VAN ANDEL INSTITUTE®

Invest in Hope

Delivering breakthroughs in health and education

VAN ANDEL INSTITUTE®

333 Bostwick Ave. NE | Grand Rapids, MI 49503 | P 616.234.5000 | vai.org

VISIONARY LEADERSHIP

All of humanity faces complex diseases. We must understand how they start at the cellular level in order to prevent, treat and ultimately cure them. This requires a globally integrated approach of time and resources.

That's why Jay and Betty Van Andel created and endowed Van Andel Institute in 1996. What was their vision?

- An **independent organization** that tackles the most promising research topics and clinical trials in collaboration with our scientific partners.
- A **global organization** that collaborates and shares to impact world health.
- A **strong funding** foundation that would support long-range research on critical health issues like cancer and Parkinson's.

"My parents had a powerful vision to not only foster world-class research and science education, but also to enhance the West Michigan community in which the dream would thrive. We took a dream, an idea, and relentlessly pursued the belief that we could accomplish the impossible."

David Van Andel
Chairman & CEO
Van Andel Institute

"Without research, there is no cure."

Carol Van Andel
Executive Director
David & Carol Van Andel Family Foundation

WHAT IS THE PATH TO IMPACT?

It's stunning to realize that all of our scientific knowledge has not been able to eliminate some of the simplest diseases. That makes it a little easier to understand why tackling a complex, multi-faceted disease like cancer or Parkinson's is even more complicated.

Research is not linear. Ideas are put forward and tested. Many are discarded. Others produce unexpected or unrelated benefits. But every idea, regardless of its outcome, contributes to our global knowledge base. It gets us one step closer to what might work.

BASIC RESEARCH

Make biological discoveries at the molecular level.

We're looking for answers to foundational questions, such as: "How do cells talk to each other?" "How does the shape of a molecule affect its function?" Basic science builds a fund of scientific capital that people around the world can draw from to inspire ideas and create solutions.

TRANSLATIONAL RESEARCH

Leverage discoveries to determine the cause of diseases and find new treatments.

In collaboration with expert partners, we use what we learn about the body's molecular workings to design and model new treatment approaches.

CLINICAL RESEARCH

Test treatments in humans.

Thousands of qualified patients are needed to run all three phases of a clinical trial. Only 7% of drugs make it through clinical trials to become FDA approved.

IMPACT

Make treatment available.

It can take over a decade and more than a billion dollars before pharmaceutical companies obtain federal approval to go to market in the U.S. Countries around the world have different criteria for drug approvals.

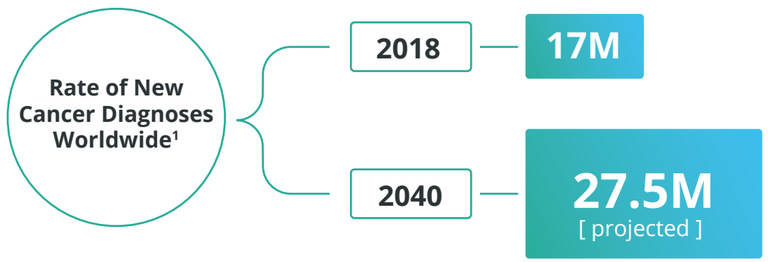
"All truths are easy to understand once they are discovered; the point is to discover them."

Galileo Galilei

MASSIVE CHALLENGES ON A GLOBAL SCALE

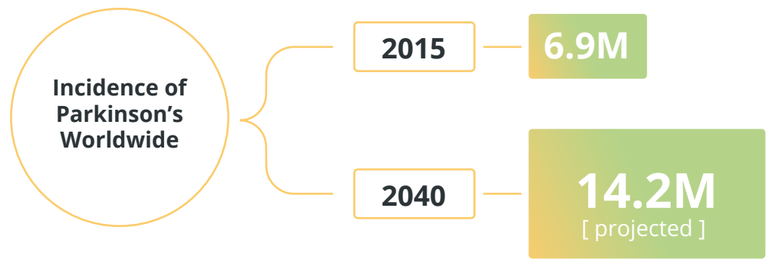
CANCER is a broad term used to describe diseases characterized by uncontrolled, invasive cell growth. Medical science has identified more than 100 different types of cancer. Despite great progress in treating many cancers, others remain incurable.

However, there is hope. Although cancer cases continue to climb, the cancer mortality rate has dropped 27% since 1990.

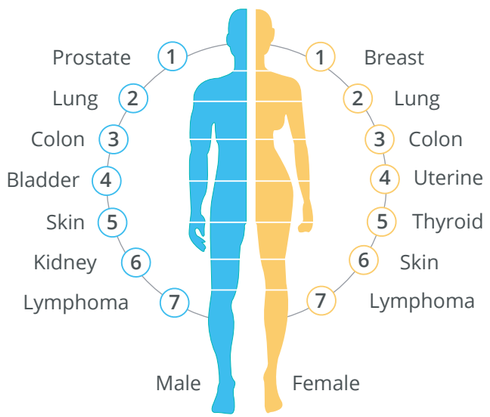


PARKINSON'S DISEASE is a progressive disorder characterized by mobility challenges and several non-motor symptoms (e.g. depression, constipation). There is no single cause for 90% of cases. Currently, there is no cure for Parkinson's and there are no treatments that slow or stop the disease.

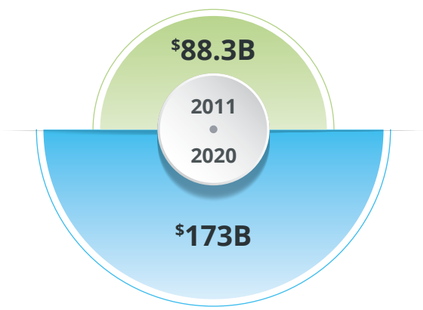
The incidence of Parkinson's increases sharply with age. Our world's population is growing older, which means we can anticipate exponential growth in this disease.



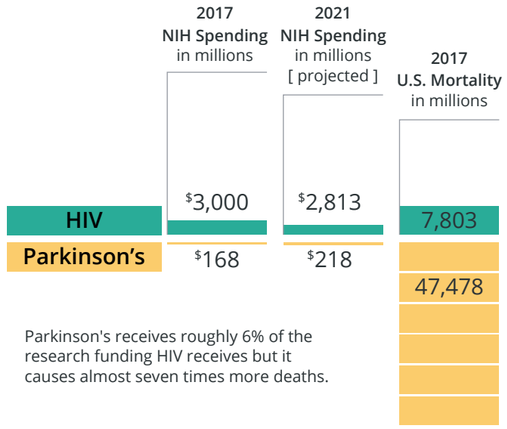
Leading Sites of New Cancer Cases
(2020 estimate)



U.S. Healthcare Expenditures for Cancer [2]



Parkinson's Research Is Underfunded [3]



Annual Total Cost of Parkinson's in the U.S. [4]

Direct medical costs hospitalizations, medication	**$25.4 billion**
Non-medical costs missed work, lost wages, early retirement, family caregiver time	**$26.5 billion**
Total	**$51.9 billion**

[1] American Cancer Society
[2] Agency for Healthcare Research and Quality, and the National Institutes of Health

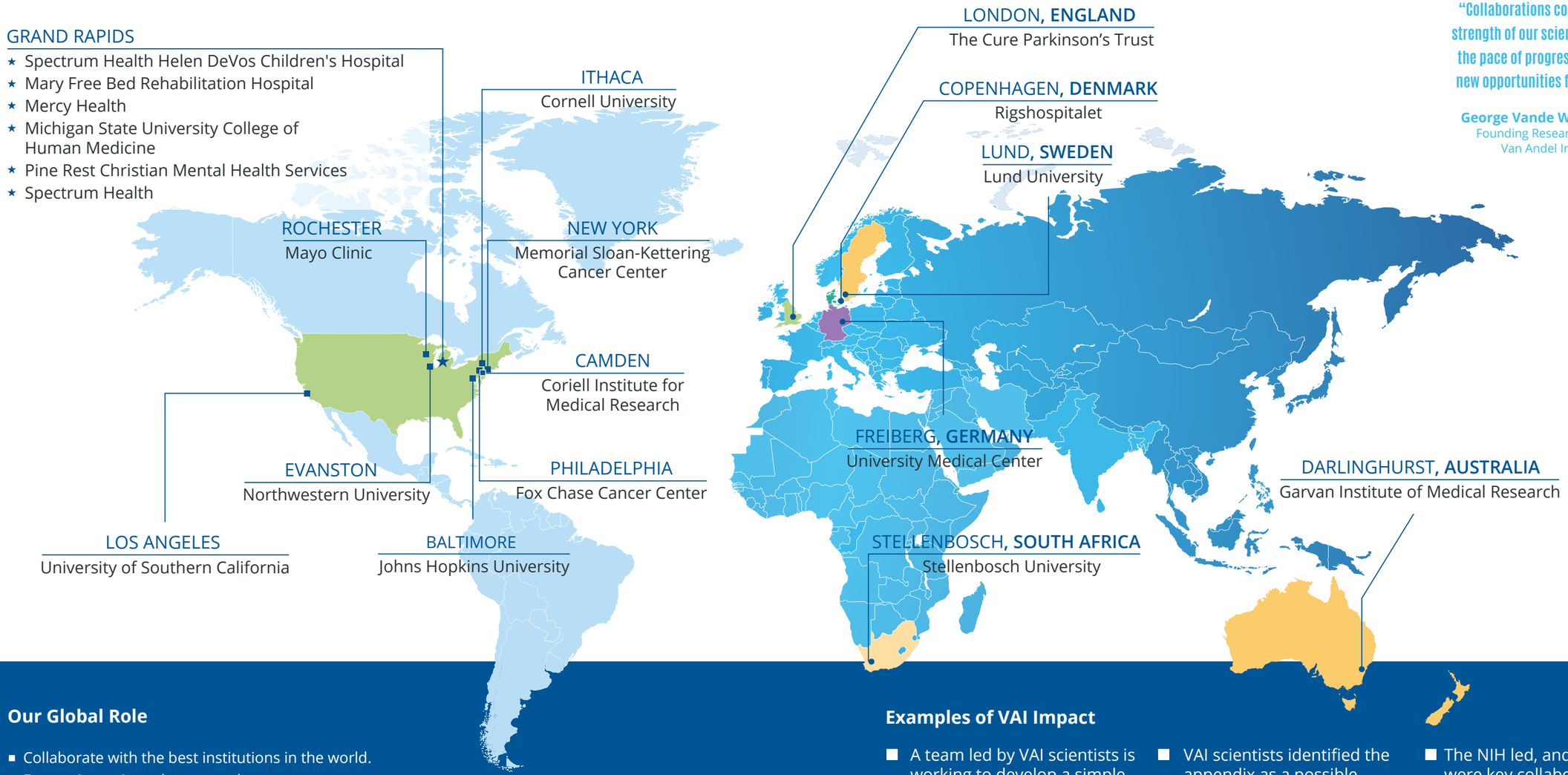
[3] NIH. Estimates of Funding for Various Research, Condition, and Disease Categories (RCDC). Table Published: February 24, 2020.
[4] Michael J. Fox Foundation for Parkinson's Research

"It really hurts when your family goes through these diseases. I don't want to go down the path again with others if we can find the cures. We have to have hope."

Sally Schaafsma, VAI volunteer

COLLABORATING FOR IMPACT

A Partial List of Our (100+) Collaborators



"Collaborations complement the strength of our scientists, increase the pace of progress and open up new opportunities for discovery."

George Vande Woude, Ph.D.
Founding Research Director
Van Andel Institute

Our Global Role

- Collaborate with the best institutions in the world.
- Engage in cutting-edge research.
- Share our results worldwide.
- Help identify new uses for existing drugs.
- Facilitate clinical trials.
- Act as a virtual hub that brings academic institutions and drug companies together to impact human health.
- Train the next generation of scientists.

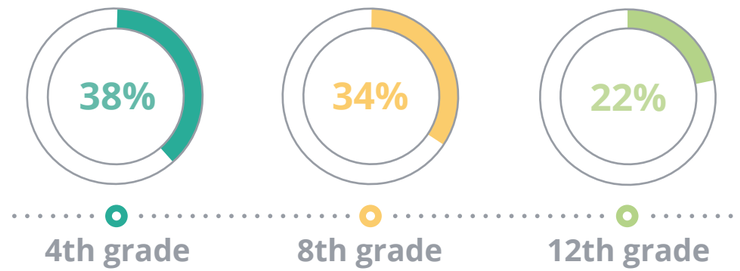
Examples of VAI Impact

- A team led by VAI scientists is working to develop a simple blood test that, when combined with an existing test, detects nearly 70% of pancreatic cancers. According to the National Cancer Institute, only 9.3% of people with pancreatic cancer survive past five years. Early detection can lead to longer survival.
- VAI scientists identified the appendix as a possible starting point for Parkinson's. This opens the door to potential new therapies that aim to head off the disease in the gut, long before motor symptoms occur.
- The NIH led, and VAI scientists were key collaborators in, The Cancer Genome Atlas project. Over the course of 10 years, scientists worked to reclassify cancer at the molecular level rather than by its location in the body. This helps physicians and patients avoid treatments that are unlikely to bring benefit. It will also help direct patients into clinical trials that might prove beneficial.

ENGAGING THE NEXT GENERATION OF SCIENTISTS

VAI co-founder Betty Van Andel believed that education should be an integral part of the Institute's mission. The numbers show that her instinct was right. Access to science education is one of the best investments that can be made.

Fewer than 1 in 4 High School Seniors Are Proficient in Science [5]



Our Roadmap for Science Education

K–12 Education

Create classrooms where curiosity, creativity and critical thinking thrive.

- Offer field trips for 2,500+ students and workshops for 1,300+ teachers annually.
- Provide project-based learning kits and online classroom resources.
- Promote summer camps and extra-curricular opportunities.

"I learned that I love science!"

Carlos, elementary school student
Grand Rapids Public Schools

Undergraduate Summer Internships

Expose students to hands-on laboratory experiences that will help define their science-related career paths.

- Pair 20–25 summer interns with a scientific investigator for an intense 10-week research experience.
- Expose students to the latest research methods and instruments.

[5] nationsreportcard.gov

Graduate School

Transform talented and ambitious students into effective research leaders.

- Use a problem-based learning approach that trains students in rigorous science relevant to human disease.
- Provide extensive professional development in areas such as leadership, ethics, responsible and effective research, public speaking, and grant writing.

Postdoctoral Program

Prepare early career Ph.D. researchers to become successful scientific leaders through mentorship and hands-on experience.

- Teach grant writing, lab management and communication.
- Provide an environment in which early career scientists can develop a global professional network.

"I've wanted to be a scientist my whole life. Even as a graduate student at VAI, I already feel like a trusted colleague. I'm treated like someone who will contribute to the next breakthrough in human health."

Menusha Arumugam
Ph.D. Candidate

Many schools lack the resources to create hands-on, STEM-focused learning. We provide learning opportunities that increase student interest in science while also cultivating the perseverance to follow that interest.

Our philosophy is that students learn science not just by memorizing but also by actually doing science. We engage them while they're young and support them as they mature.

We provide **priceless opportunities** to empower **students** pursuing careers in science.

"Our devotion and passion for science education comes from an understanding that the life-changing scientific breakthroughs of tomorrow will be discovered by the students of today."

David Van Andel
Chairman & CEO
Van Andel Institute

HERE'S WHY YOUR GIFT MATTERS

We must embrace bold ideas and work with a sense of urgency to transform human health. Please join our mission.

TOGETHER, WE ARE CREATING ...

OPPORTUNITIES

The VAI endowment provides an operating budget that supports our scientists and their research. We invest 100% of every additional dollar we receive to create opportunities to go beyond — to engage in more research and to cultivate a passion for biomedical science in the next generation.

LEVERAGE

Research grants fuel bio-medical science and thus are highly competitive. Philanthropy provides our scientists with the springboard they need to go further with promising ideas. Your gift is the bridge that can connect us to significant grant dollars, which will, in turn, stretch our own funding even further.

HOPE

Our entire mission is focused on bringing hope to humanity. We don't do science for its own sake. We connect what we learn in the laboratory to real patients. Each day brings us closer to the ultimate goal: cures for cancer and Parkinson's disease.

"Here, the brightest minds work together without limits. People want to come here because they see VAI as a major scientific hub that turns big ideas into real breakthroughs for human health."

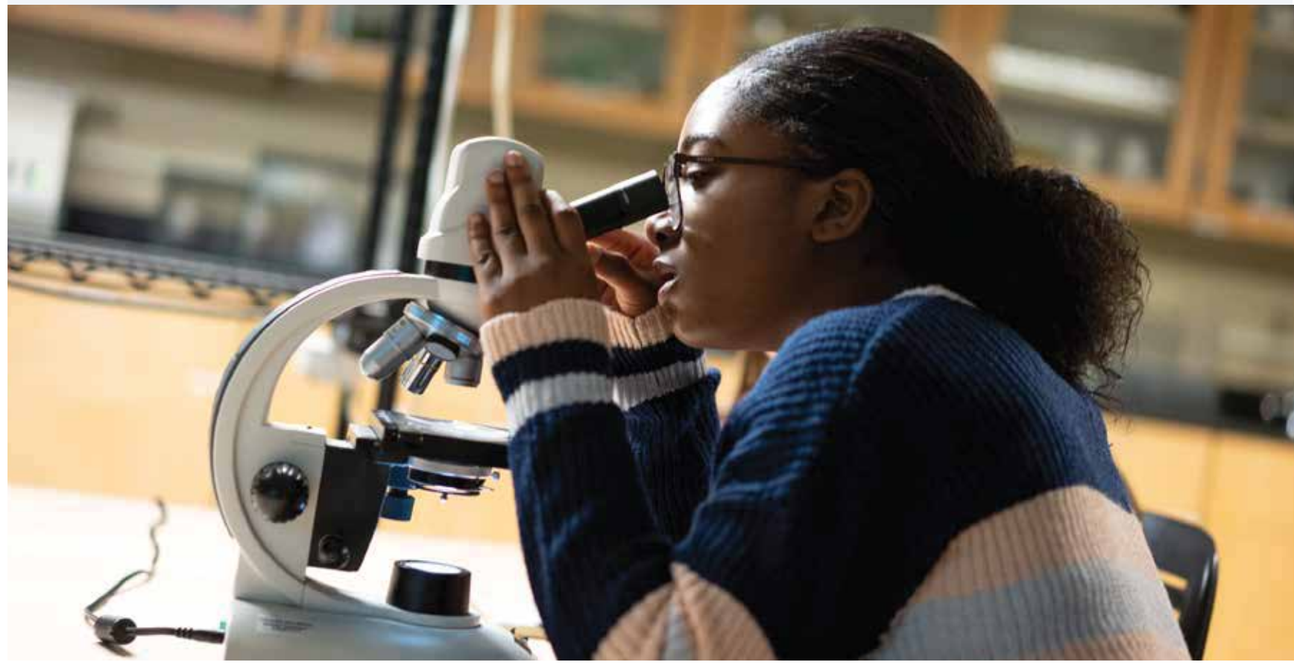
Dr. Peter A. Jones
Chief Scientific Officer

"As a survivor and a person whose family has been affected by cancer, I am well aware that we need better treatments and cures. I also know that if we can continue to support research with discipline and tenacity, we will one day find them."

Dr. Juan Olivarez
Donor & Trustee

"The work we do at VAI is for people, not just for the sake of science. Behind each data point is a person we want to help."

Dr. Rita Guerreiro
Associate Professor, Department of Neurodegenerative Sciences



"Van Andel Institute has some of the sharpest biomedical research minds in the country, and they can't do their work unless we help them acquire the tools to perform this groundbreaking research."

Steve Grill, fiduciary for the J. Scott Gill Trust, who lost his brother and mother to cancer