



Holland Bloorview
Kids Rehabilitation Hospital

SickKids

Thames Valley
Children's Centre



McMaster
Children's Hospital



Inspiring Innovation and Discovery



Making Research Relevant to Families

We want to hear from you!



Health Sciences North
Horizon Santé-Nord



Agenda

1. Introductions
2. Overview of CP-NET
3. Building a Parent/Family Advisory Group
4. Getting the Right Information to the Right People at the Right Time
5. Research Priorities & Future Directions

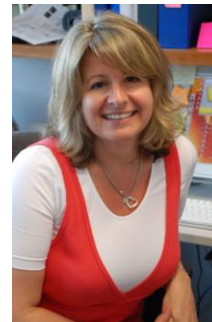


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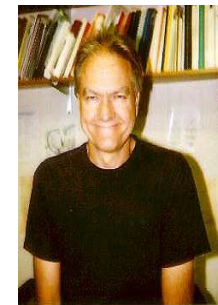


McMaster
Children's Hospital





Ontario Brain Institute
Childhood Cerebral Palsy Integrated Neuroscience
Discovery Network (CP-NET)
Investigator Group





Thames Valley
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Health Sciences North
Horizon Santé-Nord

Holland Bloorview

Kids Rehabilitation Hospital



Laurentian University
Université Laurentienne

SickKids

ERINOAKKIDS
Centre for Treatment and Development



GRANDVIEW
CHILDREN'S
CENTRE

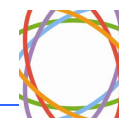
Baycrest



Queen's
UNIVERSITY

CP-NET Organizations

- Holland Bloorview Kids Rehabilitation Hospital (lead)
- The Hospital for Sick Children
- The University of Toronto
- Toronto Western Hospital, University Health Network
- Robarts Research Institute, University of Western Ontario
- McMaster Children's Hospital, Hamilton Health Sciences
- McMaster University
- Child Development Centre, Hotel Dieu Hospital
- Queen's University
- Children's Treatment Centre, Health Sciences North
- Laurentian University
- Grandview Children's Centre
- ErinoakKids Centre for Treatment and Development
- Children's Hospital of Eastern Ontario, University of Ottawa
- Thames Valley Children's Centre
- Rotman Research Institute, Baycrest



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CP-NET Investigators

Holland Bloorview

Kids Rehabilitation Hospital

Dr. Darcy Fehlings (Lead) – Holland Bloorview Kids Rehabilitation Hospital

Dr. Gabrielle deVeber – SickKids

Dr. Michael Fehlings – Toronto Western Hospital, University Health Network

Dr. Ravi Menon – Rotman Research Institute, University of Western Ontario

Dr. Peter Rosenbaum – McMaster University

Dr. Stephen Scherer – SickKids

Dr. Elaine Biddiss – Holland Bloorview Kids Rehabilitation Hospital

Dr. Craig Campbell – Thames Valley Children's Centre, London Health Sciences Centre

Dr. Tom Chau – Holland Bloorview Kids Rehabilitation Hospital

Dr. Robert Chen – Toronto Western Hospital, University Health Network

Dr. Jan Willem Gorter – McMaster Children's Hospital, McMaster University

Dr. Mark Henkelman – SickKids

Dr. Carolyn Hunt – Grandview Children's Centre

Dr. Anne Kawamura – Holland Bloorview Kids Rehabilitation Hospital

Dr. Marie Kim – ErinoakKids Centre for Treatment & Development

Dr. Anna McCormick - Children's Hospital of Eastern Ontario, University of Ottawa

Dr. Ronit Mesterman - McMaster Children's Hospital, McMaster University

Dr. Cindi Morsehead – University of Toronto

Dr. Sean Murray – Health Sciences North

Dr. Andrew Paterson – SickKids

Dr. Lucie Pelland – Queen's University

Dr. Dawa Samdup – Child Development Centre, Hotel Dieu Hospital

Dr. Stephen Scott – Queen's University

Dr. Manohar Shroff – SickKids

Dr. Margot Taylor – SickKids

Dr. Derek van der Kooy – University of Toronto

Dr. Richard Wintle – SickKids

Dr. Virginia Wright – Holland Bloorview Kids Rehabilitation Hospital

Dr. Nancy Young – Laurentian University

Ms. Lauren Switzer – CP-NET Project Manager – Holland Bloorview Kids Rehabilitation Hospital



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OBI CP-NET Industrial Partners

Electronic Arts	Siemens Healthcare
BKIN Technologies	XLR Imaging
Gesture Tek	Sangamo Inc
Cell Cure Neuroscience Ltd	Covidien Inc.
Northern Digital	Allergan Inc.
Hocoma Inc	Stem Cells Inc.

OBI CP-Net Patient Advocacy Organization Partners

- CanChild Centre
- NeuroDevNet
- Ontario Federation for CP
- OACRS
- Heart and Stroke Foundation of Ontario
- Parents for Children with Hemiplegic CP



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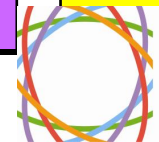


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OBi CP-Net Vision: to transform care for children with CP and their families by accelerating the development of new neuroscience treatments

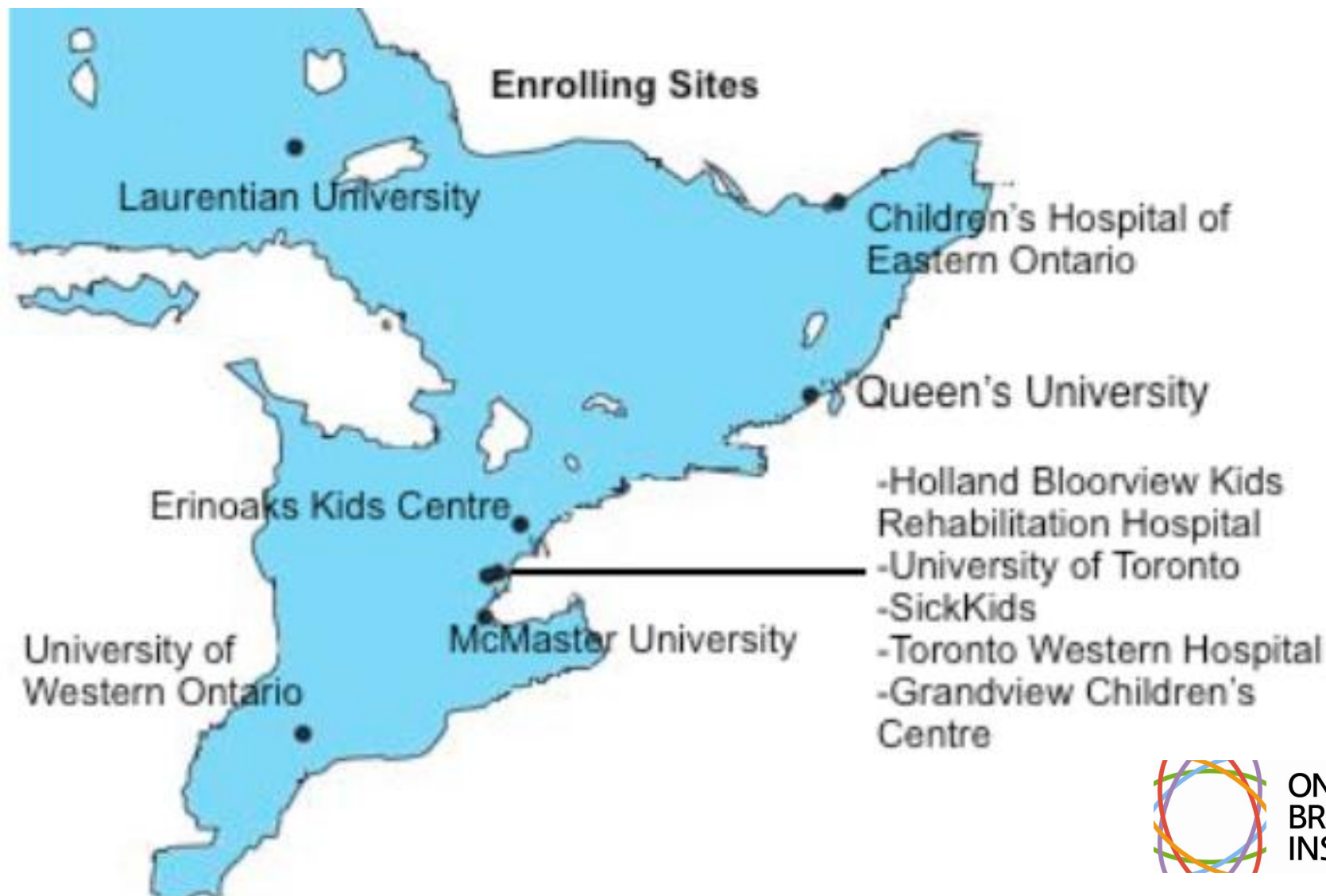
Databases

Research Themes	Clinical Risk Factors	Genomics	Neuro-Developmental	Neuro-Imaging
1) Neuro-Developmental Patterns				
2) Genomics				
3) Constraint Therapy				
4) Technology Innovation				



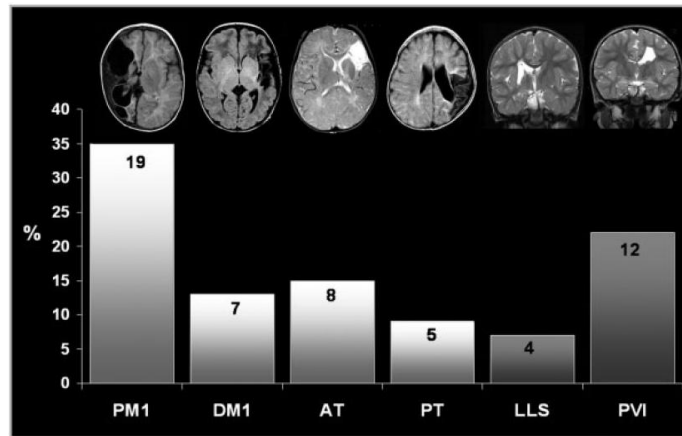
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Sites Involved



Research Themes

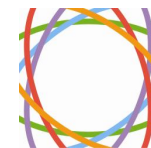
1. Predicting developmental outcomes based on images of the brain



Adam Kirton, MD, MSc, FRCPC,¹ Gabrielle deVeber, MD, MHSc, *Ann Neurol* 2008;63:436–443

2. Role of Genetics in Hemiplegic CP

- Special genetic testing to discover genetic risk factors for hemiplegic CP

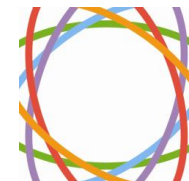


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Slide 9

Research Theme 3: Constraint Therapy

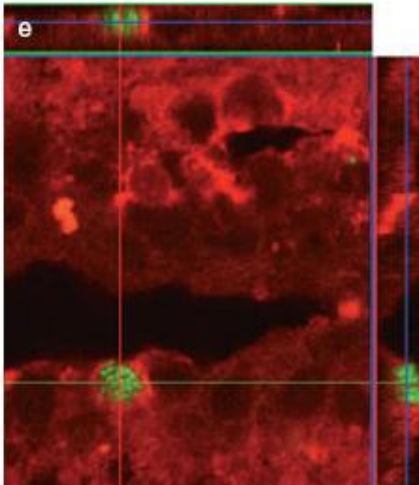
- 3a) Can we predict when Constraint Therapy will have the most benefit by looking at images of the brain?



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Research Theme 3: Constraint Therapy

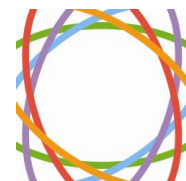
3b. Looking at the molecular and cellular mechanisms of Constraint Therapy in mice with a focus on stem-cells. Can the information in mice tell us something about kids with hemiplegic CP?



DEVELOPMENTAL MEDICINE & CHILD NEUROLOGY

ORIGINAL ARTICLE

Effects of constraint-induced movement therapy on neurogenesis and functional recovery after early hypoxic-ischemic injury in mice



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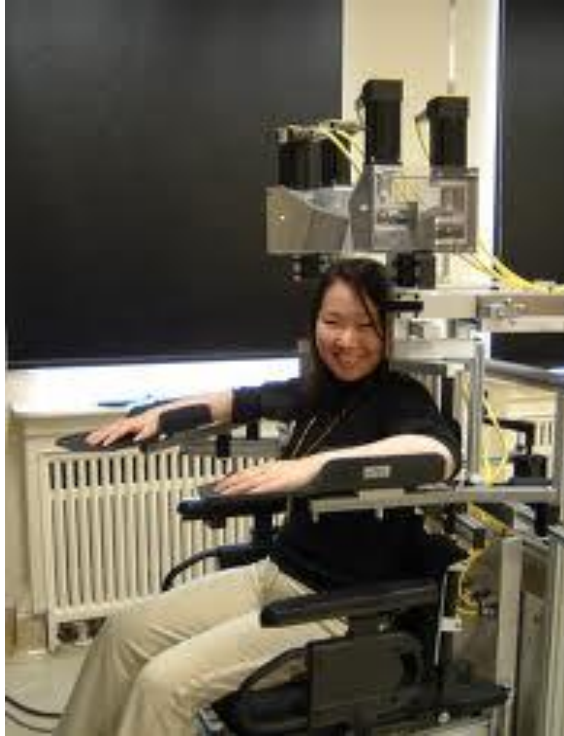
Theme 4: Developing Technological Innovations for Neuro-Rehabilitation

a. Virtual Reality Therapy (Kinect)



b. Robotics-Assisted Gait Training (Lokomat)

c. Robotic Upper-Limb Proprioception (Kinarm)



d. Transcranial Magnetic Stimulation (TMS)

