

# 2015 Annual Report



a place of mind  
THE UNIVERSITY OF BRITISH COLUMBIA

**Department of Physical Therapy**  
Faculty of Medicine

The Department of Physical Therapy at the University of British Columbia has a world-class reputation with an outstanding cadre of faculty members with proven excellence in education and research. Innovation abounds: the *Northern and Rural Cohort* enabling Masters of Physical Therapy (MPT) students to provide physiotherapy services in underserved communities; the *Internationally Educated Physiotherapy Exam Preparation Program* improving the success rate in the licensing examinations; the online *Masters of Rehabilitation Science (MRSc) Program* which advances practice-based research; an *MPT/PhD Program* that models the integration of research with clinical practice.

## Excellence in Education

### Award-winning Educators



**Susan Murphy**

*2012 Killam teaching award recipient*



**Darlene Redenbach**

*2009 Killam teaching award recipient*



**Simone Gruenig**

*Recipient of the 2015 Faculty of Medicine Award  
for Excellence in Clinical Teaching*

## Excellence in Education

In recognition of her exceptional contributions to clinical teaching Simone Gruenig received the University of British Columbia, Faculty of Medicine Award for Excellence in Clinical Teaching in 2015.

Ms. Gruenig has been teaching in the Master of Physical Therapy Program (MPT) since 2007 and has accomplished a great deal during her tenure. Ms Gruenig's dual role as both a clinician and instructor allows her to incorporate real clinical situations into her teaching, which resonate with students in the classroom.



Ms. Gruenig has trained many students during clinical placements and delivered countless hours of classroom teaching. She was the first Physical Therapy clinical supervisor in Canada to implement a 4:1 student to instructor ratio clinical placement in an acute hospital care setting at Vancouver General Hospital. In the first three years, this program alone trained 80 students and this multiple student to instructor model has been adapted for use in settings in BC and across Canada.

Ms. Gruenig's classroom teaching is interactive and she engages her audience through stories and real clinical situations, mostly humorous ones but sometimes shocking ones as well. She embraces interactive and experiential teaching and learning, and often incorporates games and technology to enhance student learning and participation. Her teaching evaluations consistently show student comments related to her willingness to provide guidance and help whenever needed. A testament to her popularity and respect among the MPT students is reflected in invitations from recent graduating classes (2012 and 2013) to speak at their convocation awards luncheon; this honour is given to only one professor from the MPT Program each year.

Ms. Gruenig created simulated learning modules for the Center of Excellence for Simulation Education and Innovation. These courses were the first simulated modules for physical therapists in Canada. The module for the act of suctioning through computerized simulated patients is used for her lab where every student gets a four hour hands on lab experience with the simulated patients for all three types of suctioning (oral, nasal and tracheal). Students in the MD and nursing programs also utilize this resource in their curriculum. Additionally, she developed and teaches a continuing education course, 'Chest Radiology 101' that is in demand and has been taught to community physical therapists in multiple locations throughout the province.

Ms. Gruenig has been the main cardiorespiratory instructor in the Department's successful Internationally Educated Physiotherapist Exam Preparation Program since 2009. Her clinical expertise and teaching has an international impact that helps address the shortage of physical therapists in BC and Canada as well as the needs of foreign trained therapists. Her experience as International Health Project Director in Cusco, Peru and her experience with aboriginal populations help her understand the needs of the foreign trained therapists and our Northern and Rural Cohort.

## Excellence in Education

### The Internationally Educated Physiotherapist Exam Preparation (IEPEP) Program team



Senior Instructor and  
Associate Head MPT Program,  
Alison Grieg

In 2015 the Department's Internationally Educated Physiotherapist Exam Preparation (IEPEP) Program received the 2015 Faculty of Medicine Award for Innovation in Continuing Medical Education/Continuing Professional Development.

The IEPEP Program supports Internationally Educated Physiotherapists (IEPs) through the most difficult of the Canadian physiotherapy licensing requirements – the national exams. It was the first of its kind in Canada and it provides an exceptional Continuing Professional Development experience for its participants through innovative program delivery, development of novel teaching and learning resources, and a commitment to ongoing Program improvement and evaluation.

The IEPEP Program was developed in 2008 in partnership with the Physiotherapy Association of BC and the College of Physical Therapists of BC to help address significant job vacancies across BC and Canada. The IEPEP Program has incorporated innovative and creative approaches from the beginning, including a unique curriculum approach that aligns with the national examination blueprint, and the structure of the program which includes online resources, structured learning activities and face-to-face events. The 'in-person' events have the dual-purpose of revisiting entry-to-practice content, while teaching exam strategies and approaches.

The IEPEP Program has fostered an ongoing program evaluation framework in order to ensure continuing relevance and excellence for its participants. Highlights from evaluations include the development of 23 Virtual Patient cases, a transition to a fully online written preparation program, and an extensive network of clinicians, invigilators and instructors with wide ranging expertise. The IEPEP Program is committed to expanding and providing support for IEPs throughout the province especially in areas where there is a continuing shortage of physiotherapists. Using the existing program model, program administrators have planned and garnered local support to implement the practical program component in Prince George.



MPT Program  
and IEPEP Administration  
Manager,  
Carissa Dyck

## Excellence in Clinical Education

Fieldwork placements play a pivotal role in clinical education. We rely heavily on the cooperation and volunteerism of physical therapists across the province and are greatly appreciative of the contributions of their time and expertise in training the next generation of therapists. Each year students can nominate Clinical Educators who have provided an exceptional experience on any of their placements; in 2015 two Clinical Educators were recognized.



### **April Campbell**

Recognized for her role as a Clinical Skills Assistant  
in the Masters of Physical Therapy Program

*Quote from nominator: April spent extra time helping students who were struggling with the material. Due to her large understanding of the material she was able to convey it in a wide variety of ways to help students with different learning styles grasp the material at hand. Finally, April provided great feedback by making the students she worked with feel proud of their gains while providing highly constructive criticism for areas where she noticed struggles. April is without a doubt the best CSA I've worked with.*



### **Kerri Takasaki**

Recognized for her role as a Clinical Educator  
at Surrey Memorial Hospital

*Quote from nominator: Kerri, by far, has been a preceptor that holds all the qualities of a therapist that any student or patient would find invaluable. She continually progressed and refined my clinical skills and judgment by placing me in appropriate, but challenging situations to see how I could problem solve my way through the situation, only to supplement what I had learned with constructive feedback. Kerri always linked in with me regarding my goal achievement status, and how I was feeling about how the placement was going. To me, this "linking in" displayed by Kerri throughout my placement really showed her genuine interest in my learning and goal attainment.*



**Carolyn Andersson and Ingrid Dill** (pictured with Dr. Applegarth)  
received the 2014 UBC Applegarth Staff Service Award for their  
innovative initiatives supporting Clinical Education

*Quote from nominator: The quality of service and range of support available to our students and Clinical Educators has reached a level of excellence under their guidance, which the Department has not previously hoped to experience.*

Each year *Clinical Educator Workshops* are offered in towns and cities across the province. We are happy to be able to provide our workshops to over 100 participants each year. Highlights from 2015 were six workshops in the lower mainland, with more throughout the province including Kelowna, Victoria and Prince George. In 2015 the Department also launched online EXCEL E-learning Modules which cover a broad range of topics. They provide direct, anytime access to information provided in workshops, and help to answer most questions a new or returning Clinical Educator might have about supervising a student.

## Excellence in Clinical Education

### Prince Rupert Interprofessional Student Model (PRISM) Clinic

The Prince Rupert Interprofessional Student Model (PRISM) Clinic was developed in partnership with Northern Health to increase access to rehabilitation services while increasing the capacity to educate students for health care careers in northern BC. Using a population health approach to integrated primary health care, MPT students work collaboratively with students from UBC's Masters of Occupational Science and Occupational Therapy (MOT) to address patients' needs along the continuum of care, from acute to community, in a team based model of care. To increase the access to continuing professional development opportunities for both students and clinical instructors and open up the possibilities for telehealth, the clinic is equipped with UBC Faculty of Medicine videoconferencing/telehealth capabilities. The clinic opened in November 2013 and has trained 20 MPT students, 12 MOT students and two Rehab Assistant students. Since opening it has drastically decreased the waitlist for rehabilitation services and increased services to patients with chronic conditions. With the help of a post-doctoral student, Instructor Robin Roots has launched a research project to examine patient outcomes, student experiences and health system impacts of the clinic.

In 2015, the Department hired Caitlin DuBiel as the full-time Clinical Instructor for PRISM Clinic. Caitlin is no stranger to the North Coast having spent time fishing with her father in Haida Gwaii while growing up. She graduated as a physiotherapist from Queen's University. Her training included experience in Kathmandu, Nepal working at a paediatric hospital and at a school for children with disabilities. She was later selected to attend a symposium on Global Health and Community-Based Rehabilitation (CBR) in Bergen, Norway. These experiences sparked her interest in CBR and service delivery models in rural regions. She is thrilled to be facilitating student learning in this exciting model of care and share her passion for CBR.



Caitlin DuBiel

### Assessment of Clinical Performance

The development of a new tool to assess performance of students on placement was initiated in direct response to concerns on the accuracy of scoring and workload burden of past tools. From March to Dec 2013 the Department pilot tested a new tool, the Assessment of Clinical Performance (ACPe), providing crucial data about the internal consistency, reliability, construct validity and practicality. The ACPe is now widely used across Canada in assessing competency of students during fieldwork ensuring standardization across Canadian PT programs. To ensure our clinical educators could accurately assess student performance and were comfortable with using the ACP tool, the Department offered numerous continuing education resources including a webinar, EXCEL modules and information on our website. We continue to contribute to this national initiative by piloting the integration of the tool into HSPnet, the Practice Education Management system used by many health authorities and health education programs across Canada. To assure the HSPnet tool meets the needs of placement sites we have advocated for several enhancements such as split screen access to enhance dialogue and feedback between preceptor and student, timelines and the ability to have joint preceptors working on the evaluation of their students. We then piloted the ACPe housed within HSPnet throughout BC on a variety of clinical sites to further test usability. We are acting as a point of contact for troubleshooting problems experienced by the receiving sites.

## Excellence in Education



**Anne Rankin**

### **Interim Associate Head, Clinical Education**

In 2015 Ms. Rankin stepped into the interim role of overseeing Clinical Education for the MPT Program. Anne's breadth of expertise is evidenced by the diverse subjects she teaches that include exercise equipment, acute pain management, differential diagnosis, pediatric fractures, limb loss, palliative care and oncology. She received her Clinical Specialist-Oncology designation in 2012.



**Natalie Grant**

### **Musculoskeletal Curriculum Coordinator**

Ms. Grant took on the position of Musculoskeletal Curriculum Coordinator this year. She has a Bachelor degree from Simon Fraser University in Kinesiology and obtained her Master of Science in Physical Therapy from McMaster University in 2004. She has worked in a variety of settings and specialties. Her current ongoing professional development includes manual therapy, myofascial release techniques, treatment of pelvic floor dysfunction and she achieved her acupuncture certification (CAFCI) in 2015.



**Kerrie Roberts**

### **Clinical Instructor Northern and Rural Cohort**

Ms. Roberts has been a Clinical Instructor with the Northern and Rural Cohort of the MPT Program since 2013 where she supports MPT students during their academic block at UNBC in Prince George. Additionally, Kerrie coordinates continuing professional development to meet the needs of northern and rural physiotherapists in an effort to build clinical capacity for MPT students. She has worked in a variety of clinical settings since graduating with her Bachelors of Rehabilitation Medicine in 1997 and has a clinical interest in neuromuscular physiotherapy.



**Robin Roots**

### **Coordinator of Clinical Education, Northern and Rural Cohort**

Ms. Roots facilitates Clinical Educator workshops in northern and rural BC and works with students and their preceptors in the North. Her teaching includes: rural health, physiotherapy practice in rural and remote contexts, cultural safety, cultural competency, interprofessional education and collaborative practice. Robin obtained her Master of Science in 2011, with a thesis project of "*Understanding Rural Rehabilitation Practice: Perspectives of Occupational Therapists and Physical Therapists in British Columbia*".



**Tara Klassen**

### **Neuro Rehabilitation Curriculum Coordinator**

Ms. Klassen has been teaching in the program since 2007 delivering excellent classroom content as well as coordinating the curriculum for the neuro rehabilitation stream. In 2013 she began doctoral training and obtained a Canadian Institutes of Health Research doctoral scholarship to examine exercise intensity in the early phase after stroke.

## Excellence in Research

### Innovation in Rehabilitation

Dr. Janice Eng, Canada Research Chair in Neurological Rehabilitation, is an internationally renowned scientist; she was recognized as the University of British Columbia Faculty of Medicine 2015 Distinguished Medical Lecturer and the Vancouver Institute Medical Lecturer.

Dr. Eng established the Rehabilitation Research Program at G.F. Strong Rehabilitation Centre which supports nine faculty and over 40 trainees. The Rehabilitation Research Program aims to discover innovative solutions to optimize the outcomes of rehabilitation and improve the lives of those with disabilities and their families.

Dr. Eng's team developed several resources that have improved outcomes after stroke and spinal cord injury:

*The Graded Repetitive Arm Supplementary Program (GRASP)* is an inexpensive and self-directed arm and hand program that stroke patients can do at home with their families to improve hand function. GRASP has now been implemented in over 1300 sites in 47 countries. GRASP will be utilized as one of the key components in a \$14 million 6000-person trial funded by the US-based Patient Centered Outcomes Research Institutes.

*The Fitness and Mobility Exercise (FAME)* Program is a community-based exercise program developed for people with stroke who have some standing and walking ability. This program has been shown to improve mobility, cardiovascular fitness, bone health and memory, as well as reduce falls. FAME has been implemented in over 200 sites across 21 countries with different neurological populations, as well as with frail older adults. The Canadian Stroke Network used the FAME protocol as part of an 11-site, pan-Canadian trial.

*The Spinal Cord Injury Research Evidence (SCIRE)* project funded by the Rick Hansen Institute and Ontario Neurotrauma Foundation is a web-based knowledge resource for health care providers in spinal cord injury. The SCIRE Project is led by Dr. Eng and includes over 70 researchers across five countries. Over 50 peer-reviewed journal articles have been published from the project so far. A published study showed that this resource increased access to evidence-based information, increased knowledge of the evidence, informed changes to the health providers' practice, and influenced their clinical decision making.



## Excellence in Research

### Supporting patients to be healthy

Dr. Linda Li was recognized in 2015 by the Association of Rheumatology Health Professionals (a division of American College of Rheumatology) as a distinguished scholar.

Based at Arthritis Research Canada, Dr. Li's research program focuses on understanding how individuals make treatment decisions, and studying the role of digital media in improving the uptake of effective treatment. Dr. Li heavily engages knowledge users including patients, caregivers, clinicians and policy makers in her research.

Dr. Li is leading the *Improving Cognitive and Joint Health Network (ICON)*, a cross-Canada team of health researchers, computer scientists, patients, individuals in the public and the private sector to develop innovative tools (e.g., mobile apps, wearable health tracking devices) that will support people to use effective strategies to improve or maintain the health of two body systems: the brain and joints.

Dr. Li created *OPEN (Osteoarthritis Physical Activity & Exercise Net)* to support people with knee osteoarthritis (OA), who have been sedentary, in becoming physically active. Features include a goal setting tool, tips on how to stay active, videos that address myths about OA and the latest information about OA management.



*ANSWER (Animated Self-serve Web-based Research)* is an online decision aid that combines the best scientific evidence with 'real-world' information to support persons with Rheumatoid Arthritis (RA) when making decisions about methotrexate with their doctor. ANSWER is now available for free public access via the Arthritis Research Canada (ARC). (<http://answer.arccanada.org/>). ANSWER-2 supports people with Rheumatoid Arthritis considering one of the biologic and other new therapies for their treatment. By featuring real-life patient stories and evidence-based information tailored to the individual, this new decision aid will help people to consider the pros and cons of biologic therapy in a meaningful way.

ARC has just released 2 Chinese-language videos with Dr. Li providing information about exercise and arthritis, and about medication use in RA (<http://www.arthritisresearch.ca/educational-videos-chinese>).

In an ongoing partnership between ICON and Kinduct Technologies (a Canadian e-health company) an *On-demand Program to Empower Active Self-management (OPERAS)* is under development. OPERAS will help patients monitor their activity levels in concert with their disease status. The data can be shared with health care professionals and has the potential to broaden the uptake of an active lifestyle among patients with Arthritis. OPERAS is building on the success of tools developed previously by Dr. Li, OPEN, ANSWER and ANSWER-2.

## Excellence in Research

*The Department is home to numerous researchers who are recognized as world leaders in health research. Their studies span the full continuum, from basic science to clinically focused research and knowledge implementation. Their efforts have led to the development of methods and programs that have advanced practice locally, nationally and internationally.*



**Lara Boyd**

Dr. Boyd is a Canada Research Chair in Neurobiology of Motor Learning. She examines the relationships between brain function and behaviour after central nervous system damage. Her research aims to understand how best to stimulate neural plasticity to facilitate motor learning and recovery of function after stroke or other forms of acquired brain injury which informs rehabilitation interventions.



**Pat Camp**

Dr. Camp is a physical therapist, clinician-scientist and Michael Smith Foundation for Health Research Clinical Scholar. Dr. Camp directs the clinical care and research activities associated with the Respiratory Rehabilitation Program at St. Paul's Hospital. Her research targets the development of novel, patient oriented strategies to improve the physical activity of individuals with chronic obstructive pulmonary disease, with a specific focus on hospitalized chronic obstructive pulmonary disease patients.



**Kristin Campbell**

Dr. Campbell's research interests focus on the role of physical activity in the prevention and rehabilitation of chronic disease, particularly cancer. She has investigated the effect of exercise on proposed biomarkers of breast and colon cancer risk, such as sex hormones, inflammatory markers and tissue protein expression. Dr. Campbell contributed to the development of the American College of Sports Medicine/American Cancer Society Exercise guidelines for cancer survivors.



**Elizabeth Dean**

Dr. Dean's work focuses on bridging the ultimate knowledge translation gap between what is known about the causes of and factors contributing to lifestyle-related non-communicable diseases and physical therapy practice. She has particular interest in the epidemiology and cross cultural means of maximizing outcomes of health education and interventions such as physical activity. She works with international teams to capacity build with respect to health-focused physical therapy practice.

## Excellence in Research



**Jordan Guenette**

Dr. Guenette is a Michael Smith Foundation for Health Research Scholar. The focus of Dr. Guenette's research is to better understand the physiological factors that limit exercise tolerance across the spectrum of health and chronic lung disease. His investigations lead to novel rehabilitation interventions to reduce symptoms and improve exercise performance to improve quality of life for patients suffering from chronic lung diseases.



**Michael Hunt**

Dr. Hunt is a Michael Smith Foundation for Health Research Scholar & Canadian Institutes of Health New Investigator. He is using state-of-the-art real-time motion analysis techniques to analyze movement patterns to develop targeted treatment approaches that aim to optimize function and/or prevent disease progression in individuals living with osteoarthritis.



**Linda Li**

Dr. Li is a Canada Research Chair in Patient-Oriented Knowledge Translation & Michael Smith Foundation for Health Research Scholar. Her inquiry aspires to improve the uptake of effective treatment for people with arthritis through gaining an understanding how individuals make treatment decisions and the development and evaluation of tools that support people in putting the best research evidence into action in the diagnosis and management of disease.



**Alex Scott**

Dr. Scott, a Michael Smith Foundation for Health Research Scholar, is working to discover better treatments for tendinopathy by examining the biological and biomechanical responses of tendons to mechanical loading and/or injury. Dr. Scott is the lead investigator on an international, multicenter randomized controlled clinical trial investigating the efficacy of platelet rich plasma in combination with exercise for patellar tendinopathy.



**Naznin Virji-Babul**

Dr. Virji-Babul is a physical therapist and neuroscientist. She uses a combination of behavioural and brain imaging tools to investigate the patterns of brain activation as they relate to the impact of concussion and perceptual-motor and social-emotional development. In this work she hopes to develop imaging "signatures" of concussion and to study the long term impact of concussion in adolescents.

## Research Metrics for 2015

In 2015 Department academic faculty published 140 peer reviewed articles, had 29 additional in-press and were supported as Principal Investigator (PI) or Co-Investigator (Co-I) on grants and awards totaling \$78,148,394 <sup>1, 2</sup>

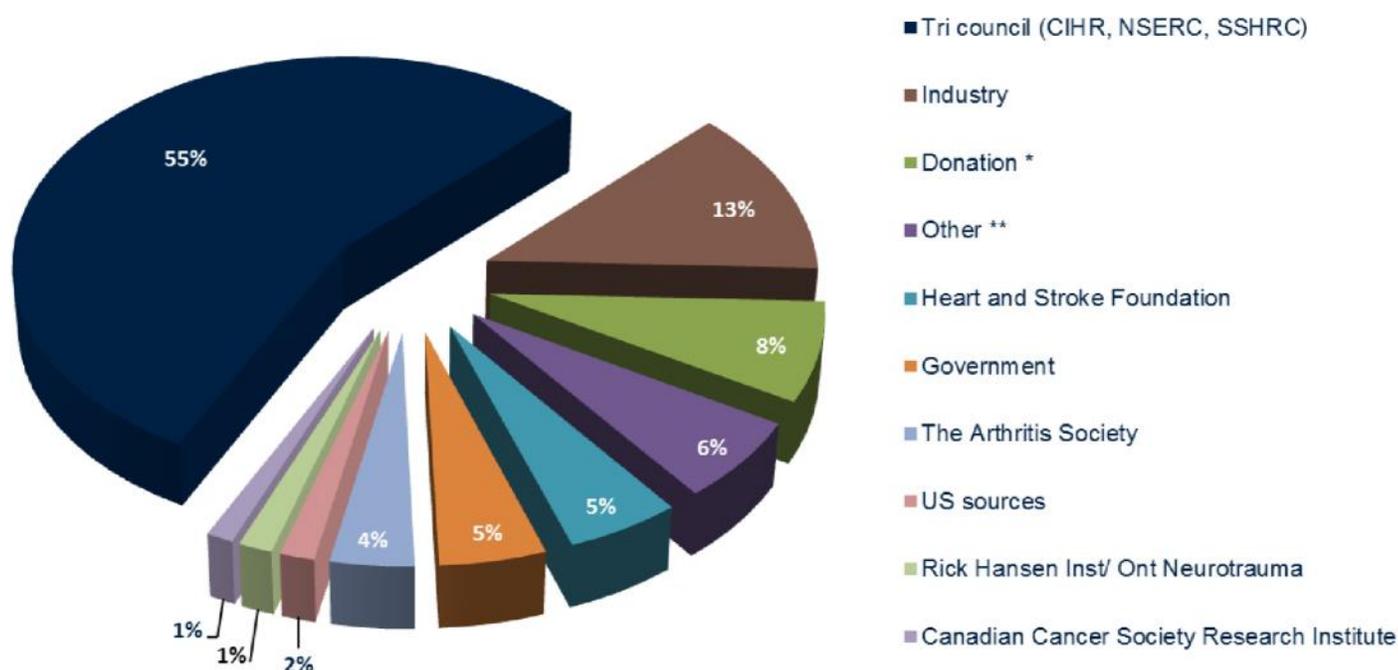
Operating funds held as PI or Co-I = \$27,399,211 <sup>2</sup>	Equipment grants = \$5,868,923
Operating funds held as PI = \$16,349,852 <sup>2</sup>	Scholar Awards = \$3,388,000 <sup>2, 3</sup>
Team Grants = \$41,492,260 <sup>2</sup>	

<sup>1</sup> Includes team grants, operating funds, equipment and scholar awards

<sup>2</sup> Calculated over the tenure of the award

<sup>3</sup> Drs Linda Li, Michael Hunt and Jordan Guenette were supported by Michael Smith Foundation for Health Research. Dr. Hunt was additionally supported as a Canadian Institutes of Health Research New Investigator. Drs Linda Li, Teresa Liu-Ambrose, Janice Eng and Lara Boyd were supported by the Canada Research Chairs program.

### Sources of Operating Funds held as PI



\* Generous donations to research were made by the Eaton Arrowsmith School, the Jack Brown & Family Alzheimer's Research Foundation and Dr. George Jakeway as well donors who prefer to remain anonymous.

\*\* Includes funding from the following sources:

The Centre for Stroke Recovery	Pedorthic Research Foundation of Canada
Alzheimer's Society	Physiotherapy Foundation Canada
University of British Columbia	Vancouver Coastal Health Research Institute
BC Cancer Foundation	Physiotherapy Foundation of Canada
Canadian Respiratory Research Network	Canadian Rheumatology Association
BC Lung Association	BC Lung Association
Providence Health Care	

## Research Trainee Metrics for 2015

In 2015 trainees supervised by Department faculty members held scholarships and grants worth over \$4,674,974<sup>1</sup>. In 2015 49 trainees were listed authors on peer reviewed publications, of those 33 were listed as first author.

### Funding held by trainees in 2015

- Undergraduate research trainees = \$10,500
- M.Sc. Students = \$357,150
- Ph.D. Students = \$1,402,452
- Post-Doctoral Fellows = \$2,904,872

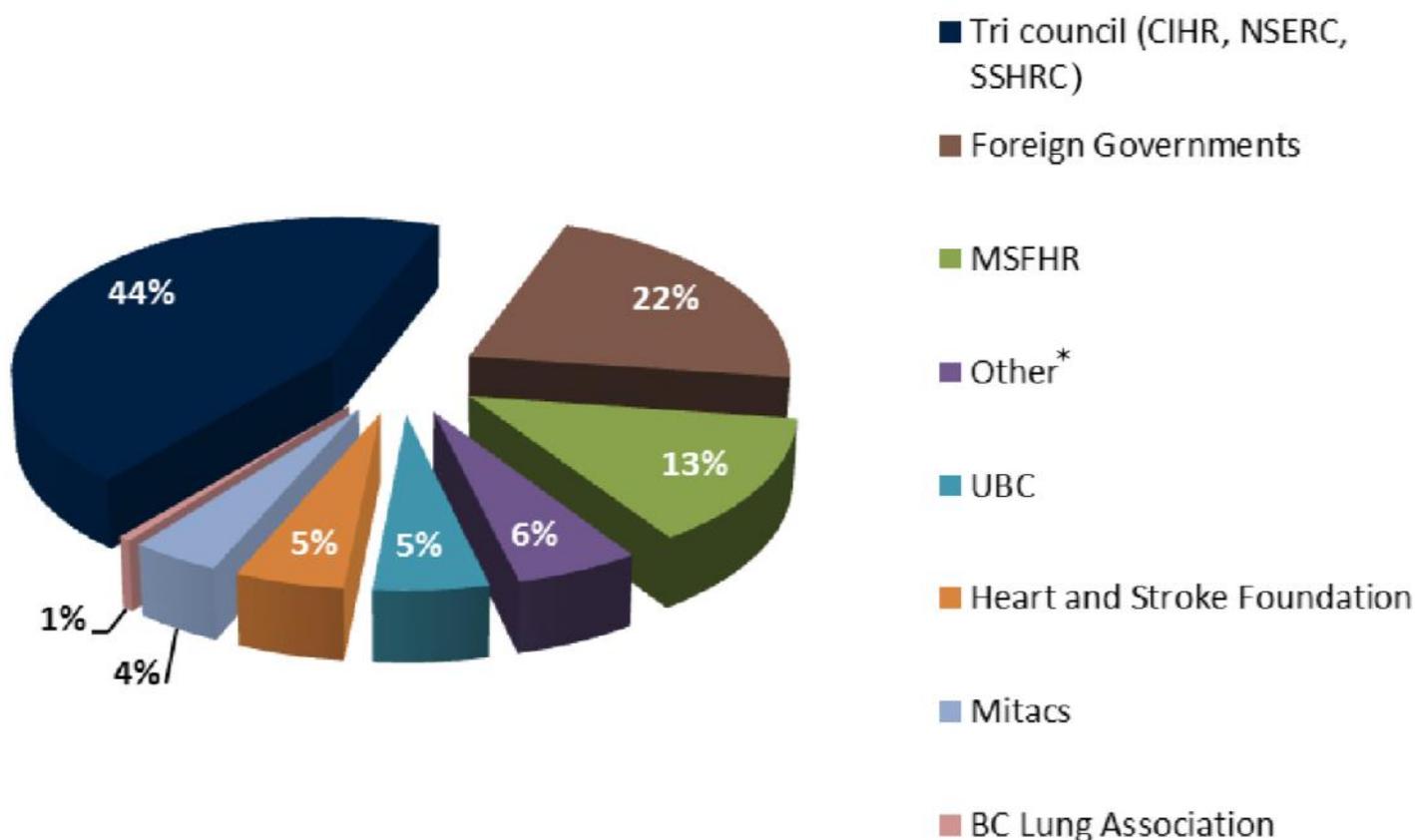
### Number of trainees in 2015

- Undergraduate Students = 12
- Masters Students = 30 (5 graduated in 2015)
- Ph.D. Students = 30 (8 graduated in 2015)
- Post-Doctoral Fellows = 18

<sup>1</sup> Calculated over the tenure of the award, does not include funding from the UBC Work Learn program

\* Two undergraduates, 12 Masters Thesis, 20 PhD and 16 PDF trainees held funding supporting their training

## Sources of Trainee Funding



\*Other Includes funding from the following sources:

The American Thoracic Society

The Alzheimer's Society

WorkSafe BC

William Harvey Research Institute

The Arthritis Society

# VISION

To Achieve Movement and Function for Life

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## VALUES

SERVICE

=

**S**ocial Accountability

**E**nhancing Innovation

**R**esearch with Impact

**V**ibrant leadership

**I**ntegrity

**C**ollaboration

**E**xcellence

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## MISSION

The Department of Physical Therapy provides an outstanding learning environment and leads in innovative research to advance health globally

### Department of Physical Therapy

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