



INS 12TH WORLD CONGRESS  
NEUROMODULATION: MEDICINE EVOLVING THROUGH TECHNOLOGY  
*Fairmont Montreal, Quebec, Canada*  
*6 - 11 June 2015*

**International Neuromodulation Society 12th World Congress Preliminary Program - 7 June**

June 7th, 2015 - INS Preconference 2: Understanding the Mechanisms of Action of Neurostimulation and SCS Responder Identification		
Spinal Cord Stimulation (Total 200 minutes – Morning session)		
What do we know now about MoA in SCS?		
09:00-09:05	Welcome and Introduction	Elliot Krames, MD /Simon Thomson, MBBS
09:05-09:20	An overview of Neurophysiological mechanisms of SCS	Michelangelo Buonocore
09:20-09:35	The neurochemistry of SCS in Neuropathic pain	Bengt Linderöth, MD, PhD
09:35-09:50	The dynamic neurophysiological measures of SCS	John Parker
09:50-10:05	The neurophysiology of SCS in neurocardiology (Ischaemia, dysrhythmmia and Heart failure)	Robert Foreman, PhD
10:05-10:20	The segmental neurophysiological mechanisms for pain inhibition from SCS	Yun Guan
10:20-10:35	Maximizing pain relief by the optimization of geometric SCS parameters	Jan Holsheimer
Coffee break (10:35-10:55)		
Variants of Standard SCS		
11:00-11:15	What is Burst? Rationale?	Dirk de Ridder, MD, PhD
11:15-11:30	High Frequency Neurostimulation: Insights into Mechanisms	Kerry Bradley, PhD
11:30-11:45	DRG stimulation – Differences to standard SCS	Elliot Krames, MD /Simon Thomson, MBBS
11:45-12:15	What do we still need to know about MoA of SCS? (Panel Discussion – 30 mins) Moderators – Elliot Krames, Simon Thomson  John Parker Michelangelo Buonocore Bengt Linderöts Robert Foreman Yun Guan	
Lunch Break (12:15-13:15)		

***International Neuromodulation Society 12th World Congress Preliminary Program - 7 June (Cont.)***

<b>June 7th, 2015 - INS Preconference 2: Understanding the Mechanisms of Action of Neurostimulation and SCS Responder Identification (Continued)</b>		
<b>Spinal Cord Stimulation (Total 180 mins – Afternoon session)</b>		
<b>Translation into the clinical perspective</b>		
13:15-13:35	<b>Evaluation of preclinical pain models: somatic vs visceral</b>	Professor Fernando Cervero
13:35-13:55	<b>Translational models of human visceral pain: learning from mistakes and the way forward?</b>	TBA
13:55-14:15	<b>Quantitative Sensory Testing: Can we diagnose?</b>	Dr. Vivek Metha
14:15-14:35	<b>Machine learning approaches for the detection of acute and chronic pain: promises and limitations</b>	Sean Mackey, MD, PhD
<b>Tea Break – 20 mins (14:35-14:55)</b>		
<b>Disease Markers as Predictors of SCS outcome (Panel Discussion – 50 mins)</b>		
<b>Moderators – Elliot Krames, Simon Thomson</b>		
14:55-15:05	<b>Clinical Markers review</b>	Tracy Cameron, PhD
15:05-15:15	<b>Quantitative Sensory Testing</b>	Dr. Vivek Metha
15:15-15:25	<b>fMRI</b>	Sean Mackey, MD, PhD
15:25-15:35	<b>ECAPS</b>	John Parker
15:35-15:45	<b>Biological markers of pain</b>	Joshua Gunn, PhD



## International Neuromodulation Society 12th World Congress Preliminary Program - 8 June

TIMES	Monday, 8 June A	Monday, 8 June B	Monday, 8 June C	Monday, 8 June D
<b>Opening Plenary Session</b>				
08:00 - 08:30	<b>Call to Opening of the Meeting:</b> Timothy Deer, MD, Simon Thomson MBBS, FRCA, Michel Prudhomme, MD, PhD (08:00 - 08:15) Setting a Global Target: Neuromodulation Accessibility for All Who Need It Marc Russo, MBBS (08:15 - 08:30)			
08:30 - 09:30	The Future of Medicine: The Evolution of the Field Moderator: Elliot Krames, MD  Bioelectronic medicines –bringing precision neuromodulation at peripheral nerves to a broad range of chronic diseases Kristoffer Famm, PhD (15 min - 08:30-08:45)  Neurophysiological and molecular basis for reflex control of inflammation Kevin Tracey, MD, PhD (15 min - 08:45-09:00)  Distance and Neuromodulation Ivar Mendez, MD, PhD (15 min - 09:00-09:15)  15 minute discussion (09:15-09:30)			
09:30 - 10:00	International Perspectives And Comparisons Of Prospective Research: Dorsal Root Ganglion Spinal Cord Stimulation International Jean-Pierre Van Buyten, MD, and Liong Liem, MD US Peter Staats, MD and Timothy Deer, MD			
10:00 - 10:25	<i>Break, Posters &amp; Exhibits</i>			
10:30 - 11:00	Long Term Follow Up of US Pivotal For High Frequency Spinal Cord Stimulation Leonardo Kapural, MD, PhD and Kasra Amirdelfan, MD			
11:00 - 11:30	Overcoming Hurdles in Neuromodulation: Making Neuromodulation the Standard in Disease Treatment Simon Thomson, MBBS, FRCA			
<b>Oral Poster Presentations</b>	<b>8 Minute Presentation &amp; 2 Minute Q &amp; A</b>			
11:30 - 11:40	1			
11:40 - 11:50	2			
11:50 - 12:00	3			
12:00 - 12:10	4			
12:10 - 12:20	5			
12:30 - 14:30	<i>Lunch, Posters and Exhibits</i>			

**International Neuromodulation Society 12th World Congress Preliminary Program - 8 June (Cont.)**

Times	Monday, 8 June A	Monday, 8 June B	Monday, 8 June C	Monday, 8 June D
<b>Breakout Presentations</b>	<b>Neuromodulation for Pain</b> Breakout 1: Moderator: Joshua Prager, MD	<b>Neuromodulation for Epilepsy</b> Breakout 2: Moderators: Ashwini Sharan, MD & Guoming Luan, MD, PhD	<b>Neuromodulation for Pelvic Organ Motility Disorders and Pain</b> Breakout 3: Moderator: Magdy Hassouna, MD, PhD, FRCSC	<b>Non-Invasive Brain Stimulation and Stroke Recovery</b> Breakout 4: Moderators: Rebeca Boltes Cecatto PhD, MD & Werner Braunsdorf, MD
14:30 - 14:45	Pathophysiological mechanisms of CRPS and its insights into Treatment Frank Huygen, MD, PhD	Update on VNS for Epilepsy Paul Boon, MD	NM for Urological diseases Magdy Hassouna, MD, PhD, FRCSC	Non-Invasive Brain Stimulation in Stroke: Analysis of Stimulation Methods, Parameters, Trial Design and Outcomes Marcel Simis, MD, PhD
14:45 - 15:00	Pathophysiological mechanisms of CRPS and its insights into Treatment, continued. Frank Huygen, MD, PhD	Update on rTMS for Epilepsy Felipe Fregni, MD, PhD	Sacral NM for pelvic floor disorders Magdy Hassouna, MD, PhD, FRCSC	Motor Recovery and Neuroplasticity After FES Rebeca Boltes Cecatto PhD, MD
15:00 - 15:15	The pathophysiology of complex regional pain syndrome and history of treatment algorithms Michael Stanton Hicks MB BS, Dr med, FRCA	Update on Anterior Thalamic DBS for Epilepsy Robert Gross, MD, PhD	Neuromodulation in Chronic abdominal Pain and Pelvic Pain Including Ultrasound Mayank Gupta, MD	Navigated rTMS Combined with Task-oriented Therapy for stroke related motor deficits Richard Harvey, MD
15:15 - 15:30	Review of the literature of neurostimulation for complex regional pain syndrome Salim Hayek, MD, PhD	Responsive Brain Stimulation for Epilepsy Martha Morrell, MD, PhD	What technological and medical improvements are needed for Sacral nerve stimulation to really catch on? Michele Spinelli, MD	Motor Learning and Cortical Plasticity Induced Noninvasive Brain Stimulation Felipe Fregni, MD, PhD, MPH
15:30 - 15:45	Integrating Neuromodulation into the treatment algorithm for CRPS Joshua Prager, MD	Hippocampal DBS for Epilepsy Arthur Cukiert, MD, PhD	SNS for Colorectal Disease: An Update Charles Knowles, MBBChir, MA, PhD, FRCS	
15:45 - 16:00	PANEL ALL Discussion	Optogenetic Strategies for Epilepsy Robert Gross, MD, PhD	Discussion	Discussion
16:00 - 16:30	<i>Break, Posters &amp; Exhibits</i>			
<b>Oral Poster Presentations</b>	<b>8 Minute Presentation &amp; 2 Minute Q &amp; A</b>			
16:30 - 18:00	<b>Pain</b>	<b>Brain</b>	<b>Breakout 3</b>	<b>Breakout 4</b>

## International Neuromodulation Society 12th World Congress Preliminary Program - 9 June

TIMES	Tuesday, 9 June A	Tuesday, 9 June B	Tuesday, 9 June C	Tuesday, 9 June D
	<b>Plenary Session</b>			
08:00 - 09:40	<b>Sensors, Monitors, Analytics and Feedback systems: Current and Future Applications for Neuromodulation</b> Moderators: Peter Konrad, MD, PhD and Ali Rezai, MD Sensors in Medicine: 2015 and beyond Ali Rezai, MD (08:00-08:20) Sensors for Human Performance and Augmentation Scott Galster, PhD (08:20-08:40) Heart Failure Jeffrey Ardell, PhD (08:40-09:00) Spinal cord and epilepsy neuromodulation Ashwini Sharan, MD (09:00-09:20) Discussion (9:20-9:40)			
09:45 - 10:00	<b>Spinal Cord Stimulation to Treat Heart Failure</b> Animal Data Timothy Deer, MD (9:45-9:50) Human Data Hung-Fat Tse, MD, PhD (9:50-10:00)			
10:00 - 10:25	<i>Break, Posters &amp; Exhibits</i>			
10:30 - 11:30	<b>Is Paresthesia Free Stimulation The Future of Spinal Cord Stimulation?</b> Moderated by Timothy Deer, MD and David Kloth, MD Parasthesia Free: The Evidence: Advocates: Marc Plazier, MD / Adnan Al Kaisy, MB ChB, FRCA / Paul Verrills, MD We need Parasthesias to produce pain Relief: The Advocates: Eric Buchser, MD, Salim Hayek, MD, PhD & Ramsin Benyamin, MD			
<b>Oral Poster Presentations</b>	<b>8 Minute Presentation &amp; 2 Minute Q &amp; A</b>			
11:30 - 11:40	1			
11:40 - 11:50	2			
11:50 - 12:00	3			
12:00 - 12:20	<b>INS General Assembly</b>			
12:30 - 14:30	<i>Lunch, Posters and Exhibits</i>			
<b>Breakout Presentations</b>	<b>Neuromodulation for Cardiovascular Disorders</b> Breakout 1: Moderators: Mike DeJongste, MD, PhD and Robert Foreman, PhD	<b>Brain Stimulation for Pain</b> Breakout 2: Moderators: Damianos Sakas, MD, PhD & Takamitsu Yamamoto, MD, PhD	<b>Neurolytics and Neuromodulation in Cancer Pain</b> <b>Breakout :</b> Moderator: Allen Burton, MD	<b>Neurostimulation for Motor and Metabolic Disorders?</b> Breakout 4: Moderators: Tom Abell, MD and Jiande Chen, PhD
14:30 - 14:45	SCS for Vascular Disease Shoaeddin Damirchi, MD	Motor Cortex Stimulation for Pain: Evidence and Progresss Alessandro Dario, MD	Technological advances in Neurolytics and Neuromodulation Amitabh Gulati, MD	Gastric neuromodulation for gut dysmotility Thomas Abell, MD
14:45 - 15:00	Neuromodulation for Angina Sam Eldabe, MBBS, FRCA	Neuromodulation for Cluster Headache Fabian Piedimonte, MD and Juan Carlos Andreani, MD	Update on pharmacokinetics and dynamics of the intrathecal space Christophe Perruchoud, MD	Intestinal neuromodulation for diabetes Jiande Chen, PhD

**International Neuromodulation Society 12th World Congress Preliminary Program - 9 June (Cont.)**

<b>TIMES</b>	<b>Tuesday, 9 June A</b>	<b>Tuesday, 9 June B</b>	<b>Tuesday, 9 June C</b>	<b>Tuesday, 9 June D</b>
<b>Breakout Presentations</b>	<b>Neuromodulation for Cardiovascular Disorders</b> Breakout 1: Moderators: Mike DeJongste, MD, PhD and Robert Foreman, PhD	<b>Brain Stimulation for Pain</b> Breakout 2: Moderators: Damianos Sakas, MD, PhD & Takamitsu Yamamoto, MD, PhD	<b>Neurolytics and Neuromodulation in Cancer Pain</b> <b>Breakout :</b> Moderator: Allen Burton, MD	<b>Neurostimulation for Motor and Metabolic Disorders?</b> Breakout 4: Moderators: Tom Abell, MD and Jiande Chen, PhD
15:00 - 15:15	SCS for Heart Failure John Lopshire, MD	Deep Brain Stimulation for for Chronic Pain Julie Pilitsis, MD, PhD	Functional Rehabilitation in Cancer Pain Brian Bruel, MD	Gastric neuromodulation for obesity Jieyun Yin, MD
15:15 - 15:30	Neuromodulation for Arrhythmias Heinz Theres, MD, PhD	Occipital and Supraorbital Peripheral Nerve Stimulation Erika Peterson, MD	Intrathecal Drug Delivery in Treating Cancer Pain Louise Lynch, MD	Gastric neuromodulation for children Todd Ponsky, MD
15:30 - 15:45	Progress in Neuromodulation for Heart Diseases Mike DeJongste, MD, PhD	Occipital Nerve Stimulation for Chronic Migraine Genni Duse, MD	Newest Concepts in Intrathecal Drug Delivery for Cancer Pain Lisa Stearns, MD	GI Neurostimulation for Functional Bowel disease Jieyun Yin, MD
15:45 - 16:00	Discussion	Discussion	Discussion	Discussion
16:00 - 16:30	<i>Break, Posters &amp; Exhibits</i>			
<b>Oral Poster Presentations</b>	<b>Cardiovascular Diseases</b>	<b>Brain</b>	<b>Specialty</b>	<b>Specialty</b>
16:30 - 16:40				
16:40 - 16:50				
16:50 - 17:00				
17:00 - 17:10				
17:10 - 17:20				
17:20 - 17:30				
17:30 - 17:40				
17:40 - 17:50				
17:50 - 18:00				

## International Neuromodulation Society 12th World Congress Preliminary Program - 10 June

TIMES	Wednesday, 10 June A	Wednesday, 10 June B	Wednesday, 10 June C	Wednesday, 10 June D
	<b>Plenary Session</b> Moderator: Robert Levy, MD, PhD			
08:00 - 08:30	Innovations in GI Neurostimulation Thomas Abell, MD and Jiande Chen, PhD			
08:30 - 09:00	Spinal Cord Stimulation for clinical severe neuropathic pain: New horizons and Translational Research; Bert Joosten, PhD, Bengt Linderöth, MD, PhD, Robert van Dongen, MD, PhD			
09:00 - 09:30	Current Practices and Management Infection and implantable Devices: Current Practices and Management David Provenzano, MD			
09:30 - 10:00	Current Practices and Management Spinal Cord Stimulation Anesthesia choices and safety; Steven Falowski, MD, Pro; General Ashwini Sharan, MD Can.			
10:00 - 10:25	Break, Posters & Exhibits			
10:30 - 11:00	Current Practices: Functional Neuroimaging And The Use of Neuromodulation Sean Mackey, MD, PhD & Translational Neuroimaging Approaches In Neuromodulation Chengyuan Wu, MD, MSBmE			
11:00 - 11:30	The Use of Deep Brain Stimulation for Alzheimer's Disease Andres Lozano, MD, PhD			
<b>Oral Poster Presentations</b>	<b>8 Minute Presentation &amp; 2 Minute Q &amp; A</b>			
11:30 - 11:40	1			
11:40 - 11:50	2			
11:50 - 12:00	3			
12:00 - 12:10	4			
12:10 - 12:20	<b>Giant of Neuromodulation Award</b>			
12:30 - 14:30	Lunch, Posters and Exhibits			
<b>Breakout Presentations</b>	<b>Evaluating Outcomes in Neuromodulation</b> Breakout 1: Moderator: Roger Strachan, MD, FRCS & Wojciech Maksymowicz, Prof. dr hab.n.med.	<b>Current State of Brain Neuromodulation for Disorders of Cognition and Behavior</b> Moderators: Ali Rezai, MD & Fabian Piedimonte, MD	<b>Neuromodulation for Spasticity</b> Breakout 3: Moderator: Michael Saulino, MD, PhD	<b>The Dark Side of the Moon</b> Breakout 4: Moderator: Ivano Dones, MD
14:30 - 14:45	Capturing Outcomes in NM in Neuropathic Pain; From Subjective to Objective Michael Gofeld, MD	Brain Circuits and Networks Ali Rezai, MD	Continuous intrathecal baclofen trialing Michael Munin, MD	SCS Mario Meglio, MD, PhD
14:45 - 15:00	Multidimensional Evaluation and E-Medicine Philippe Mavrocordatos, MD	DBS for Depression Darin D. Dougherty, MD	Utility of electrophysiological techniques in the management of intrathecal baclofen patients Stuart Yablon, MD	ITB Mohamed Ali Jamous, MD, MSc



**International Neuromodulation Society 12th World Congress Preliminary Program - 10 June (Cont.)**

<b>TIMES</b>	<b>Wednesday, 10 June A</b>	<b>Wednesday, 10 June B</b>	<b>Wednesday, 10 June C</b>	<b>Wednesday, 10 June D</b>
<b>Breakout Presentations</b>	<b>Evaluating Outcomes in Neuromodulation</b> Breakout 1: Moderator: Roger Strachan, MD, FRCS & Wojciech Maksymowicz, Prof. dr hab.n.med.	<b>Current State of Brain Neuromodulation for Disorders of Cognition and Behavior</b> Moderators: Ali Rezai, MD & Fabian Piedimonte, MD	<b>Neuromodulation for Spasticity</b> Breakout 3: Moderator: Michael Saulino, MD, PhD	<b>The Dark Side of the Moon</b> Breakout 4: Moderator: Ivano Dones, MD
15:00 - 15:15	New insights on patient selection, trialing, and medication selection Jason Pope, MD	DBS to Augment Fear Extinction: Implications for PTSD Treatment and Beyond Darin D. Dougherty, MD	Combining intrathecal baclofen therapy with other modalities John McGuire, MD	DBS Giuseppe Messina, MD
15:15 - 15:30	High frequency PNS for Stump Pain. Amol Sooin, MD	DBS for Obsessive Compulsive Disorder Bart Nuttin, MD, PhD	Combined intrathecal therapy for management of chronic pain and severe spasticity Michael Saulino, MD, PhD	Sacral Nerve Root Stimulation Michele Spinelli, MD
15:30 - 15:45	Bilateral epidural sacral nerve neuromodulation: an option for bladder and GI dysfunction and for the treatment of pelvic pain Gianni Colini Baldeschi, MD	DBS for Addiction Disorders Jens Kuhn, MD	Lateral Cord Stimulation as a new tool for treatment of Refractory Spasticity. Juan Carlos Andreani, MD	Peripheral Nerve Stimulation Paul Verrills, MD
15:45 - 16:00	Discusion	DBS for Enhancing Learning and Memory Dr. Itzhak Fried	Discussion	Discussion
16:00 - 16:30	<i>Break, Posters &amp; Exhibits</i>			
<b>Oral Poster Presentations</b>	<b>Pain</b>	<b>Brain</b>	<b>Specialty</b>	<b>Specialty</b>
16:30 - 16:40				
16:40 - 16:50				
16:50 - 17:00				
17:00 - 17:10				
17:10 - 17:20				
17:20 - 17:30				
17:30 - 17:40				
17:40 - 17:50				
17:50 - 18:00				

**International Neuromodulation Society 12th World Congress Preliminary Program - 11 June**

<b>TIMES</b>	<b>Thursday, 11 June A</b>	<b>Thursday, 11 June B</b>	<b>Thursday, 11 June C</b>	<b>Thursday, 11 June D</b>
<b>Breakouts</b>	<b>Pain Breakout 1: Peripheral Nerve Stimulation</b> Moderators: Alexandre Francisco, MD & Marc Huntoon, MD	<b>Novel Neuromodulation Strategies for Brain and Spinal Cord Injury</b> Breakout 2: Moderators: Julian Taylor, PhD & Peter Konrad, MD, PhD	<b>Specialty Breakout 3: Intrathecal Drug Delivery</b> Moderator: Joshua Prager, MD	<b>Specialty Breakout 4: Cost Effectiveness for Neuromodulation</b> Moderator: Nagy Mekhail, MD, PhD
08:00 - 08:15	The evolution of PNS to a minimally invasive, ultrasound-guided percutaneous lead placement procedure Kenneth Aló, MD	Transcutaneous Electrical Stimulation for Bedsore Management Vivian Mushahwar, PhD	Systemic Opioid Cessation in Intrathecal Drug Delivery David Caraway, MD, PhD	Cost and Longevity of ITP Nagy Mekhail, MD, PhD
08:15 - 08:30	Reducing PNS complications by selecting the optimal lead, placement method, and anchoring technique for each indication Leonardo Kapural, MD, PhD	Epidural Spinal Cord Stimulation for Paralysis Julian Taylor, PhD	Best Practices for Intrathecal Drug Delivery: Patient Safety v. FDA Concerns Joshua Prager, MD	Health Care Utilization in Parkinson's Disease Jeff Arle, MD, PhD
08:30 - 08:45	Can an extended one-month trial of PNS be used as a therapy without a permanent implant in some patients? John Chae, MD	Direct Spinal Cord Stimulation for Paralysis Vivian Mushahwar, PhD	Effects of Bolus Dosing on Granuloma and Outcomes Jason Pope, MD	Health Care Utilization in Peripheral Nerve Stimulation Konstantin Slavin, MD
08:45 - 09:00	Making Percutaneous PNS more accessible and reliable Marc Huntoon, MD	Neural Prosthetics for Brain and Spinal Injury TBA	Continuity of Care in Intrathecal Drug Delivery Lawrence Poree, MD, PhD	Health Care Utilization in the Future of Neuromodulation Ali Rezai, MD
09:00 - 09:15	Neuromodulation of the Peripheral Nerves: A Review of the Prospective Literature and Registry Data Porter McRoberts, MD	Deep Brain Stimulation for Early Parkinson's Disease Peter Konrad, MD, PhD	Intrathecal Therapy or Spinal Cord Stimulation. The Decision Points Jason Pope, MD	Patient access with Governmental Payors Simon Thomson, MBBS, FRCA
09:15 - 09:30	Peripheral Nerve Stimulation: Combined Use with SCS Eugene Mironer, MD	New Concepts in Neuromodulation for the Brain Michel Prudhomme, MD, PhD	The Past, Present and Future of Intrathecal Drug Delivery Maged Hamza, MD	Patient Access with Private Insurance Ganesan Baranidharan, MBBS, FRCA
09:30 - 09:45	Prospective Evaluation of a New Device for Peripheral Nerve Stimulation Ramsin Benyamin, MD	Neuromodulation of the Brain for Dystonia Fabian Piedimonte, MD	The Past, Present and Future Drug Jay S. Grider, DO, PhD	Peripheral Nerve Stimulation Giancarlo Barolat, MD

**International Neuromodulation Society 12th World Congress Preliminary Program - 11 June (Cont.)**

<b>TIMES</b>	<b>Thursday, 11 June A</b>	<b>Thursday, 11 June B</b>	<b>Thursday, 11 June C</b>	<b>Thursday, 11 June D</b>
10:00 - 10:30	<i>Break</i>			
Oral Poster Presentations	<b>Pain</b>	<b>Brain</b>	<b>Specialty Breakout 3</b>	<b>Specialty Breakout 4</b>
10:30 - 10:40				
10:40 - 10:50				
10:50 - 11:00				
11:00 - 11:10				
11:10 - 11:20				
11:20 - 11:50	Functional Investigation of the Brain with Neuromodulation Itzhak Fried, MD, PhD			
11:50-12:20	MRI Guided Ultrasound Jin Woo Chang, MD, PhD DBS for Addictions and Eating Disorders Bomin Sun, MD			
12:20-12:50	Improving Patient Safety and Product Improvement in Neuromodulation: Reaching a Goal Through Collaboration Robert Levy, MD, PhD			
12:50-13:00	Farewell & Meeting Adjourns -Timothy Deer, MD, Simon Thomson, MBBS, FRCA, Michel Prudhomme, MD, PhD			