

The BB Rat Turns Thirty: Lessons and Future Directions

*An international symposium to celebrate the contribution of this model
and to develop future directions for research in type 1 diabetes*

December 3-5, 2004

The Westin Hotel, Ottawa, Canada

Organizers:

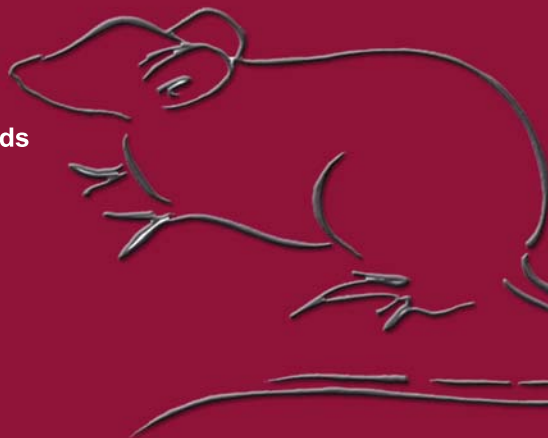
Fraser W. Scott, PhD Ottawa Health Research Institute

Errol B. Marliss, MD McGill University

<http://www.ohri.ca/BBRat>

INVITED SPEAKERS

Donald Bellgrau, PhD, USA
Rita Bortell, PhD, USA
Karsten Buschard MD, Denmark
Subrata Chakrabarti, PhD, Canada
Hemmo Drexhage, PhD, Netherlands
Daniel Figeys, PhD, Canada
Diane Finegood, PhD, Canada
Dennis Guberski, MS, USA
David Hill, PhD, Canada
Ingrid Kloting, PhD, Germany
Hubert Kolb, PhD, Germany
Anne Kwitek, PhD, USA
Ake Lernmark MD, PhD, USA
Zhen-Guo Li, PhD, USA
Sheldon Lin, MD, USA
Willy Malaisse, MD, PhD, Belgium



INVITED SPEAKERS

Helle Markholst, MD, Denmark
Rory McCrimmon, MD, USA
Mike Michalkiewicz, DVM, PhD, USA
John Mordes, MD, USA
Joe Neu, MD, USA
Philippe Poussier, MD, Canada
Alex Rabinovitch, MD, PhD, Canada
Ravichandran Ramasamy, PhD, USA
Jan Rozing, PhD, The Netherlands
David Serreze, PhD, USA
Anders Sima MD, PhD, USA
Wilma Suarez-Pinzon, PhD, Canada
Thomas Sparre, MD, PhD, Denmark
Guoyao Wu, PhD, USA
Ji-Won Yoon, PhD, Canada
Danny Zipris, PhD, USA

SCIENTIFIC ADVISORY COMMITTEE

Hubert Kolb, PhD, Germany
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John Mordes, MD USA
Philippe Poussier, MD, Canada
Alex Rabinovitch, MD, PhD, Canada
Anders Sima MD, PhD, USA

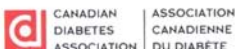
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Program

The poster and complete program is also available as a PDF and can be found [here](#).

Friday, December 3, 2004

4:30-7:30 PM	REGISTRATION	The Westin Hotel
6:30-7:30 PM	Wine and Cheese Reception, Poster Viewing	The Westin Hotel (Quebec & Nova Scotia Rooms)
7:30 PM	Board buses to Canada Aviation museum	The Westin Hotel (Westin Main entrance)
8:00-10:00 PM	Dinner and Speakers Clifford Chappel, Oakville, Ontario Errol Marliss, McGill University, Montreal "Discovery and early characterization of the BB rat"	Canada Aviation Museum



<http://www.aviation.technomuses.ca/>

Saturday, December 4, 2004 (Provinces II)

8:50-9:00 AM	Welcome and introductory remarks	Alex Rabinovitch, University of Alberta , Edmonton
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The Immune Etiology of Diabetes

Chair: Hubert Kolb , Dusseldorf

9:00-9:20 AM	Why study type 1 diabetes in rats ?	John Mordes, University of Massachusetts Medical School , Worcester
9:20-9:40 AM	Immunopathogenesis of diabetes in BB rats	Philippe Poussier , University of Toronto
9:40-10:00 AM	The innate immune system in diabetes	Hubert Kolb, German Diabetes Center , Düsseldorf
10:00-10:20 AM	What does IAN gene expression do for BB T cells ?	Donald Bellgrau, University of Colorado
10:20-10:40 AM	BREAK	

The Role of the Target Tissue

Chair: Diane Finegood, Vancouver

10:40-11:00 AM	Beta cell mass dynamics in early life	Diane Finegood, Simon Fraser University , Vancouver
11:00-11:20 AM	Growth factors and beta cell regeneration	Wilma Suarez-Pinzon, University of Alberta , Edmonton
11:20-11:40 AM	Sulfatide - an autoantigen in the islet ?	Karsten Buschard , Bartholin Institute, Copenhagen
11:40-12:00 PM	Proteomic analyses of the islets	Thomas Sparre, Steno Diabetes Centre, Gentofte
12:00-12:20 PM	Integrative biology of the pancreas in immune-mediated diabetes	Hemmo Drexhage, Erasmus University, Rotterdam
12:20-1:20 PM	LUNCH (Poster viewing, Quebec & Nova Scotia Rooms)	

[Overview](#)

[Register](#)

[Program](#)

[Accommodations](#)

[Posters/Abstracts](#)

December 3-5, 2004
The Westin Hotel
Ottawa, Canada

Genetics, BB Congenics and Other Rat Models

Chair: Philippe Poussier , Toronto

1:20-1:40 PM	New rat models for diabetic complications	Dennis Guberski, BRM Inc, Worcester
1:40-2:00 PM	T-cell lymphopenia and the Ian-gene family	Helle Markholst, Novo Nordisk, Copenhagen
2:00-2:20 PM	Congenetic BB rats	Ake Lernmark , University of Washington, Seattle
2:20-2:40 PM	<i>IDDM4</i> rat diabetes locus and diabetes	John Mordes, University of Mass. Medical School, Worcester
2:40-3:00 PM	BREAK	

Infectious Agents and Diabetes

Chair: Ji-Won Yoon, Chicago

3:00-3:20 PM	Virus-induced diabetes	Ji-Won Yoon, Chicago Medical School
3:20-3:40 PM	Toll-like receptors in KRV-induced diabetes	Danny Zipris, University of Mass. Medical School, Worcester
3:40-4:00 PM	Cytomegalovirus-enhanced diabetes	Jan Rozing, University of Groningen , The Netherlands

Testing of Pharmacological and Other Interventions

Chair: Alex Rabinovitch, Edmonton

4:00-5:00 PM	PANEL DISCUSSION: What are the most promising interventions and how can they be implemented?	
	Panel: A. Lernmark, K. Buschard, J.Rozing, S. Chakrabarti , J-W. Yoon, J. Mordes, D. Finegood, D. Hill	
	PANEL DISCUSSION: 3-5 minute presentations by each discussant, with discussion by the group	
6:15 PM	Board buses to Canadian Museum of Civilization, Hull, Quebec http://www.civilization.ca/	The Westin Hotel (Westin Main entrance)
6:30-7:30 PM	Reception	Canadian Museum of Civilization, Canada Hall
7:30-10:00 PM	Dinner and Speaker	Canadian Museum of Civilization, Riverview Lounge
	Human: model of BB rat and NOD mouse diabetes?	David Serreze , The Jackson Laboratories, Bar Harbor



Sunday, December 5, 2004 (Two simultaneous sessions)

SESSION A (Provinces II Room)

Diet, Gut Immunity and Diabetes

Chair: Fraser Scott, Ottawa

8:30-8:50 AM	Diet and dysfunctional metabolism	Willy Malaisse , Brussels Free University
8:50-9:10 AM	Wheat-related diabetes in rats and humans	Fraser Scott, Ottawa Health Research Institute
9:30-9:50 AM	NK cell defects in gut immune system	Rita Bortell, University of Massachusetts Medical School, Worcester
9:50-10:10 AM	Gut leakiness, tight junctions and diabetes	Joe Neu, University of Florida, Gainesville
9:50-10:10 AM	BREAK	

New Models, New Technologies

Chair: Helle Markholst, Copenhagen

10:10-10:30 AM	PAC transgenic rescue of lymphopenia and the involvement of IAN genes in T cell development	Mike Michalkiewicz, Medical College of Wisconsin
10:30-10:50 AM	The rat genome	Anne Kwitek, Medical College of Wisconsin
10:50-11:10 AM	Genetic variation in transcription factor Yy1 and type 1 diabetes	Ingrid Kloting, University of Greifswald , Karlsburg, Germany
11:10-11:30 AM	"Mapping protein-protein interactions in yeast and in human"	Daniel Figeys, University of Ottawa

SESSION B (Ontario Room)

BB Rats as Models of Diabetic Complications

Chair: Anders Sima , Detroit

8:30-8:50 AM	Diabetic retinopathy in the BB/Wor-rat	S. Chakrabarti University of Western Ontario, London
8:50-9:10 AM	Diabetic neuropathy in type 1 and type 2 BB-rats	Anders Sima , Wayne State University , Detroit
9:10-9:30 AM	Diabetic encephalopathy – a new late complication in diabetes	Z. Li, Wayne State University, Detroit
9:30-9:50 AM	Metabolic and Ion Fluxes in Diabetic BB rat heart	R. Ramasamy, Columbia University, New York
9:50-10:10 AM	BREAK	

Metabolic and Other Lessons

Chair: Guoyao Wu, College Station (Texas)

10:10- 10:30 AM	Arginine and nitric oxide metabolism	Guoyao Wu , Texas A & M University, College Station
10:30-10:50 AM	The effect of diabetes on fracture healing	S.S. Lin , New Jersey Medical School , Newark
10:50-11:10 AM	BB rat diabetes effects on brain glucose and on the alpha cell	Rory McCrimmon, Yale School of Medicine , New Haven
11:10-11:30 AM	Low protein diets, taurine and NOD diabetes	David Hill , Lawson Health Research Institute, London , Ontario

Plenary Session

11:30-12:30 PM **PANEL DISCUSSION: New Directions in Type 1 Diabetes Research**

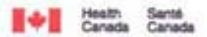
Chair: Ake Lernmark, Seattle

Panel: H. Kolb, A. Rabinovitch, G. Wu, A. Sima, H. Markholst, P. Poussier, M. Michalkiewicz, D. Serreze

3-5 minute presentation by each panel member followed by Group Discussion – Rapporteur will capture key conclusions

12:30-1:30 PM LUNCH (Poster viewing, Quebec & Nova Scotia Rooms)

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