

## miRcore Volunteer and GIDAS History



### Early 2011

- A small group of students meets Saturdays as miRcore volunteers to advocate for personalized medicine.
- Volunteer students vote Alzheimer's as their disease of focus.

### 2011-2012 School Year

- Huron GIDAS (Genes In Diseases And Symptoms) founded in 2011.
- Huron GIDAS spreads awareness of Alzheimer's disease through posters, assembly with invited speakers, video making, and a fundraiser for Alzheimer's research.

### 2012-13 School Year

- Half-day Computational Biology summer camp for high school students offered through Ann Arbor Rec&Ed in 2012.
- Community, Pioneer, and Skyline high school GIDAS chapters founded in 2012.
- Diseases of focus: autism (Huron and Skyline), breast cancer (Pioneer), type 1 diabetes (Community).
- Saturday volunteer students start to analyze gene expression data using GenePattern tools.

- Two students participate in the DREAM (Dialogue for Reverse Engineering Assessments and Methods) 7 challenge subsection and earn an unofficial ranking of 6<sup>th</sup> and 16<sup>th</sup> competing with 43 professional computational teams.
- The first Genes and Health contest in February 2013 with the sponsorship of the University of Michigan WISE (Woman In Science and Engineering), Janssen, and Zingerman's.
- Fundraised over \$13,000 for microgrants to support researchers in autism, breast cancer, and type I diabetes.

### **2013-14 School Year**

- Computational biology summer camp for high school students held in the University of Michigan in 2013 with the help of WISE.
- University of Michigan GIDAS becomes active.
- Milan and Farmington high school GIDAS chapters founded in 2013.
- All GIDAS chapters focus together on Alzheimer's disease.
- Students begin to use command line computations for gene expression data analysis.
- The second Genes and Health contest in February 2014 with the sponsorship of WISE and Janssen.
- Music and dance performances for Alzheimer's patients in 2014.
- The first high school GIDAS research conference at the University of Michigan with the sponsorship of WISE, Janssen, and Hyundai.
- Fundraised \$8,000 for a microgrant to support Alzheimer's research.

### **2014-15 School Year**

- Computational biology summer camp for high school students and R programming camp for middle school students and above held in 2014 with the help of WISE.
- A team of "Those Kids without PhDs" participated in the Alzheimer's Disease Big Data DREAM Challenge #1, subsection 2, ranking 11<sup>th</sup> in competition with professional computational biologists.
- Parkinson's disease was voted as a disease of focus.
- Mercy and Bloomfield Hills High School GIDAS chapters founded in 2014-15.
- Half-day camps were offered throughout the school year.
- The third Genes and Health contest in February 2015 with the sponsorship of WISE.
- miRcore volunteer committees were formed for specific activities including GIDAS support.
- Students perform group research on Parkinson's and prepare papers for the Journal of Emerging Investigators.
- The second high school GIDAS research conference at UM with the sponsorship of WISE, the Prechter Family Fund, and Hyundai.
- Fundraised \$5,000 for a microgrant to support Parkinson's disease research.

## 2015-16 School Year

- Summer camps using TCGA (The Cancer Genome Atlas) datasets and R were offered at the University of Michigan.
- Student papers were published in the Journal of Emerging Investigators.
- Lung cancer was voted as a disease of focus.
- Out-of-Michigan GIDAS chapters founded.
- Meetings can now be attended online.
- The fourth Genes and Health Contest was held in February 2016 with the sponsorship of WISE.
- A pilot “Lab on Wheels” program was conducted in Huron high school biology classes with the sponsorship of the Ann Arbor Area Community Foundation.
- Volunteer meeting invited speakers: David Beer, Ph.D. (Professor, University of Michigan), Yuanfang Guan, Ph.D. (Assistant Professor, University of Michigan), Philip Maini, Ph.D. (Professor, University of Oxford).