

Myeloma Canada Research Network / Terry Fox Research Institute

Workshop, July 27, 2015, Toronto Airport Marriott Hotel, 8 am – 4 pm

Attendees list and agenda attached.

Dr. Tony Reiman chaired the workshop and opened by welcoming the attendees and providing introductory remarks. The Myeloma Canada Research Network (MCRN) is a group of investigators from across Canada that has been conducting multiple myeloma clinical trials and translational research over the past several years, led by Dr. Donna Reece. MCRN is interested in partnering with TFRI on a Translational Cancer Research Program in myeloma. The goals of the workshop were outlined: to hear from MCRN members and potential partners regarding the nature and direction of such a research program, and to hone the focus of the proposal in breakout sessions followed by a discussion amongst all attendees. MCRN is the only cancer-related group invited to submit a full application to CIHR for one of four SPOR Networks in Chronic Disease; the opportunity to match TFRI funding with CIHR was discussed.

Dr. Victor Ling outlined TFRI's vision for the Translational Cancer Research Program, which is well documented on the TFRI website. The reader is referred to the TFRI website for more details.

Dr. Chris Venner gave an overview of the current state of the art with respect to myeloma diagnosis, biology, management and clinical outcomes for the benefit of those in attendance not so familiar with the disease. Dr. Donna Reece gave an overview of MCRN, its inception, mission and activities to date as well as an update on the CIHR SPOR Network proposal being made by the group. Dr. Reiman reviewed the potential areas of focus for the proposal outlined in MCRN's Expression of Interest to TFRI, including novel therapeutics; genomics; and disease characterization and monitoring. Topics of current global interest and areas of strength in Canada, represented well by the workshop attendees, were referenced. The importance of focus in a single research area, the need to carve out a distinct piece of work for the TFRI proposal, and the potential to enhance MCRN's TFRI Program through partnership with the CIHR SPOR Network program was discussed.

Invited talks from other members of MCRN provided context for discussion about the proposal. Dr. Nizar Bahlis discussed his team's work in Calgary on myeloma genomics and therapeutics including mechanisms of resistance to therapy and novel treatment approaches. Dr. Rodger Tiedemann presented his work on the characterization of myeloma progenitors that resist proteasome inhibitor therapy. Dr. Trevor Pugh discussed his collaboration with Dr. Suzanne Trudel on the development of methods for characterizing and monitoring myeloma with circulating tumour DNA (ctDNA). Dr. Sabine Mai discussed her work on 3D-nuclear architecture in myeloma. Dr. Jonathan Sussman (patient reported outcomes) and Dr. Matthew Cheung (economic analysis) commented on the potential to evaluate the impact of new technologies on patient quality of life and costs of care in the context of a TFRI program.

Potential partners with MCRN in this work were invited to give presentations about their organizations and research capabilities. Dr. Kelley Parato gave an overview of the new BioCanRx NCE program for developing novel cancer biotherapeutics in Canada. Dr. Cheryl Arrowsmith discussed the work of the

highly productive Structural Genomics Consortium, emphasizing the capacity for screening novel compounds against therapeutic targets of interest to accelerate drug development. Dr. Francois Benard discussed his group's work with novel tracers for PET imaging of cancer that could potentially be used to diagnose, stage and monitor various cancers including myeloma. Dr. Lois Shepherd gave an overview of the NCIC Clinical Trials Group, an active partner of MCRN, with a focus on the integration of translational research into intervention trials and the NCIC CTG's biobanking capabilities. Dr. Steve Robbins provided perspective from the CIHR Institute of Cancer Research on the potential to align the TFRI and CIHR proposals from MCRN. Mr. Aldo del Col described Myeloma Canada, a key partner with and integral part of MCRN, that provides a strong voice, advocacy and perspective from myeloma patients. Dr. Tom Hudson provided input on potential areas of collaboration with the Ontario Institute of Cancer Research (OICR) including linkages to startups with novel cancer drugs in development of potential interest to the MCRN.

Esteemed colleagues Dr. Leif Bergsagel and Dr. Marta Chesi from the Mayo Clinic, Scottsdale AZ attended the workshop to give strong international perspective. Drs. Bergsagel and Chesi provided very useful commentary regarding the value of working now in the area of myeloma, Canada's capabilities and strengths in this area, and the potential areas of focus under consideration.

The breakout sessions in the afternoon included three groups, each discussing the three potential areas of focus outlined in the EOI:

- Genomics-guided therapy
- Better disease characterization and monitoring
- Moving novel therapies from Canadian laboratories into the clinic

At the conclusion of the breakout sessions, rapporteurs from each group summarized the discussion for everyone in attendance.

The novel therapies breakout group felt that although there are several investigators working at a high level in this area in Canada and a lot of activity in MCRN in the development novel myeloma drug treatments, it would be challenging to hone down to a single research question appropriate for a TFRI proposal in this area. Each specific novel therapeutic strategy under development is somewhat unique, and to support a breadth of work across the spectrum of this activity in Canada would be hard to encompass with a single research question. Focusing in one of the other proposed areas is nevertheless expected to be of significant benefit in the development of novel myeloma therapies and in tailoring treatment to the biology of disease in each patient. The development of novel therapies remains a key focus of MCRN.

The groups discussing genomics-guided therapy and disease monitoring produced remarkably similar ideas which resonated amongst the workshop attendees. Both groups agreed with a sentiment articulated by Dr. Bergsagel that one of Canada's strengths for doing translational myeloma research lies in our particular ability to follow patients throughout the trajectory of their disease. It is felt that by comprehensively characterizing the disease at the molecular and cellular level using serial sample collection over time, we could identify myeloma disease profiles that could potentially be used to direct

management. It is agreed that various applications of myeloma genomics would be a necessary and central component of comprehensive disease characterization. The ultimate translation of such disease profiling would rest upon demonstrating its utility in making patient treatment decisions.

The agreed upon area of focus for the TFRI proposal is to devise a comprehensive longitudinal profile of the disease using leading edge molecular and cellular techniques that offers the potential to guide treatment decisions. If the MCRN proposal to CIHR is also funded, the TFRI-funded disease profiling platform could be incorporated into MCRN clinical trials of novel therapies. We would propose to subsequently test this profile in a randomized trial in a subsequent study led by the Myeloma Canada Research Network, in collaboration with international partners. Prospective banking of blood, bone marrow and clinical data from patients on a standardized pan-Canadian protocol will be proposed by the Myeloma Canada Research Network and biospecimens distributed to participating groups across Canada to allow their contributions to the research. The program will be centrally coordinated and integrated. Opportunities will exist for many investigators and groups across Canada – as represented by the workshop attendees - to accrue patients, to take part in the research, and to access the biospecimens, data and resources assembled under the TFRI program.

At the conclusion of the workshop, there was strong enthusiasm amongst attendees to continue with an MCRN application to TFRI for a Translational Cancer Research Program partnership. Plans were set in motion for a workshop report and project outline to be submitted by MCRN to TFRI in September, led by Dr. Reiman together with a small writing team (Drs. Bahlis, Pugh, Reece, Tiedemann, Trudel).



Myeloma Canada Research Network Workshop

British Columbia / Alberta / Quebec Room
 Toronto Airport Marriott Hotel
 901 Dixon Road, Etobicoke, ON M9W 1J5
 Phone: 416-674-9400

MONDAY, JULY 27, 2015

By web conference: <http://tfri.webex.com>

Tel: 1-877-668 4490

Access: 298 693 646

<i>Time</i>	<i>Topic</i>	<i>Presenter</i>
8:00	Breakfast and room set up	
8:30	Introductory Remarks	Tony Reiman
	<ul style="list-style-type: none"> • <i>Welcome, introductions</i> • <i>The opportunity</i> • <i>Agenda overview</i> 	
8:45	TFRI's Vision for the Translational Program	Victor Ling
9:00	Myeloma 101	Chris Venner
	<ul style="list-style-type: none"> • <i>Introduction to the disease</i> 	
9:15	The Myeloma Canada Research Network	Donna Reece
	<ul style="list-style-type: none"> • <i>Who we are, what we do, our history, our vision</i> • <i>The CIHR SPOR Network opportunity and proposal</i> 	
9:45	The Proposal: Potential Areas of Focus	Tony Reiman
	<ul style="list-style-type: none"> • <i>Genomics-guided disease management</i> • <i>Better disease monitoring (molecular, flow, imaging)</i> • <i>Moving novel therapies from Canadian labs into the Clinic</i> 	
10:15	Comments from the Mayo Clinic	Leif Bergsagel, Marta Chesi
10:30	BREAK	
	Invited Talks from Canadian Research Groups (<i>that could contribute to a national translational research platform in myeloma</i>)	
10:45	<i>Myeloma Novel Therapeutics and Genomics</i>	Nizar Bahlis
11:00	<i>Myeloma Clonal Dynamics and Therapeutics</i>	Rodger Tiedemann

11:15	<i>ctDNA Monitoring</i>	Trevor Pugh
11:30	<i>BioCanRx</i>	Kelley Parato
11:45	<i>Structural Genomics Consortium</i>	Cheryl Arrowsmith
Noon	LUNCH	
Time	Topic	Presenter
12:30	Functional Imaging	Francois Benard
12:45	Bioinformatics	Yussanne Ma
1:00	QoL and Economic Analysis	Jonathan Sussman, Matt Cheung
1:15	NCIC Clinical Trials Group	Annette Hay, Lois Shepherd
1:30	Comments From Partners	
	<i>Myeloma Canada</i>	Aldo del Col
	<i>CIHR</i>	Steve Robbins
	<i>OICR</i>	Tom Hudson
1:45	Breakout Discussions on Potential Focus and Research Questions (<i>afternoon refreshments available during the breakout session</i>)	Everyone
	<ul style="list-style-type: none"> • <i>Genomics</i> 	
	<ul style="list-style-type: none"> • <i>Disease Monitoring</i> 	
	<ul style="list-style-type: none"> • <i>Novel Therapeutics</i> 	
2:15	Reports from Breakout Groups <i>5 minutes for each report</i>	One rapporteur from each group
2:30	Perspectives and Discussion	Everyone
	<ul style="list-style-type: none"> • <i>What key research question(s) will be our focus?</i> 	
	<ul style="list-style-type: none"> • <i>Who will step up to help lead this program and write this proposal?</i> 	
3:00	Next Steps and Closing Remarks	Tony Reiman
3:15	Time for Further Discussion and Planning	
4:00	Adjournment	

MCRN/TFRI Workshop Report July 27, 2015

Workshop attendees:

Arrowsmith	Cheryl	University Health Network	Toronto
Bahlis	Nizar	University of Calgary	Calgary
Benard	Francois	BC Cancer Agency Research Centre	Vancouver
Bergsagel	Leif	Mayo Clinic	Scottsdale
Chesi	Marta	Mayo Clinic	Scottsdale
Cheung	Matt	Sunnybrook	Toronto
del Col	Aldo	Myeloma Canada	Montreal
Elnenaei	Manal	QEII Health Sciences Centre	Halifax
Gul	Engin	Princess Margaret Hospital	Toronto
Hay	Annette	NCIC CTG	Kingston
Herst	Stephen	Terry Fox Research Institute	Vancouver
Hudson	Tom	OICR	Toronto
Kotb	Rami	Cancer Care Manitoba	Winnipeg
Krelenbaum	Marilyn	Consultant (Grant Writing)	Montreal
Ling	Victor	Terry Fox Research Institute	Vancouver
Ma	Yussanne	Genome Sciences Centre	Vancouver
Mai	Sabine	University of Manitoba	Winnipeg
Masih-Khan	Esther	Princess Margaret Cancer Centre	Toronto
Maxwell	Chris	University of British Columbia	Vancouver
Mes-Masson	Anne-Marie	CR CHUM / TFRI	Montreal
Murugesan	Alli	University of New Brunswick	St. John
Paige	Chris	University Health Network/TFRI	Toronto
Parato	Kelley	BioCanRx	Ottawa
Pugh	Trevor	University of Toronto	Toronto
Rakesh	Nayyar	Cytoquest Corporation	Toronto
Reece	Donna	Princess Margaret Hospital	Toronto
Reiman	Tony	St. John Regional Hospital	St. John
Robbins	Steve	CIHR	Calgary
Rodriguez	Jesus Giovanni Pisa	Princess Margaret Hospital	Toronto
Roy	Jean	Hospital Maisonneuve Rosemont	Montreal
Shepherd	Lois	NCIC CTG	Kingston
Sussman	Jonathan	PRO	Hamilton
Sutherland	Heather	BC Cancer Agency	Vancouver
Tiedemann	Rodger	Princess Margaret Hospital	Toronto
Venner	Chris	Cross Cancer Institute	Edmonton
Waller	Daniel	McGill University	Montreal
Watkins	Russ	Terry Fox Research Institute	Vancouver
White	Darrell	QEII Health Sciences Centre	Halifax