</sup> International Gravens Conference – Oral presentation
48. Kabajaasi O, Khan F, Kenya-Mugisha N, Wiens MO, Nambuya H, **Duby J.** Video-Assisted Education to Encourage Maternal Engagement in a Ugandan NICU - 38<sup>th</sup> International Gravens Conference – oral presentation
49. Khan F, Kenya-Mugisha, N, Nambuya H, Kabajaasi O, **Duby J.** “Family Integrated Care in Uganda: Perspectives of Healthcare Workers.” Annual Conference Association of Perinatal Women’s Health Nurses/Canadian Association of Neonatal Nurses (Montreal, QC), November 202 – Oral presentation
50. Ying Pang X, Mardakis S, Proulx M-C, **Duby J.** Family forward: Evaluating the presence and participation of families in interdisciplinary rounds in the NICU. Annual Conference Association of Perinatal Women’s Health Nurses/Canadian Association of Neonatal Nurses (Montreal, QC), November 2024 – Poster
51. Launay A, Camacho A, Mardakis S, Remner E, Garfinkle J, **Duby J.** Hold me close: There is always an opportunity for some form skin-to-skin care in the NICU. Annual Conference Association of Perinatal Women’s Health Nures/Canadian Association of Neonatal Nurses (Montreal, QC), November 2024 – Poster
52. \*Eva B. Senechal, Daniel J. Radeschi, Robert Edward Kearney, Wissam Shalish, MD **Guilherme Sant'Anna.** Advanced Wireless Wearable Skin Sensors in the NICU: Parents Perspective. Pediatric Academic Societies Conference 2024 [Poster Presentation].

53. \*Eva B. Senechal, Daniel J. Radeschi, Wissam Shalish, Robert Edward Kearney, **Guilherme Sant'Anna**. Advanced Wireless Skin Sensors in the NICU: Healthcare Professionals Perspective. Pediatric Academic Societies Conference 2024 [[Poster Presentation](#)].
54. Justine Tremblay, Vivian Mara G. de Oliveira Azevedo, Sasha Pinto, Robert Edward Kearney, **Guilherme Sant'Anna**, Daniel J. Radeschi, Melissa Diamond, Wissam Shalish. Advanced Wireless Sensors for Neonatal Care in the Delivery Room: the AWARD Simulation Study. Pediatric Academic Societies Conference 2024 Works in Progress [[Poster Presentation](#)].
55. Carolina Michel-Macías, Shiran S. Moore, Gabriela De Carvalho Nunes, Daniela Villegas Martinez, Adrian Dancea, Punnanee Wutthigate, Jessica Simoneau, Marc Beltempo, **Guilherme Sant'Anna**, Gabriel Altit. Small left ventricle in extreme of prematurity and postnatal growth. Pediatric Academic Societies Conference 2024 [[Poster Presentation](#)].
56. Daniel J. Radeschi, Eva B. Senechal, Wissam Shalish, **Guilherme Sant'Anna**, Robert Kearney. Accuracy of Bradycardia and Tachycardia Detection Using Wireless Heart Rate Monitoring in the Neonatal Intensive Care Unit. Pediatric Academic Societies Conference 2024 Works in Progress Poster [[Poster Presentation](#)].
57. Daniel Radeschi, \*Eva Senechal, Wissam Shalish, **Guilherme Sant'Anna**, Robert Edward Kearney. Signal Quality Estimation of Impedance Pneumography Signals in the NICU Using a Frequency-based Approach. IEEE. Engineering in Medicine and Biology Society, 2025
58. Afifi J, **Beltempo M**, Hicks M, Richter L, Colby L, Bourque CJ, Butt A, Salami B, Olukotun M, Shah P, Luu TM. Sociodemographic and Family Characteristics of Children With and Without Neurodevelopmental Impairment in a Canadian Cohort of Extreme Preterm Children. Pediatric Academic Societies 2024 Meeting. Toronto, ON, Canada, May 2024 (poster)
59. Kashkari H, Shah P, Yoon E, Afifi J, **Beltempo M**, Crane J, McDonald S, El-Naggar W. Umbilical Cord Management in Preterm Infants Born by Cesarean Delivery. Pediatric Academic Societies 2024 Meeting. Toronto, ON, Canada, May 2024 (poster)
60. [Piedboeuf S](#), [Piedboeuf B](#), [Guillot M](#), [Simoyan D](#), [Marc I](#), [Audrey Hébert A](#), **Beltempo M**. Bronchopulmonary dysplasia in extreme preterms: does the definition matter? Pediatric Academic Societies 2024 Meeting. Toronto, ON, Canada, May 2024 (poster)
61. Ahmed A, Grandi SM, Pullenayegum E, McDonald, SD, Pole J, Premji S, **Beltempo M**, Bacchini F, Shah PS, Pechlivanoglou P. Short and long-term mortality after preterm birth: Evidence from a national population-based cohort. Society for pediatric and perinatal research (SPER) annual meeting, Austin, Texas, June 17-18 and Society for epidemiologic research (SER) annual meeting, Austin, Texas, June 18-21
62. Abda A, Yoon E, Kanungo J, Ojah C, Lapointe A, Shah P, Beltempo M, Barrington K. The Link Between Initial Intravascular Access in Preterm Infants and Necrotising Enterocolitis. Canadian National Perinatal Research Meeting 2024. Vancouver. BC. June 2024 (poster)
63. Marc I, Lavoie P, McPhee A, Collins C, Simonyan D, Pronovost E, Guillot M, Mohamed I, **Beltempo M**, Boutin A, Fortier I, Sullivan T, Moore L, Makrides M. High-dose docosahexaenoic acid for bronchopulmonary dysplasia severity in very preterm infants: A collaborative individual participant data meta-analysis. Canadian National Perinatal Research Meeting 2024. Vancouver. BC. June 2024 (poster)
64. Barbera R, **Beltempo M**, D'Souza R, McDonald S, Ronzoni S, Ting J, Boucoiran I. Canadian survey on the diagnosis and clinical management of preterm premature rupture of membranes in tertiary centers. Canadian National Perinatal Research Meeting 2024. Vancouver. BC. June 2024 (oral)
65. Fazio, M., Jabbour, E., Soullane, S., Burstein, B., **Beltempo, M**. The relationship between unit occupancy and outcomes in the neonatal intensive care unit: a systematic review and meta-analysis. (2024). Canadian National Perinatal Research Meeting. Montreal, Canada. (Poster)
66. Fazio, M., Patel, S., Piedboeuf, B., Drolet, C., Lapointe, A., Bizgu, V., Massé, E., Lacroix, G., **Beltempo, M**; on behalf of the Quebec investigators of the Canadian Neonatal Network (CNN).

Association of maternal factors and unit occupancy with the probability of outborn birth in the neonatal intensive care unit. (2024). Canadian National Perinatal Research Meeting. Montreal, Canada. (Poster)

67. Quintero Salazar, J., Ting, J., Abou Mehrem, A., Khurshid, F., Boucoiran, I., Shah, PS., Beltempo, M ; on behalf of the Canadian Neonatal Network Investigators. Predictors of neonatal early-onset sepsis and risk stratification decision-making for preterm infants between 30 0/7 and 34 6/7 weeks. (2024) Congrès provincial de la recherche mère-enfant. Quebec, QC, Canada (Poster)

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## AWARDS & GRANTS RECEIVED

Field, T., (NPA) PAs: Miller, S. **Brossard-Racine, M.**, Brouillette, J., Camirand Lemyre, F., Dehaes, M., Gallagher, A., Grewal, J., Honfo, S., Khairy, P., Ogourtsova, T., Seed, M., Selvanathan, T., Simard, M.-N., Wald, R., Zhou, L., Zwicker, J. wards & Grants Received - Lifespan Brain Health Trajectories in Congenital Heart Disease: the role of sex & gender - Heart & Stroke, Brain Canada: Congenital Heart Disease Team Grant – 2024-2029 – **\$1,750,000**

Research Tools and Instruments (RTI) Grants, Natural Sciences and Engineering Research Council of Canada (NSERC)

Title: In-vitro neonatal respiratory system to understand the relationship between respiratory sounds, airway pressure, and lung mechanics

Principal investigator : **Shalish, W.** Co-investigator: **Sant’Anna, G.**

**Amount: \$147,238**

Young Researcher’s Scholarship, Fondation de la Recherche Pédiatrique

Title: Intermittent hypoxias and associated modifiable risk factors during neonatal hospitalization in very preterm infants

Role: Principal applicant

Amount: \$30,000 over 2 years

**CIHR Project Grant (\$1,690,651)** “Smart Discharges for newborns with sepsis: a personalized public health approach for improving discharge and post-discharge care in low-resource settings” Principal Investigators: Matthew Wiens, **Jessica Duby**, Nathan Kenya-Mugisha

**Beltempo, M.** 2024 Travel Award grant for Early Career Investigators, Pediatrics Academic Societies, **\$2500 USD**

**Beltempo, M.** Principal applicant: FRQ-S Chercheur-boursier clinicien Junior 2: Transformation des services de soins intensifs néonataux pour améliorer les issues de santé (**145,938\$ for 4 years**)

**Beltempo M (NPA)**, Shah P, Lee KS, Shivanda S, Soraisham A, Ting J. Improving health care systems for neonatal intensive care in the Canadian Neonatal Network. **Montreal Children’s Hospital Foundation and Canadian Neonatal Foundation \$500,000 CAD**

Kharrat A (NPA), Shah P, **Beltempo (Co-App)**, Luu TM, Russel K, Ting J. Incidence and outcomes of neonatal septic shock in Canada: a nationwide population-based observational study. CIHR Operating Grant: Data Analysis Using Existing Databases and Cohorts. **\$75,000 CAD**

Mukerji A(NPA), Jain A (PA), Shah P (PA), Sidhu A (PA), Abou Mehrem A, I; Augustine S, Bacchini F; Barbosa de Oliveira C, **Beltempo M (Co-App)**, Coughlin K; Drolet C; Dunn M, Harabor A, Kalish B, Kanungo J, Khurshid F, Law, Brenda H; Lemyre B, Louis D, Narvey M, Read B, Schmoelzer G, Shahroor M, Sherlock R, Shivananda S, Singh B; Stavel M, Stevenson M; Wong J; Yi M; Yoon E; Yuen JR, Zhu F. Post-extubation pressures on non-invasive respiratory support in preterm neonates: A prospective comparative effectiveness research study. **CIHR Project Grant \$367,199 CAD**

Abenhaim H, Klam S, **Beltempo (co-app)**, Balayla J. Maternal and Neonatal Outcomes of Cesarean Deliveries in Women with Muscular Dystrophy. Muscular Dystrophy Canada. **\$92,944 CAD.**

Thebaud B (NPI), Fergusson D, Shah P, Asztalos E, Nuyt AM, Guillot M, **Beltempo M (CO-I)**, Lacaze-Masmonteil, Bacchini F, Dunn M, Robeson P, Renesme L, Schmoeler G, Courtman D, Shahroor M, Mukerji A, Ramasay T, Pousseau J. Helping Underdeveloped Lungs with Cells (HULC-2) - A Randomized Controlled Trial to test the efficacy of umbilical cord-derived mesenchymal stromal cells (UC-MSC) in reducing respiratory morbidity in preterm infants at risk of bronchopulmonary dysplasia (BPD). **CIHR Project Grant \$2,300,649**

Papenburg J, Bowen AC, Pellan Cheng M, Campbell T, Autmizquine J, Bullard J, Davis J, Gill P, Lopez A, Nashid N, Schwartz K, Barton M, Cambell A, Fanella S, Kellner J, Morris S, Pernicia J, Tong S, **Beltempo M (Co-I)**, Cooke S, Fontela P, Li P, Murthy S, Robinson J. Staphylococcus aureus Network Adaptive Platform trial in Pediatrics and Youth (SNAP-PY). **CIHR Project Grant \$1,067,176**

Stevenson M, Jain A, Mukerji A, Shah P, Yoon E, Bergman K, Katherina A, Schmoelzer G, Weisz D, Asztalos E, **Beltempo M (Co-I)**, Coughlin K, Ramanathan R, Shahroor M, Soraisham A, Wong J. A Cluster Crossover Randomized Controlled Trial of Manual T-piece versus Ventilator Positive Pressure Ventilation during Resuscitation of Extremely Premature Neonates: the MVP trial. **CIHR Project Grant \$711,451**

Pasquier JC, **Beltempo M(PI)**, Boucoiran I, Laforest-Lapointe I, Abenhaim H, Agrawal S, Arrieta Mendez M, Audibert F, Beaulieu JF, Bouron-Dal Soglio D, Bujold E, Chaillet N, Demers S, Gagnon R; Mâsse B, McDonald S, Ouellet A, Piedboeu B, Ronzoni S, Roy-Lacroix ME, Shah P, Tordjman LH. Étude préliminaire d'un ÉCR de phase 3 multicentrique testant l'association des antibiotiques et des probiotiques vaginaux pour des patientes ayant une rupture prématurée et préterme des membranes entre 24 et 32 semaines d'aménorrhée (Étude PROB-PROM) **CIHR Project Grant \$409,276**

**Grants and Awards : \$9,260,022**

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**INVITED TALKS & MEDIA**

1. **Altit G.** (2024, November 27-29). Point of Care Ultrasound Workshop. I Congresso Internacional de Neonatologia do DF, Brazilia, Brazil.
2. **Altit G.** (2024, November 27-29). Complex Cardiovascular Neonatal Conditions. I Congresso Internacional de Neonatologia do DF, Brazilia, Brazil.
3. **Altit G.** (2024, November 27-29). The Patent Ductus Arteriosus. I Congresso Internacional de Neonatologia do DF, Brazilia, Brazil.
4. **Altit G.** (2024, November 27-29). Neonatal Shock. I Congresso Internacional de Neonatologia do DF, Brazilia, Brazil.
5. **Altit G** (2024, November 14). Cardiopulmonary assessment and diagnostic approach of HIE. Dr. Regan Giesinger Clinical Cardiopulmonary Physiology for the Care of the Sick Newborn Course. Invited. Neonatal Hemodynamics Research Centre (NHRC) (Virtual; Toronto / Iowa).
6. **Altit G** (2024, September 26). Chronic pulmonary hypertension in BPD – a lifelong condition. University of Miami – Neonatal Grand Rounds. Miami, United States.
7. **Altit G.** (2024, September 23-25). Member of the organizing committee and Workshop on Point of Care Ultrasound. **Delphi Neonatal Innovation conference**, Fort Lauderdale, United States.
8. **Altit G.** (2024, September). Congenital Diaphragmatic Hernia – A 2024 Cardio-Respiratory Update. Sydney neonatal lectures. Sydney, United States.
9. **Altit G.** (2024, August 21). Precision in PDA Cath closure – Periprocedural Care. Panelist. **Neonatal Hemodynamics Research Center-PanAmerican Hemodynamics Collaborative webinar**. Virtual.
10. **Altit G.** (2024 August). The Complex Neonate with Pulmonary Hypertension. Neoheart 2024. Columbia University, Irving Medical Center, New York City, United States.
11. **Altit G.** (2024 August). Neonatal Point of Care Ultrasound Workshop. Neoheart 2024. Facilitator. Columbia University, Irving Medical Center, New York City, United States.
12. **Altit G.** (2024 August). Targeted Neonatal Echocardiography Workshop – Pulmonary Hypertension. Neoheart 2024. Facilitator. Columbia University, Irving Medical Center, New York City, United States.
13. **Altit G.** (2024 June). Enhancing Global Neonatal Cardiovascular Care through the NeoCardioLab Digital Platform. The 29th International Perinatal Collegium. Quebec City, Canada.
14. **Altit G.** (2024 May). Harmonizing Research, Education, and Transparency: NeoCardioLab's Journey At the heart of NeoCardioLab: Unconventional Career Pathway. California Association of Neonatologists (CAN) and AAP District IX Section on Neonatal-Perinatal Medicine. 30th Annual Conference. Coronado, California, United States of America.
15. **Altit G** (2024 May). Target shock – targeted agents reducing global hypoperfusion in extreme preTerms. Pediatric academic societies 2024. Oral (Hot) Symposium Invitation. Toronto, Canada.
16. **Altit G** (2024 May). Chronic pulmonary hypertension in BPD – a lifelong condition. Bronchopulmonary Dysplasia Collaborative – Subgroup in Pulmonary Hypertension (Virtual).
17. **Altit G.** (2024 April). Near-Infrared Spectroscopy and congenital heart diseases. 8<sup>th</sup> POCUSNEO Advanced Neonatal Care Symposium. (Virtual).

18. **Altit G.** (2024 April). Harmonizing research, Education and transparency: NeocardiLab's journey. **Boston Children Hospital Harvard**, Boston, United States (Virtual).
19. **Altit G.** (2024 March). At the heart of NeoCardioLab: Ultrasound Integration in Hemodynamic Research and Education. **Neonatal Clinical Forum presentations.** Massachusetts General Hospital – Harvard Affiliated Hospital, Boston, United States. (Virtual).
20. **Altit G.** (2024, February). Case – the “Bleu” Baby. **Bangkok International Neonatal Symposium 2024 – Meet the expert;** Neonatal Fellow sessions. Hua Hin, Thailand.
21. **Altit G.** (2024, February). **Bangkok International Neonatology Symposium 2024.** Lectures (80 participants): PAC system and echocardiography measurements; Acute pulmonary hypertension in HIE; Assessment and management of pulmonary hemodynamics and RV in the setting of Acute PH; Hemodynamic evaluation and management of TNE in chronic pulmonary hypertension. Facilitator of the Targeted Neonatal Echocardiography Workshop (40 participants). Bangkok, Thailand.
22. **Altit G.** (2024, Décembre). La Procédure de l'INESSS pour la gestion de l'ictère néonatale. **13<sup>e</sup> Journées de néonatalogie du CHU Sainte-Justine.** Montreal, Canada.
23. **Altit G.** (2024, November 13). Bronchopulmonary-Dysplasia and Pulmonary Hypertension. Invited Keynote speaker. Joined **Canadian Association of Neonatal Nurses 2024 Conference and Canadian Association of Perinatal and Women's Health Nurses 2024 Conference.** Montreal, Canada.
24. **Altit G.** (2024, October 3-4). Member of the organizing committee. Lectures : Cyanose réfractaire néonatale : c'est le cœur ou les poumons / Conclusion, échange et questions / Atelier de simulation : Pericardiocentèse et cardioversion. **Cardiologie Néonatale de la théorie à la pratique.** CHU Sainte-Justine, Montréal, Canada
25. **Altit G.** (2024, October). La Procédure de l'INESSS pour la gestion de l'ictère néonatale. **Conférencier formation continue de l'Association des biochimistes cliniques du Québec (ABCQ) 2024.** Auberge du Lac Taureau, Canada.
26. **Altit G.** (2024, September 17). Target Neonatal Echocardiogram. **13th McGill University Neonatal Conference Innovation and Technology in Neonatal Care.** Montreal, Canada.
27. **Altit G.** (2024, June 12). Congenital diaphragmatic hernia. Targeted Neonatal Echocardiography Foundation Curriculum. **Neonatal Hemodynamics Research Centre.** (Virtual)
28. **Altit G, Launay A.** (2024, May 22). Les soins peau à peau chez les nourissances à terme et prématurés : recommandations et mise en pratique. **Communauté infirmière de pratique en néonatalogie du Québec.** (Virtual).
29. **Altit G.** (2024, April 12). Pulmonary Hypertension in Premature Infants. **Canadian Premature Babies Foundation** – Scientific Preemie Chats (Virtual). Ontario, Canada
30. **Altit G.** (2024 March). **Pan Canadian Fetal Cardiology Rounds.** Specialist invited for a panel discussion and audience interaction.
31. **Altit G.** (2024, November) Neonatal Cardiology Research Half-Day. Organizer. **Child Health and Human Development.** Shriner's Hospital, Montreal, Canada.
32. **Altit G.** (2024, April). Harmonizing research, education and transparency: NeoCardioLab's journey. Research Institute of the McGill University Health Centre. **Child Health and Human Development – Principal Investigator Presentations** (Monday noon seminars). Montreal.
33. **Altit G, Zavalkoff S, Seguin J.** (2024, April). Point of Care Ultrasound at the MCH: a story of innovation. Pediatric Medical Grand Round. **Montreal Children's Hospital,** Montreal, Canada

34. **Altit, G.** 2024 April 17: **Canadian Premature Babies Foundation.** *Moderating the Scientific Premie Chats of the Canadian Premature Babies Foundation with Leah Whitehead (parent), Dr Adrienne Rahde Bischoff and Dr Audrey Hébert on Navigating the Controversies: Patent Ductus Arteriosus Management in Infants Born Less Than 28 Weeks.*  
<https://www.youtube.com/watch?v=yorOU6nYxTo>
35. Palmis, S., Héguy, C., Rampakakis, E., **Wintermark, P.**, Rohlicek, C., Saint-Martin, C., Gilbert, G., & **Brossard-Racine, M.** (2024, November 27). Critical early life events differently affect cerebellar growth in infants born preterm or with congenital heart disease. 49th Preston Robb Neuroscience Day. Montreal, QC, Canada. [Accepted, but unable to attend due to parental leave]
36. Chen, N.H.\*, Tardif, C. L., Saint-Martin, C., Pinchevsky, E., **Wintermark, P.**, **Brossard-Racine, M.** (2024, November 27). White matter microstructural alterations in school-aged survivors with neonatal encephalopathy treated with therapeutic hypothermia. 49th Preston Robb Neuroscience Day. Montreal, QC, Canada.
37. Héguy, C., Palmis, S., Karat, B., Gilbert, G., Saint-Martin, C., **Shalish, W.**, Duerden, E. G., & **Brossard-Racine, M.** (2024, September 27). Postnatal respiratory morbidities differently affect hippocampal subfield development in very preterm neonates. The 16th Annual IPN Retreat. Montreal, QC, Canada.
38. Dionne, E., Majnemer, A., Beauchamp, M., & **Brossard-Racine, M.** (2024, June 5-8). Factors associated with mathematical performance in children with Developmental Coordination Disorder. Joint Developmental Coordination Disorder 15th and International Motor Development Research Consortium 6th Conference. Ghent, Belgium. Oral Presentation. [Accepted, but unable to present due to parental leave].
39. **Brossard-Racine, M.** (2024, November 7). Neurodevelopmental and neurocognitive consequences of congenital heart disease. 2024 Neonatal Cardiology Scientific day, Montreal, Canada.
40. **Brossard-Racine, M.** Keynote speaker (2024, May 23). Neuroimaging in survivors of early life adversities. Quebec Bio-Imaging Network 2024 Annual Scientific Day, Montreal, Canada.
41. **Shalish W.** AI for neonatologists: a comprehensive overview of how AI will change clinical practice and academic life in the 21st century. Pre-conference session at the Pediatric Academic Societies Annual Meeting, Toronto, Canada, May 3rd 2024. Role: Speaker and moderator.
42. **Shalish W.** Can AI solve some of Neonatology’s greatest challenges? Panel Discussion at the Pediatric Academic Societies Annual Meeting, Toronto, Canada, May 2024. Role: Speaker and moderator
43. **Shalish W.** Invited speaker, Annual Neonatology Conference, McGill University. Presentation entitled: 'A new vision on neonatal respiratory monitoring'.
44. **Shalish W.** Invited Speaker (virtual), Research Seminars for the Division of Neonatology at Columbia University/New York Presbyterian Hospital, New York, USA. Presentation entitled 'Reimagining apnea monitoring in the Neonatal Intensive Care Unit'
45. **Shalish W.** Invited Speaker, Neonatal Rounds for the Division of Neonatology at London Health Sciences Center, London, Ontario, Canada. Presentation entitled 'Reimagining apnea monitoring in the Neonatal Intensive Care Unit'.
46. Canadian Premature Babies Foundation Premie Chat September 20, 2024 Labelle C & **Duby J** "Learning to Feed your Baby in the NICU"
47. McGill Annual Neonatal Conference (September 2024) **Duby J** "Innovations in Promoting Family Engagement in the NICU"
48. **SANT’ANNA, G.** Ontario, Canada. EPIQ Lung Health Grand Rounds. *“The Challenge of Premature Infants Extubation - Art, Science and Gamble”*, April 2024 (Virtual)
49. **SANT’ANNA, G.** Ontario, Toronto. POCUSNEO & NEOPEDS Conference, Toronto. *“Strategies to minimize extubation failure in micro preemies”*. May 2024

50. SANT'ANNA, G. British Columbia, Vancouver. Canadian Perinatal Research Meeting (CNPRM). Theme title: *"Health technology innovation and integration in clinical care"*. Keynote Speaker. "Wireless Sensor Technology Innovation, Application and Vision for Future in Neonatal Care. June 4<sup>th</sup>, 2024.
51. SANT'ANNA, G. Montreal, Québec, Canada - *"Smart NICU Project at the Montreal Children's Hospital - MUHC"*, XIII McGill Neonatal Conference Day, September 2024.
52. Montreal, Québec, Canada - *"Smart NICU Project at the Montreal Children's Hospital - MUHC"*, Italian Delegation Visit, October 2024.
53. SANT'ANNA, G. SP, Brazil – II NeoBrain Brazil Conference. *"The Brain-Lung Axis" and "Innovations and Technology in Neonatal Care and the Smart Hospital Project"* - March 8 & 9, 2024
54. SANT'ANNA, G. Londrina, Brasil. 30 Years of HU Londrina, Neonatology. November 21-22, 2024. *"Neonatology: 64 years of a successful history"*; *"Cuidados Gerais com RN PT extremos"* and *"Bubble CPAP"*.
55. SANT'ANNA, G. Curitiba, Brasil. Sociedade Paranaense de Pediatria. Bubble CPAP workshop, *"Cuidados Gerais com as via Aéreas"*, *"Pneumotórax"* and *"Inovação no Cuidado do Prematuro Extremo"*. November 25 and 26, 2024.
56. SANT'ANNA, G. Brasilia, DF, Brazil – II CINEO – November 28 and 29, 2024.
57. SANT'ANNA, G. Fort Lauderdale, FL – DELPHI Neonatal Innovation Conference: *"The SMART NICU: a not-too-distant future?"* - September 23-25, 2024
58. SANT'ANNA, G. Washington, DC –The 2024 Bubble CPAP & Non-Invasive Respiratory Management of the Neonate Conference. *"Extubating the Preterm Infant to non-invasive respiratory support: art, gamble or science?"* and *"Reproducibility of bCPAP in different clinical settings (A Bubble CPAP experience from Canada – The McGill Montreal Children's Hospital)*. December 7-8, 2024.
59. SANT'ANNA, G. New York City - *"Non-invasive ventilation in preterm infants: do we really need to intubate?"* and *"The Smart NICU Project"* – 33<sup>rd</sup> Jen-Tien Wung Respiratory Care of the Newborn: A Practical Approach. Columbia University Conference on Neonatal Respiratory Care, October 19-20, 2024.
60. SANT'ANNA, G. New York City – Montefiore, *"Optimal Timing of Extubation of Preterm Infants"* at the 15th Annual: Current Topics in Neonatal Nutrition and Advances in Neonatal Care. Einstein College of Medicine and Montefiore Medical Center – Department of Pediatrics and the Division of Neonatology and Suny Stonybrook - October 22-23, 2024.
61. SANT'ANNA, G. Porto, Portugal. Hospital da Senhora da Oliveira - Guimarães. Weaning from Mechanical Ventilation: Evidence and Protocols". October 2, 2024
62. SANT'ANNA, G. Porto, Portugal. IPoKRATES. Clinical Seminar. Nutrition for Preterm Infants: Where are we now and what is the future? *"The association between fluids & nutrition during NICU stay and BPD"*, *"Feeding practices and lung aspiration: What do we know?"* and *"Continuous GI function monitoring in neonates: Is it possible?"*. October 3-5, 2024. \* IPoKRATES stands for the International Postgraduate Organization for Knowledge Transfer, Research, and Teaching Excellent Students. It is a non-profit, non-governmental foundation that invites distinguished professors and lecturers to give seminars on neonatal topics across the globe.
63. SANT'ANNA, G. Taipei, Taiwan – Taiwanese Society of Neonatology Conference - 09/03 - *Advancing Monitoring Using a Family-Centered Approach*; 11/03 - *Extubation in Extremely Preterm Infants: Art, Science or Gamble?* and 13/03 (Taipei) - *Weaning from Mechanical Ventilation: Evidence-Based Strategies*.
64. SANT'ANNA, G. São Paulo SP, Brazil – Workshop on "Neonatal Respiratory Care". March 7, 2024
65. SANT'ANNA, G. São Paulo SP, Brazil – Workshop on "Neonatal Bubble CPAP and Respiratory Care". March 20, 2025
66. SANT'ANNA, G. Rio de Janeiro, RJ, Brazil – Workshop on "Neonatal Bubble CPAP and Respiratory Care". Congresso Brasileiro de Perinatologia. November, 2025

67. **SANT'ANNA, G.** São Paulo, Brazil. “*The Brain-Lung Axis in the Premature Infant*”. NeoBrain Brazil Highlights, Feb 15<sup>th</sup>, 2024.
68. **SANT'ANNA, G.** Maceió, Brasil. Reunião Clínica Hospital das Clínicas. *Uso do CPAP na UTIN Neonatal*. July 23<sup>rd</sup>, 2024.
69. **SANT'ANNA, G.** CAISM – X Jornada de Neonatologia. “*CPAP após a Extubação*” – August 23<sup>rd</sup>, 2024. Cuidados com a Instalação e Manutenção do CPAP.
70. **SANT'ANNA, G.** Toronto, Canada. PREEMIE Chats – Canadian Premature Babies Foundation, December 13<sup>th</sup>, 2024 – *Very Preterm Infants: Do we Really Need to Intubate?*
71. **SANT'ANNA, G.** CAISM – Hospital da Mulher J.A. Pinotti – “*CPAP após a Extubação*” – December 13<sup>th</sup>, 2024.
72. Emily Campbell\*, Amanda Gross, Guilherme Mendes Sant'Anna, Wissam Shalish, Robert Edward Kearney. Modelling the Relationship between Bubble CPAP Pressure, Flow, and Canister Bubbling Sounds. 47th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC).
73. **Beltempo M.** Retour vers le futur : les ressources humaines en néonatalogie. Présentation scientifique de néonatalogie du CHU Sainte-Justine. Montréal, QC, Canada; Janvier 2024.
74. **Beltempo M.** L'organisation des soins en néonatalogie – est-il temps pour la gestion basée sur les données probantes? Présentation scientifique de Pédiatrie du CHU Sainte-Justine. Montréal, QC, Canada; Janvier 2024.
75. **Beltempo M.** Présentation: RCIU, faible poids et petit pour l'âge gestationnel – quoi dire à la famille ? Congrès annuel de l'Association des obstétriciens et gynécologues du Québec. Montreal, QC, Canada. May 2024
76. **Beltempo M.** The science of quality and the evidence of community. Saint-John Regional Hospital Neonatal Quality Improvement Day. Saint-John, NB, Canada. May 2024
77. **Beltempo M.** Organization of care in neonatology : time for evidence-based management? BC Children's Hospital Pediatric Grand Rounds. Vancouver, BC, Canada. September 2024
78. **Beltempo M.** Is quality scientific ? Kingston Hospital Pediatric Research Day. Kingston, ON, Canada. November 2024