



## Van Andel Institute®

### **VAN ANDEL INSTITUTE OVERVIEW AND FACT SHEET**

<http://www.vai.org/>

Van Andel Institute is committed to improving the health and enhancing the lives of current and future generations through basic and translational biomedical research and science education. This commitment is demonstrated by two complementary institutes: Van Andel Research Institute and Van Andel Education Institute. The Institute supports the developing life science industry in West Michigan; Greater Grand Rapids is the western anchor of a life science research and resource corridor that stretches south to Kalamazoo and east to Detroit.

- **Founded:** 1996, by Jay and Betty Van Andel
- **Chairman and CEO:** David Van Andel
- **Location:** Grand Rapids, Michigan
- **Employees:** approximately 220 total (includes VARI and VAEI)
- **Financial:**
  - Approximately \$40 million annual operating budget, which funds operations for both VARI and VAEI
  - General operations funded by endowment from Jay and Betty Van Andel
  - Additional funding from research grants and donations
    - Because of the endowment, every dollar of private donations goes directly to research and education

### **VAN ANDEL RESEARCH INSTITUTE (VARI)**

Van Andel Research Institute (VARI) is an independent, world-class medical research facility that has gained worldwide recognition for basic and translational research into the genetic and molecular origins of cancer, Parkinson disease, and other threats to human



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health. VARI's laboratories and core facilities work to translate discoveries into therapies that will one day conquer illness and enhance lives.

- **Director:** George Vande Woude, Ph.D.
- **Staff:** scientists in laboratories and core facilities supported by administrative staff
- **Focus:** biomedical research at the genetic and molecular levels
  - Cancer
  - Parkinson disease
  - Translation of scientific research results into clinical applications
- **Laboratories and Core Facilities:**
  - Analytical, Cellular, and Molecular Microscopy
  - Antibody Technology
  - Cancer and Developmental Cell Biology
  - Cancer Genetics
  - Cancer Immunodiagnostics
  - Cell Signaling and Carcinogenesis
  - Cell Structure and Signal Integration
  - Chromosome Replication
  - Computational Biology
  - Flow Cytometry
  - Germline Modification
  - Integrin Signaling and Tumorigenesis
  - Mass Spectrometry and Proteomics
  - Microarray Technology
  - Molecular Oncology
  - Sequencing
  - Structural Sciences



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- Systems Biology
- Transcriptional Regulation
- Tumor Metastasis and Angiogenesis
- Vivarium and Transgenics
- Xenotransplantation
- **Partnerships and Affiliations:**
  - Institutional member of the Association of American Cancer Institutes (AACI)
  - Institutional member of the Association of Independent Research Institutes (AIRI)
  - Center for Molecular Medicine -- collaboration between VARI and Spectrum Health offering technologies for investigation of complex diseases like cancer, heart disease, mental illness and other conditions at the DNA, RNA and protein levels.
  - NCCS-VARI Translational Research Program -- collaboration with National Cancer Center, Singapore focuses on the biology behind varying drug responses in Asian versus non-Asian patients with specific types of cancer.
  - NJMU-VARI Antibody Technology Development Program -- collaboration with Nanjing Medical University, China focuses on the development of antibodies for clinical diagnostic/prognostic and therapeutic application for cancer and infectious diseases.
  - ClinXus -- partnership between several West Michigan healthcare and life science organizations that provides a single point of contact for clinical research clients, patients and physicians who participate in clinical studies.
  - XB-Biointegration Suite -- central informatics solution from VARI and XB TransMed Solutions facilitates systematic management of pre-clinical, clinical, demographic, biomedical, and molecular information.



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- Member of the Core Technology Alliance -- a consortium founded by VARI, Michigan State University, University of Michigan, and Wayne State University that is funded by Michigan Tri-Technology Corridor grants to provide services in specialized research areas. VARI is the primary institution for animal models and antibody technology and serves as a satellite institution for genomics, proteomics, bioinformatics and structural biology.
- Institutional member of the Grand Rapids Clinical Oncology Program (GRCOP). GRCOP is one of the oldest of the 53 NCI Community Clinical Oncology programs. This is a unique distinction for VARI as we are the first basic science institute to affiliate with one of these programs. Together with GRCOP, VARI is involved in a Phase II clinical trial for treating pancreatic cancer.
- Institutional member of the Michigan Cancer Consortium (MCC) -- a group of public, private and voluntary organizations committed to reducing the human and economic impact of cancer in Michigan. VARI also holds a position on the MCC Membership Committee.
- Partnership with DeVos Children's Hospital in a fellowship program focused on the diagnosis and treatment of pediatric cancer and blood disorders. DeVos Children's Hospital recruits pediatric oncology fellows, whose training includes work in VARI laboratories learning about translational research in cancer diagnosis and treatment.
- Partnership with Grand Valley State University (GVSU) to design, construct, and operate a new Good Manufacturing Practices (GMP) facility in Grand Rapids that will produce biological agents for early-phase clinical testing.



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- Graduate training programs with Michigan State University -- MSU Graduate School's Cell and Molecular Biology Program and MSU College of Veterinary Medicine
- **Seminar Series:** the Han-Mo Koo seminar series features speakers spanning distance and discovery in the Institute's Tomatis Auditorium. The seminar series is dedicated to the memory of Han-Mo Koo, who joined Van Andel Research Institute in June of 1999 as the principal investigator of the Laboratory of Cancer Pharmacogenetics. Here he established, among others, projects to study melanoma and pancreatic cancer. In May 2004, Han-Mo passed away following a six-month battle with cancer.
- **Training Programs:** VARI directs and supports several training programs, including –
  - Bridges to the Baccalaureate Program
  - Grand Rapids Area Pre-College Engineering Program
  - NIH T-32 Training Program in Hypothesis-Based Biomedical Research for Veterinary Students
  - VAI-MSU Graduate School Program
  - Internships: Frederik and Lena Meijer Student Internship Program and Grand Rapids Medical Education and Research Center Medical Student Summer Research Internship Program
  - Postdoctoral Fellowships



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### **VAN ANDEL EDUCATION INSTITUTE (VAEI)**

Van Andel Education Institute (VAEI) is nurturing the scientists of tomorrow. From groundbreaking educational programs targeted at elementary and middle school children, to a graduate school designed to train professionals in cell and molecular biology, VAEI is building on curiosity and problem-solving skills with real, hands-on experiences.

- **Director:** Steven Triezenberg, Ph.D.
- **Focus:**
  - Promote / improve science education
  - Increase number of persons who choose to pursue science-related careers
- **Methods / Programs:**

**Science Academy:** The Science Academy is dedicated to advancing and promoting science education and increasing the number of students who choose to pursue careers in science or science-related fields. The Academy offers the following educational programs:

- The Academy's inaugural Out-of-School-Time Cohort Program brings together a diverse group of fourth and fifth grade children from the Grand Rapids area to grow the scientists of tomorrow. These students stay together for three consecutive years in summer or after-school sessions, learning to think and act like scientists through hands-on investigations.
- The Classroom Science Investigations program is a unique professional development initiative in which teachers learn alongside their students. The program is designed to enhance science instruction and encourage student interest



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in science. Originally for elementary teachers and students, this program will expand to the middle school level in 2009.

- Through Science On Saturday, teams of upper elementary and middle school students and an accompanying adult see, touch, and investigate a variety of animals to help explore and develop a love of science.
- Partners for Sustainable Innovation (PSI) is a new professional development program for middle school teachers (grades five through seven). Over the course of three years, teachers will receive 300 hours of professional development. PSI will deepen teacher understanding of the connections between genetic, species, and ecosystem biodiversity, human health and life science careers, and will provide training in the use of inquiry-based learning to engage students in science. It will also build a sustained dialogue between educators and partnering life science organizations to facilitate effective workforce development and provide a context for concepts taught in the classroom.

**Graduate School:** In May 2005, the State of Michigan granted VAEI a charter to award M.S. and Ph.D. degrees in molecular and cellular biology. Van Andel Institute Graduate School is a unique Ph.D. program that prepares students for a career in biomedical research. The graduate school enrolled its first students in the Fall of 2007. Once VAI's Phase II building expansion is complete and operating at capacity, the graduate school will enroll up to 45 students in the four- to five-year program. Dr. Steven Triezeberg is Dean of VAI Graduate School, as well as VAEI Director and a VARI Scientific Investigator.

**Professional Development:** To better prepare teachers and students for success in the classroom and in the growing fields of science and technology, VAEI offers several professional development programs for educators.



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- VAEI provides professional development workshops for teachers in various formats during both summer and academic year sessions
- Forums for school leaders are offered periodically on different topics and in various formats.
- VAEI staff is available to assist individual educators, schools and school systems in designing science education programs

### **BIOGRAPHICAL INFORMATION**

#### **David Van Andel**

David Van Andel is chairman and CEO of Van Andel Institute. The son of founders Jay and Betty Van Andel, he is also currently chairman and CEO of Idea Sphere Inc. Most recently he held the position of executive vice president and chief operating officer of Alticor's Pyxis Innovations Business Unit and is a member of the corporation's board of directors. Prior to this position, David was senior vice president – Americas and Europe, overseeing the Amway business activities in North America and 22 European and 11 Latin American affiliates. He has been in various positions at Amway since 1977.

David is also co-owner and chairman of the Grand Rapids Griffins, an International Hockey League team. He is vice-chairman of The Right Place Program and active in numerous business and community organizations including the American Cancer Society Foundation, Great Lakes Division; the Gerald R. Ford Foundation; the U.S. Chamber of Commerce Foundation; and the Grand Rapids Museum Foundation. David is a graduate of Hope College in Holland, Michigan.



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### **George Vande Woude, Ph.D.**

Dr. Vande Woude received his M.S. (1962) and Ph.D. (1964) from Rutgers University. From 1964–1972, he served first as a postdoctoral research associate, then as a research virologist for the U.S. Department of Agriculture at Plum Island Animal Disease Center. In 1972, he joined the National Cancer Institute as head of the Human Tumor Studies and Virus Tumor Biochemistry sections and, in 1980, was appointed chief of the Laboratory of Molecular Oncology. In 1983, he became director of the Advanced Bioscience Laboratories–Basic Research Program at the National Cancer Institute’s Frederick Cancer Research and Development Center, a position he held until 1998. From 1995, Dr. Vande Woude first served as special advisor to the director, and then as director for the Division of Basic Sciences at the National Cancer Institute. In 1999, he was recruited to the directorship of Van Andel Research Institute in Grand Rapids, Michigan.

### **Steven Triezenberg, Ph.D.**

Dr. Triezenberg received his Ph.D. in cell and molecular biology from the University of Michigan in 1984, where he studied DNA replication of polyomavirus. He was a postdoctoral fellow in the laboratory of Steven L. McKnight at the Carnegie Institution of Washington Department of Embryology (in Baltimore) from 1984-1987. Dr. Triezenberg joined the faculty of the Biochemistry Department at Michigan State University in 1987, where he also served as Associate Director of the interdepartmental graduate program in cell and molecular biology. Dr. Triezenberg came to Van Andel Institute in May 2006 as a Scientific Investigator and the founding Dean of VAI Graduate School. He became the Van Andel Education Institute Director in 2009.