

The CRA's 2022 Distinguished Rheumatologist: Dr. Lori Tucker

Why did you become a rheumatologist? What or who influenced you along the way to do so?

I think I might have been destined to be a rheumatologist, actually! Prior to attending medical school, I spent a year in a wonderful immunology lab, run by Dr. Matthew Scharff at Albert Einstein College of Medicine, where I learned about monoclonal antibodies, cellular immunology, and was fortunate to be part of a fantastic model of translational research. After medical school, when I started my pediatric training in Boston, the new Department Head was Dr. Jane Schaller, a true pioneer in pediatric rheumatology. This was the first time I even learned that pediatric rheumatology could be a career choice, and I found myself drawn to the combination of complex diagnostics, immunology, and chronic disease management. I also really loved the team aspect of care; I love working with nursing, physiotherapy, occupational therapy, social work all together. It was the perfect fit for me.

You are clinical professor in pediatrics and Division Head of Pediatric Rheumatology at the University of British Columbia and BC Children's Hospital, as well as Clinical Investigator at the BC Children's Hospital Research Institute. In addition to this, you're one of the founding members and Past-President of the Canadian Alliance of Pediatric Rheumatology Investigators, the Canadian national network for pediatric rheumatology research.

a) From where did your passion for pediatric rheumatology stem?

My passion for pediatric rheumatology comes from the children and their families. I have always loved the "solving the puzzle" aspect of pediatric rheumatology diagnostics and using my knowledge to help families understand what is wrong with their child and how to make it better. I feel it is a privilege to help children with rheumatic diseases grow and develop to their best capacity, and I love the long-term care aspect of what we do. I also love working as part of a team — most of the best clinical care and research have resulted from the amazing teams I have been privileged to work with.

b) Can you tell us more about CAPRI? What led to its founding and how has it impacted Canadian rheumatology?

The pediatric rheumatology community in Canada has always been a close, collegial, and friendly group. When I moved to Canada, I felt so welcomed here. In 2011, we all came together at a seminal meeting in Vancouver, led by Ciaran Duffy, and agreed that we should do collaborative Canadian pediatric rheumatology research as a group. From that meeting, CAPRI — the Canadian Alliance of Pediatric Rheumatology Investigators — was born. As a fully volunteer group, inclusive of all pediatric rheumatologists and those engaged in significant pediatric rheumatology research in Canada, we have been incredibly successful in obtaining grant funding and completing a series of national projects. I would say the largest impact we have had is in demonstrating our ability to do multicentre projects in a collaborative way. We have capita-



lized on some of our members' tremendous talents in epidemiology, bench science, and clinical science, in an environment where everyone's contributions are valued. I am personally excited to see a younger generation of Canadian pediatric rheumatologists coming together in CAPRI to work in this same way, and I can say, we're in good hands with this new generation!

You have co-led the two largest multicentre longitudinal research studies on juvenile idiopathic arthritis (JIA) in Canada over the past 15 years, ReACCh-Out, and LEAP (short for Linking Exercise, Physical Activity, and Pathophysiology in Canadian Children with Juvenile Idiopathic Arthritis) and were

instrumental in the development of the national longitudinal CAPRI JIA Registry. You have also established a clinical program in auto-inflammatory diseases at BC Children's Hospital serving the province of BC, which incorporates translational research in every clinical encounter.

a) Can you tell us more about your research work and how it has shaped the pediatric rheumatology landscape?

I have been incredibly fortunate to be part of a national group of pediatric rheumatology investigators who have worked incredibly well together to study children with JIA in Canada. The dream, when we first applied for funding for the ReACCh-Out research team project, was to establish a longitudinal registry to collect detailed information about children diagnosed with JIA from every corner of Canada — and we have been successful in doing this. This initial project set the stage for future work, and our group developed methods of multicentre data collection and sample collection that have been used in subsequent important projects. Our ReACCh-Out results have shown that with current treatments, the majority of children in Canada newly diagnosed with JIA have well-controlled disease within six months, and we have been able to understand predictors of severe disease, trajectories of pain and quality of life, and factors associated with risks of flares. Through work done with children with JIA and parents, we have identified outcomes of specific interest to them, have used our data to develop prediction methods for these outcomes, and are now embarking on an ambitious trial of using these prediction methods in clinical shared decision-making across Canada. The skills, passion, and hard work of so many pediatric rheumatologists across the country in moving this research along into real clinical change is truly wonderful to see.

I also want to recognize that the initial work of ReACCh-Out, with Ciaran Duffy, Kiem Oen, Rae Yeung, led to other really important projects obtaining funding — Alan Rosenberg and BBOP (Biologically Based Predictors of JIA), and Rae Yeung and Susa Benseler with UCAN-CAN DU (Understanding Childhood Arthritis Network). These projects provide on-going collaborative research, Canadian-led, in pediatric rheumatology.



Dr. Tucker receiving the CRA Distinguished Rheumatologist Award during the virtual gala in February 2022.

In addition to your clinical and research activities, you have worked tirelessly in patient advocacy and in strengthening clinical team/parent/patient partnerships as the Medical Advisor and Board member for Cassie and Friends: A Society for Children with Arthritis and Rheumatic Diseases. This national parent and patient-run organization has become the strongest voice for pediatric rheumatology in Canada, raising funds for direct patient needs and research, providing on-line information and education sessions, and developing parent and youth support programs. Why was getting involved in patient advocacy important to you? Can you provide a concrete example of how Cassie and Friends has improved pediatric rheumatology care for patients?

I have always believed that our patients count on us to speak up on their behalf, and with them, for equitable access to care that will lead to the best outcomes. This is one of our responsibilities as pediatric specialists. I am interested in how we, as physicians, the medical experts, can work with government, administration and others to improve care. And, when you work with children with rheumatic diseases, you learn very quickly that basic awareness of these diseases and their challenges is very low, making it difficult to get attention for them.

Children with arthritis and other rheumatic diseases and their families, never really had a strong visible public voice in Canada, and there was no group solely dedicated to issues important to our patients. Cassie and Friends is now that group. Started as a provincial-based group in BC, it is now national. It is absolutely breathtaking to see Cassie and Friends viewed as the credible voice for pediatric rheumatic disease in Canada — with the clinic teams, research funders, government, and media. Pediatric rheumatologists across the country are working with their own teams and Cassie and Friends on local and national projects. We now have a dynamic youth program, providing youth with rheumatic disease a way to meet others and develop support programs, participate and drive research. The virtual education programming that Cassie and Friends have done since the start of the pandemic is incredible, and so many of our families use the education “library” at the point of need. I love working with Cassie and Friends, because I see the impact of our work every day in the clinic, talking to families.

What major changes to the landscape of pediatric rheumatology have you witnessed over the course of your career?

There are several, but the most impactful is the introduction of methotrexate and subsequently biologics to the treatment of JIA. The changes in treatment of children with JIA, driven by scientific knowledge, have completely transformed the outcomes of most children with these diseases. Our photos from Arthritis Camp in BC from 25 years ago show children using crutches and wheel-

chairs, growth limited from use of steroids, whereas today we see healthy, well-appearing kids.

One other fascinating change is the evolution and expansion of our understanding of auto-inflammatory diseases, driven by basic and translational research. Pediatric rheumatologists now have a whole new set of diseases to diagnose and treat, and there are new things to learn every day.

What do you foresee as challenges to Canadian pediatric rheumatologists in the future and what can individual rheumatologists and the CRA do to meet these challenges?

Our challenges in pediatric rheumatology are related to improving care for children and youth with rheumatic diseases in Canada, and increasing our research capacity and output, and translating these new insights into better care. We still see children referred for rheumatologic diagnosis and care late in their disease onset, and there are still serious problems with access to care and needed treatment for many children with rheumatic diseases.

What was your first thought when you learned that you would be receiving the CRA Distinguished Rheumatologist Award?

I was shocked, surprised, and very honoured, to be honest. I value my pediatric colleagues and collaborators as work partners and friends, and it means so much to me to be recognized by the rheumatology community for the work I have done over the years. I also have so much respect for the work that the CRA does, with rheumatologist volunteers, on behalf of our profession and our patients. This makes the honour even more special to me, coming from this organization that holds a special place in my heart.

You are marooned on a desert island? What book would you like to have on hand with you?

I would want to have a sketchbook, pencils and drawing pens.

If you had an extra hour in the day, how would you spend it?

In sunny weather — a bike ride in Vancouver. In rainy weather (always have to be prepared in Raincouver) — knitting or baking.

What is your favourite food or cuisine?

I will never turn down ice cream, and I love a complex, interesting dessert.

What is your dream vacation destination?

Hiking in Patagonia.

How many cups of coffee does it take to make a productive day?

I might be a Vancouver coffee snob — it’s not just the number of cups but the quality.

Two cups, and my preference is not Starbucks, but either my own home brew or a cup from one of the many local coffee shops around my home.

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