



# RESEARCH2REALITY

Shining a light on research & innovation.

## Closing the Gap Between Possibility and Reality

An interview with **Mend the Gap researchers:**

**Peter Zandstra**, Biomedical Engineer, Director, UBC School of Biomedical Engineering

**Molly Shoichet**, Biomedical Engineer, Professor, University of Toronto  
and **Dena Shahriari**, Biomedical Engineer, Assistant Professor, UBC School of Biomedical Engineering

### Peter Zandstra

Mend the Gap is a really unique program that brings together investigators from across UBC, across Canada, and across the world, around the long-standing problem of spinal cord injury. Spinal cord injury is a really significant problem that we're excited to tackle because of its impact on society. Often people who have spinal cord injuries are younger and have their whole lives ahead of them, and if we can find new solutions to make the quality of life and the long-term outcome for these individuals better, it would be a great impact.

### Molly Shoichet

We're very motivated to take on that challenge right now because of advancements in robotics, and because of advancements in biomaterials — engineering materials — and because of advancements in our understanding of the basic biology.

TODAY'S RESEARCH. TOMORROW'S REALITY.



We're really excited to be funded by the New Frontiers in Research Excellence fund — this is a new fund by the Canadian government where funds from Canada can go to international partners — because we can now bring the best to our country, and we can have that global community working together, but led out of Canada.

### **Dena Shahriari**

We have had decades of work: material scientists doing something, electrical engineers doing something, as well social scientists, and of course the clinicians and surgeons who really deal with this problem face-to-face every day. And now in this opportunity we have brought in 32 principal investigators working toward this spinal cord injury challenge and trying to improve lives after for individuals.

### **Molly Shoichet**

You know, it's a big complicated problem and there's lots of different people working together but I'm really excited personally to get moving and start doing that research.

Mend the Gap is a group of scientists and social scientists from around the world who have come together to try and mend the gap. The gap is what forms after a traumatic spinal cord injury. There's a communication pathway between the brain and the rest of the body, and when that communication is severed you lose function below that site of injury. And even though there's been more research and greater understanding of the challenges, we still don't have any solutions.