



POWERING BREAKTHROUGHS

Accelerating the science
of autoimmune disease research.

WWW.PRAESPERO.ORG

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where
the
science
takes
you.



WHAT WE DO

We help great minds uncover root causes – leading to more effective ways to prevent, treat and end autoimmune diseases. Through opportunities in collaboration and “few strings attached” funding, we give scientists that extra edge and flexibility needed to follow where the science is leading and power breakthroughs in the science of autoimmunity.

Our aim is to translate discoveries into a range of marketable cures – each one bespoke to the diversity and complexity of each human body.

OUR MISSION

Our mission is to facilitate innovation, collaboration, and cross-disciplinary research that will lead us to the root causes of autoimmune disease.

OUR VISION

Our vision is to end autoimmune disease worldwide.



“The more freedom, safety, camaraderie and healthy debate we enable for people in this research space, the more we empower the cross-fertilization of ideas. Now our experts are making real progress together to hack the science and develop a marketable cure for autoimmune diseases and cancer.”
- Laurie Venning, Praespero Founder

WHY WE DO IT

This is a high stakes moment for public health. Autoimmune disease cases are rising, as are the costs of diagnosis and treatment. The costs on individuals, employers and public health programs are growing.

Meanwhile governments are cutting funding.

Traditional research funding models are in transition.

We can't afford the cost of status quo.

50 million+

Americans and

2 million+

Canadians are impacted by autoimmune diseases.

Though these figures are likely underestimated due to complexity of diagnosis.



1 in 10 individuals

suffer from at least one autoimmune disease.

75% of those affected are **women**

and autoimmune diseases are the leading cause of **death** among young and middle-aged women in the United States.



Indigenous people

in Canada have a higher rate of Multiple Sclerosis, Lupus, Rheumatoid Arthritis and Biliary Cholangitis (autoimmune liver disease) than other people groups.



100%

increase in Type 1 Diabetes among adults over the past 40 years.



400%

increase in Celiac Disease in the U.S. over the last 30 years.



46%

increase in IBD, such as Crohn's and Ulcerative Colitis (between 2006 and 2021).



30%

increase in Multiple Sclerosis worldwide from 2013-2022.



107%

increase in Graves' Disease.



107%

increase in Sjogren's Syndrome.

19.1%

yearly increase in worldwide incidence of autoimmune diseases.



4.8

average number of physicians it will take to diagnose a common autoimmune disease.



4.5 years

average time it takes to diagnose a serious and common autoimmune disease.



459%

increase in US spending on autoimmune medications from 2011 to 2021. This is in comparison to an increase in spending of 226% on oncology medications.

\$51.8 –

\$70.6B

annual costs associated with just 7 of the 100+ known autoimmune diseases in the US alone.

\$4.7B

Cost for biologics drugs (often used to treat autoimmune diseases) in 2022, which is 29% of total public drug program spending in Canada.

16x

the amount employers pay in prescription medications for employees with autoimmune diseases compared to employees without these conditions.

\$27K

cost in economic value per short term disability patient.

\$580,000

spent for every 1000 U.S. employees due to excess and potentially avoidable healthcare costs and lost work time linked to five autoimmune conditions.

\$82K

employer cost per claimant.

183 – 297

lost workdays per year for employees on long-term disability due to autoimmune disease.

\$2,200 –

\$33,500

annual treatment costs (medical and pharmaceutical) shouldered by employers for just one employee with autoimmune conditions.

Sources:

For links to sources of these stats visit www.praespero.org/why-research-matters

HOW WE DO IT

We empower scientists to harness knowledge from three seemingly infinite resources.

We believe in:

- * The power of scientific freedom.
- * The wisdom of the collective.
- * The strength of the immune system.

Working with the immune system

Trusting the body is a revolutionary act in aiming to understand the cause of autoimmune diseases and cancer. Immunologists supported by Praespero note that traditional immunological science views “autoimmunity” or “self-reactivity” as the problem. This misperception has directed the conventional approach of designing therapies that suppress overactive immune systems, exposing patients to a world of constant risks of infection and other diseases.

But Praespero researchers want to stop treating the body like a barrier and start working in partnership with the immune system.

The body has seemingly infinite complex processes and mechanisms to deal with overreactive, self-destructive immune cells at the root of autoimmune diseases, according to Hilde Cheroute, AAI Distinguished Fellow at La Jolla Institute for Immunology.

Hilde, a recipient of the 2009 NIH Director’s Pioneer Award, encourages a wholesale shift in thinking in the immunology field.

“Everyone’s immune system is operating as a built-in doctor,” says Hilde. “We want to tap into these built-in mechanisms to treat diseases, without resorting to immunosuppressive therapies that detract from the inherent, protective capacity of the immune system.”

Unleashing the power of scientific freedom

Let’s face it. It comes down to funding. No strings attached.

We want donor dollars to drive bold exploration for innovative treatments and cures for autoimmune disease.

Traditional biomedical research funding sources are risk averse, often tying scientists down to a set of outcomes and criteria.

We fund unconventional opportunities.

We take risks.

We give the researchers we fund full scientific freedom. If something unexpected emerges in their research, they have the latitude to shift directions and follow where the science is leading them.

Working with the collective

Truth is not held by one scientist or one research team.

But the biomedical research industry is fiercely competitive. In a world where secrets and information gatekeeping is the status quo, collaboration is revolutionary. Across universities, across labs, across disciplines and across borders.

"This industry is normally driven by competition," said Whitney Dueck, Board Director at Praespero. She notes that while competition is a powerful motivator for progress, taken to extremes it can lead to more dead-ends.

"Too often scientists clutch their ideas, to the detriment of progress," adds Whitney. "At Praespero, we spend a lot of time curating opportunities for experts to collaborate. We challenge our network to trust the generative power of knowledge sharing, healthy debate and constructive criticism."

The result?

Every year, Praespero-funded scientists edge closer to breakthroughs – proving collaboration isn't just encouraged, it's engineered.


"Everyone's immune system is operating as a built-in doctor. We have to work with, and not against, the body to treat diseases."

Hilde Cheroutre, award winning immunologist at La Jolla Institute for Immunology (Praespero Scientific Advisory Board Member)

"We mine for the world's top people pushing the envelope of immunological research and help them scratch at the very edges of science."

Adam Buntzman
Researcher at BIO5 Institute
(Praespero Scientific Advisory Board Member)





“Just one award takes your good science and makes it great. Or it takes your great science and makes it outstanding. It’s the spark that can get your science off the ground.”

-Dean Tantin, Professor,
Department of Pathology,
University of Utah School of Medicine.

(Praespero Scientific
Advisory Board Member)

OUR PROGRAMS

* Annual Praespero Summit

Setting the stage for uninhibited discussion, the annual Praespero Summit is described as a ‘catalyst.’ Prompted by thoughtful presentations, new ideas emerge from panel discussions, Q&As, workshops, and lively debates catalyzing new projects, new tools, new models and new collaboration opportunities.

* Innovation Award Program

This program provides awards of up to \$150,000 CAD for various innovative research projects. Finalists are selected by the Scientific Advisory Board who follow a set of criteria, as well as through a “People’s Choice” award, submitted by audience votes at the Summit.

* Synergy Award Program (Coming soon)

This award is designed to encourage collaboration among researchers from across disciplines to advance the knowledge of autoimmune diseases and cancer.

Understanding autoimmunity as “self-based” immunity.

Philosophers, theologians, and psychologists have all asked, what is self?

According to immunologist, Adam Buntzman, the immune system is an existential organ system too; its role is “self-protection” of the body, to differentiate your ‘self’ from the outside world and attack anything it deems foreign or invading. Adam quotes Rene Descartes who said, I think therefore I am.

“The immune system says, ‘I have white blood cells therefore I can tell who I am,’” says Adam, noting that autoimmunity is not the problem. “It’s when the process of recognizing “self” goes awry that becomes the problem as this results in autoimmune diseases (self-destruction) with devastating and debilitating consequences.”

In short, an autoimmune disease is when the immune system attacks the body’s own healthy cells and tissues, mistaking them for dangerous cells.

“Autoimmunity, or ‘self-based’ immunity, is a way to distinguish healthy from unhealthy self, like infected or cancer cells,” adds immunologist Hilde Cheroutre noting that unhealthy cells are “altered self-cells” that are sensed and eliminated through mechanisms of autoimmunity.

“This is why it is so important to aim to understand, and not simply suppress autoimmunity to fight autoimmune diseases.”

The cancer autoimmunity paradox

In the drive to win the war on cancer, immunologists supported by Praespero are focused on the pre-emptive strike - and that’s found in autoimmunity research.

Cancers and autoimmune diseases are two “self-destructive” sides of the same deadly coin.

But when it comes to ending these debilitating diseases, more attention has been directed towards cancer.

And it makes sense on the surface. While autoimmune diseases are the third most common diseases, cancers still take second place in disease prevalence – and they kill more people.

But... both are “self-based” devastating diseases and at Praespero we believe that research on one disease type should not compete against the other for funding.

“Both disease types are closely linked and therefore should be studied in parallel,” says Hilde, posing the question, “Is it possible that insights gained in understanding and solving autoimmune disease might also contribute to finding a cure for cancer?”

Questions like this drive our interdisciplinary teams of immunologists and researchers at Praespero.

“The medical science industry has been putting the cart before the horse by focusing on cancer when, in reality, cancer is one subset of the larger puzzle of autoimmune-based diseases,” explains Adam.

“With autoimmune diseases, the T-cells are mistakenly attacking healthy self, while with cancer, immune cells fail to attack and destroy harmful self, but each illustrate two opposite problems of self-based immune regulation.”

Bottom line...

In the drive to win the war on cancer, immunologists supported by Praespero are focused on the pre-emptive strike.

Praespero’s team believes that exploring the deep, untapped recesses of the immunome will unearth the root causes of both autoimmune diseases and cancer... before they surface.

Celebrating 7 years of progress in the science of ending autoimmune diseases

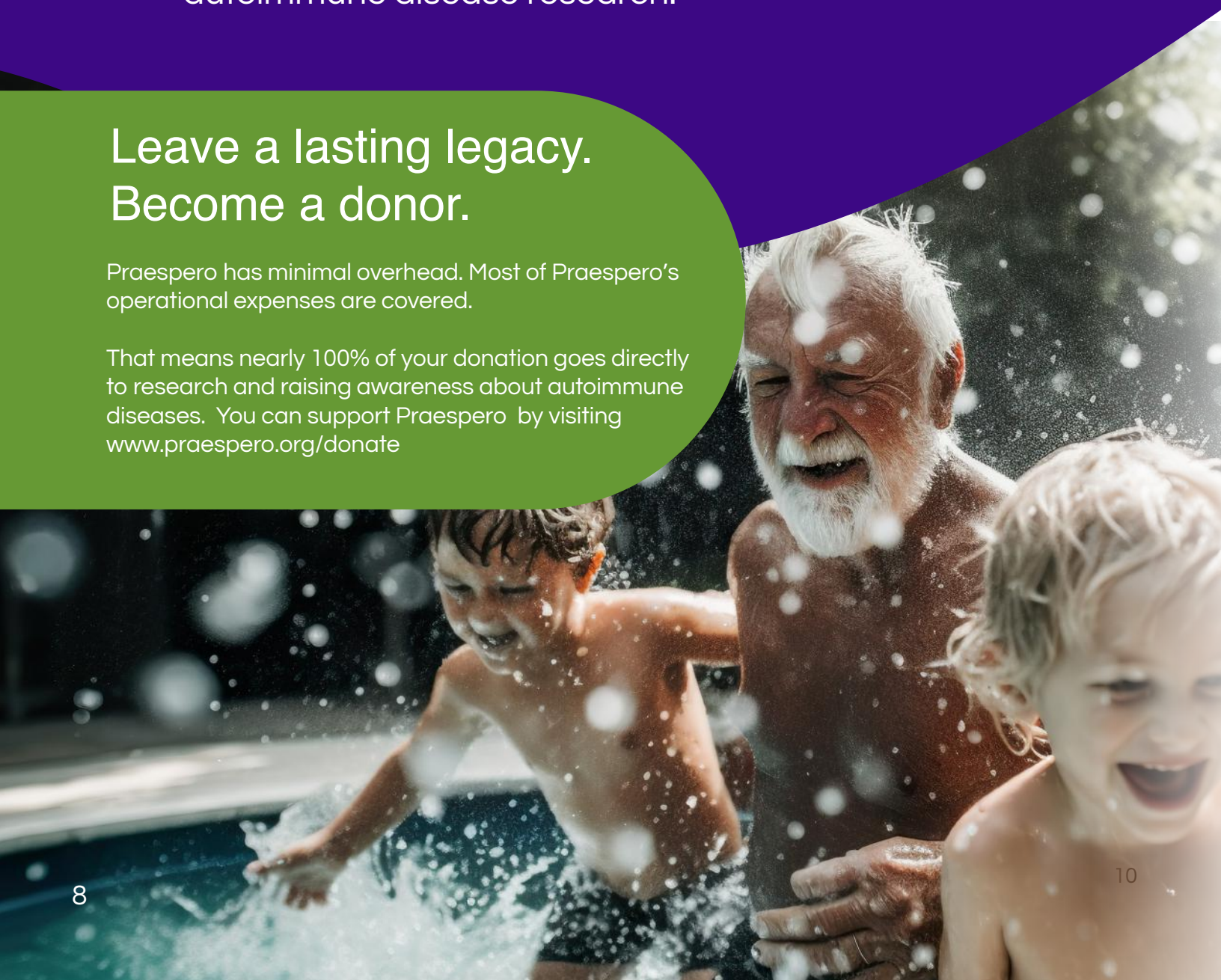
By the end of 2025, Praespero will have:

- * hosted six hugely impactful research summits;
- * given 50 separate gifts for research to 30 different labs;
- * donated over \$7 million dollars towards autoimmune disease research.

Leave a lasting legacy. Become a donor.

Praespero has minimal overhead. Most of Praespero's operational expenses are covered.

That means nearly 100% of your donation goes directly to research and raising awareness about autoimmune diseases. You can support Praespero by visiting www.praespero.org/donate



Together, we can level up the science!

In the next five years we want to expand our philanthropic network.

Your generosity will support continued advancements in finding the root causes of autoimmune diseases and ultimately move humanity from treatments to cures.

We've come a long way... but we need other donors like you to get to the next level.



Exciting developments we anticipate over the next five years include:

- * Funding innovative research that harnesses the power of immune cell therapies to help the body heal itself (yes, we believe natural immunity is possible!).
- * Continuing to discover the nuances of the immune system, and map out more of the human immunome.
- * Bringing important discoveries from the lab into trial phase, and hopefully find cures to autoimmune diseases.
- * Long term stretch goal: Developing an open & transparent peer research publication system.



Meet Praespero Founder Laurie Venning



Extreme work ethic is in his DNA. Literally.

While this opened doors to staggering entrepreneurial success and innovation, it carried a dark secret that was only uncovered after a debilitating diagnosis at age 42.

Laurie Venning's autoimmune system works almost as hard as he does.

Before being diagnosed with Rheumatoid Arthritis, Laurie and several of his family members suffered through the consequences of a health system too severely under-evolved to understand, diagnose and safely treat their debilitating diseases. As an autoimmune disease patient, the only off-ramp from the suffering was the dangerous and costly world of immune suppressing treatments – a world fraught with trial, error and huge risk.

As Laurie sought the right treatments, he noticed a gap in the research space for exploring root causes and curing (rather than treating) autoimmune diseases. He also observed that traditional funding and publication structures in biomedical science were creating barriers to finding a cure, and getting autoimmune disease patients off the treatment treadmill... once and for all.

He envisioned a space where the world's top immunologists could safely and freely explore the science of good and bad autoimmunity.

He imagined scientists collaborating across labs and

cross-pollinating ideas without fears and barriers of knowledge gate-keeping, cut-throat competition, idea theft and, well... plain old ego.

Laurie observed that many of the same challenges from his previous world in the oil and gas industry applied in the world of biomedical research. After fine-tuning 31 patents, his sand-control technology enabled additional oil to be produced that could not be recovered with conventional technologies. This invention transformed oil-well recovery, converting difficult reserves into more producible assets and helping several countries move oil reserves from probable to proven, while launching a new wave of innovation in global oil completions.

Laurie established Praespero believing that the same material science, entrepreneurial freedom and gritty wisdom that led to his game-changing oilwell invention, will lead to similar breakthroughs in the science of curing autoimmune diseases and cancer.

Whether it's through an oil reservoir, or the infinite recesses of the human immunome, Laurie believes new depths of unlimited potential are ready to be tapped.

It could be just one idea, one conversation or one donation away.

