

**Tai Kao-Sowa**  
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**EDUCATION:**

***Stanford University***

***Stanford, CA***

Class of 2020

GPA: 4.09/4.0 after freshman fall

Relevant coursework: (completed by summer of 2017)

CS 106A, CS 106B, CS 107E (Java, C++, C)

EE 101A (Circuits)

CME 100 (Multivariable Calculus)

PHYSICS 41/43 (Mechanics and E&M)

ENGR 80M (Introduction to Bioengineering)

THINK 50 (Empathy)

Outside organizations:

Stanford club swim team

Stanford Brazilian Jiu Jitsu

***Thomas Jefferson High School for Science & Technology***

***Alexandria, VA***

Class of 2016

GPA: 4.45/4.0

Conducted original research in the TJHSST Biotechnology research lab testing the effect of Ara h2 peanut allergen on PHA-induced canine dendritic cells. Investigating a possible alternative pathway to immune activation and a potential link between errant activation and atopic dermatitis via differential cell culture and flow cytometry analysis.

Relevant coursework:

Multivariable Calculus/Linear Algebra

Biotechnology Research Lab

DNA Science (qPCR, flow cytometry, western blot, cell culture)

Neurobiology

Analog Electronics

Introduction to Java

Skills:

Python, Java, C++

Electrophysiology, *Aplysia californica* dissection

Cell culture, tryptophan staining, flow cytometry analysis

Gel electrophoresis, western/southern blots, qPCR

Limited proficiency in Spanish

## **HIGH SCHOOL ORGANIZATIONS/ACHIEVEMENTS**

Summer 2015: Conducted independent original research idea to study the effect of folic acid on Treg cell induction in vitro. Serves as a possible natural treatment for autoimmune disease. Conducted the research under Dr. Bellanti, Director of the International Center for Interdisciplinary Studies of Immunology at Georgetown University Medical Center and Professor of Pediatrics and Microbiology-Immunology, (Emeritus) at Georgetown University School of Medicine, Washington, DC.

Summer of 2014: Interned in Dr. Joseph Bellanti's lab investigating the development and clinical application of interferon gamma release assays (IGRAs), including the recently developed T-SPOT®.TB test. Lab skills include:

Gel electrophoresis, blood separation and lymphocyte/buffy coat purification, bacterial transformations and ligations, cell culturing, western blotting, DNA sequencing.

Won second place in the 2013 class-wide robotics competition. Had to construct a motorized car and program an Arduino chip to navigate an unknown maze.

Third Degree Black Sash in Lung Chuan Fa Kung Fu; led classes as an instructor in 2016.

2012-2016 Varsity Swim Team

2012-2016 Varsity Tennis Team