



TROY HIGH SCHOOL WARRIOR WEEKLY



March 31, 2023

Mt. Baldy on March 23, 2023

Happy Friday and last day of March! It has been quite the week, and there is much to report. Our students are doing amazing things both inside and outside of the classroom—truly amazing things. Also, we have actually had some decent weather along with more rain. While we have had to postpone some of our athletic contests, we also had some great games this week and I am excited to report the results. It is great to be a Warrior!

On Monday, I received this message from the Orange County Science and Engineering Fair (OCSEF). *This is a notification that students at your institution (Troy High School) have won awards at the prestigious 68th Annual Orange County Science and Engineering Fair (OCSEF). This year's Annual Orange County Science and Engineering Fair has drawn over 1300 project submissions. Congratulations to the students and your institution for this phenomenal achievement.*

1st Place

Meghana Gunturi, 11th Grade, Mathematics/Software Category, Senior Division

Cloris Shi, 10th Grade, Behavioral Sciences Category, Senior Division

2nd Place

Aditya Mahna, Ayush Mahna, 11th Grade, Pharmacology / Toxicology Category, Senior Division

These selected winners will be representing Orange County at the California Engineering Science Fair (state level qualifier). California Engineering Science Fair draws hundreds of projects from over 30 participating counties in CA. We wish them luck and much success.

Please visit <https://ocsef.org/ocsef2023/> for full list of winners. For more information please visit <https://ocsef.org/>.

I have included the links to OCSEF, and to be clear what these students have accomplished is graduate level work. I cannot imagine even being in a place that could conceive some of the research upon which they worked when I was a high school student. For the Mahna brothers, their research was inspired by their desire to help their grandfather have less fatigue and nausea resulting from his chemotherapy treatments for cancer. This is their abstract from their study.

Abstract:

After recently undergoing chemotherapy treatment for cancer, our grandfather suffered from the unpleasant side effects of the treatment including fatigue and nausea. Since spices are known to serve as herbal remedies, we decided to explore the anticancer effects of spices to be used as a safe alternative. After discovering the significant anticancer effects of Nigella Sativa and Curcumin among the four spices tested in our first project, we decided to further explore the molecular mechanisms causing these effects. The study investigated the effects on SK-GT-4 esophageal cancer cells by measuring the expression of key cell cycle proteins. The hypothesis was that the spices would cause cytotoxicity in cancer cells by inducing tumor suppressor genes and reducing the expression of oncogenes in a dose-dependent manner. The effects of three concentrations of the spices were measured against the control DMSO in triplicates. Cell death was measured by trypan blue, and RNA was extracted for qPCR analysis. The data were analyzed by calculating the fold change in comparison to DMSO using the $2^{(-\Delta\Delta Ct)}$ method. The study found that Nigella Sativa induced dose-dependent cytotoxicity and led to increases in pro-apoptotic proteins Bax and a decrease in anti-apoptotic genes Bcl 2 and Cyclin D1. Surprisingly, Curcumin displayed no consistent cytotoxic effects potentially due to its

formulation or low dosage. The results provide insight into the mechanisms of Nigella Sativa as an anti-cancer agent and have important implications for the development of it as a therapeutic agent in cancer treatment, and further studies are warranted to explore its clinical applications.

10th grader, Cloris Shi submitted a project in Behavioral Sciences using machine learning to predict vaccine hesitancy in California. Here is the abstract for her study.

Abstract:

The COVID-19 vaccines have reduced cases worldwide, but resistance remains high. This study uses sociodemographic indices and public sentiment to predict vaccine hesitancy and uptake in California counties. A database of 1.76 million coordinate-tagged, vaccine-related tweets (Jan 2021-Dec 2021) was assembled and 1K tweets sampled. Tweets were labeled with county-level socioeconomic indices (Digital Divide Index, Social Vulnerability Index, Democratic Score) and a sentiment score using the language model BERTweet.

Positive Twitter sentiment strongly correlates with decreased vaccine hesitancies ($r=0.575$), and increased per-capita vaccine doses ($r=0.429$). Urban counties had, on average, a 10.3% more positive sentiment, and geographic region informs 59% of the variance between per-capita vaccine uptake rates ($f=1.2$) of urban and rural counties. Out of three machine learning models, the best model, Random Forest, accurately explains 91.4% ($RMSE=0.1$) of variability in vaccinated counts among CA counties. The model directly provides local health authorities, policymakers, governments with a low-cost, high-accuracy monitoring system to predict uptake rates ahead of vaccine roll-out.

For the novel COVID-19 vaccines, uptake rates are significantly influenced by political partisanship, socioeconomic divides, and healthcare disparities at the California county-specific level. These findings suggest the power of social media data mining in improving vaccine campaigns and optimizing vaccine distribution.

I have not yet seen Meghana's project, but I am looking forward to seeing her research! Great job to all our students for their tremendous creativity, problem solving, and application of their knowledge to find new and interesting solutions for problems that take minds like theirs to figure out. Great job, Warriors!



Pictured above are two very surprised and very happy Warriors. Troy seniors and brothers, Brian Ni and Johnny Ni were just awarded \$50,000 scholarships from Edison. While they knew they had applied for the scholarship they did not know they were two of the only 30 high school students that would receive this scholarship.

It gets better for both of the Ni brothers. Also, yesterday I received email that Johnny Ni is also receiving the \$55,000 Jack Kent Cooke Foundation Scholarship. He is one of sixty students nationwide, and this scholarship renews each year for four years. Both brothers also received the \$40,000 four-year renewable scholarship from Amazon.

Where will they spending their scholarship dollars? Brian Ni, has a scholarship for a full ride to Stanford University. Johnny has been accepted into the Computer Science program at USC and yesterday was accepted to Harvard University. He now has a choice. Could Harvard University be his future school? We don't know, as Stanford University will be sending out their acceptances today... ☺ Johnny Ni and Brian Ni are also on our CyberPatriot National Championship Team, Runtime Terror,(spoiler alert) winning their second National

Championship last week. Brian is also one of a very few CyberPatriot All Americans for making the national final four years in a row. They are two of the best students to ever come through Troy High School. Congratulations, to the Ni brothers, and if we ever needed proof of hard work and determination paying off, these two are the poster students to prove that fact.



Speaking of Harvard, pictured at right is Troy graduate Joseph Jung after finishing his Troy Tech Internship at Smile Dr. some years ago. This week, Joseph's mother dropped by let us know that he is graduating this year from Harvard Law School! To say Mom is proud of Joseph is an understatement! Congratulations to our Warrior for life, Joseph Jung on his most recent great achievement at Harvard Law!

FJUHS and Troy High School remain committed to providing Mental Health support to our FJUHS community. There are many options at your disposal, so please take advantage of them as needed. Some of the numerous Mental Health resources available to our FJUHS

Family, include Parents and Guardians. Please use the resources that are available to you and these resources can be also be found on our district website [HERE](#).

Additionally, FJUHSd has partnered with [Care Solace](#), a wonderful agency available to help our FJUHSd families access community mental health resources. It is free, confidential, and they are experts at connecting mental health providers to anyone needing support. Please feel free to review by clicking here, [Care Solace](#). FJUHSd also has these additional mental health resources and links to Orange County and National mental health support.

- [FJUHSd Virtual Calming Room](https://sites.google.com/fjuhsd.org/fjuhsd-virtual-calming-room/home): <https://sites.google.com/fjuhsd.org/fjuhsd-virtual-calming-room/home>
- [FJUHSd Parenting Resources](https://www.fjuhsd.org/Page/4317): <https://www.fjuhsd.org/Page/4317>
- [OC Support and Crisis Resources](https://www.namioc.org/help-support-overview): <https://www.namioc.org/help-support-overview>
- [National Alliance on Mental Illness \(for OC\)](https://www.namioc.org/): <https://www.namioc.org/>



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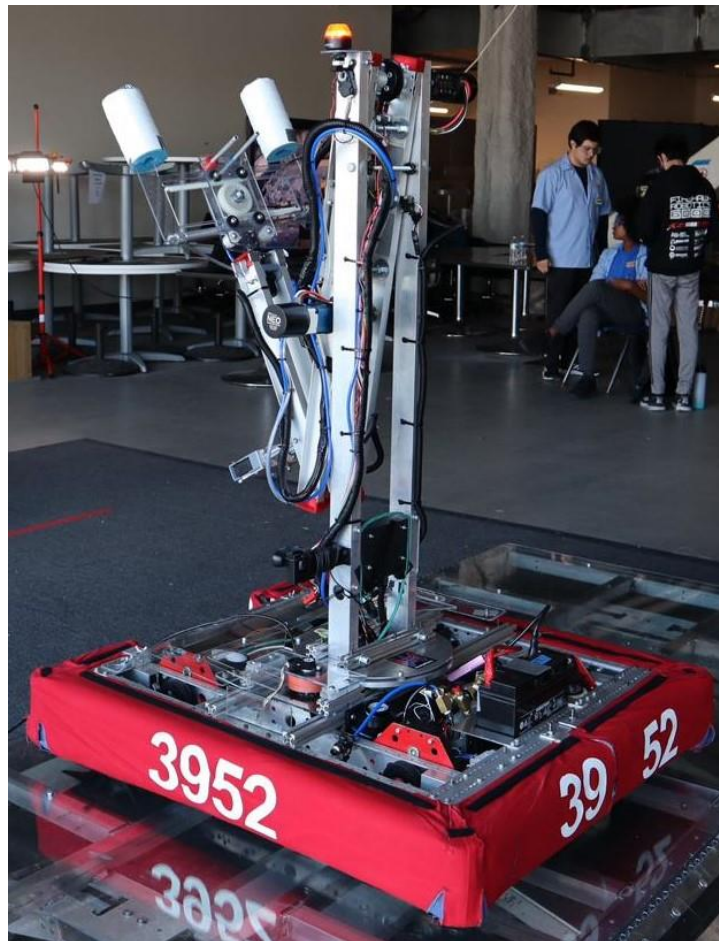
Warriors, here is the link to the March Superintendent's FJUHSd newsletter. For the global FJUHSd insight, news, and events, it does not get much better! <https://conta.cc/3YoBGsK>

The excellent Troy High School Family video: <https://youtu.be/a3HtnItxd8>



Coaches, Mr. Kent Goodman and Mr. Mike Reid are very proud of our FIRST Robotics competition and our team. From Coach Goodman, “During the first weekend of spring break we

competed at the Los Angeles Regional Competition. After two days of qualifying matches, we were selected into the playoff rounds and made it to the quarter finals before finally being defeated in a very close match. Our team suffered some wheel hub failures during the playoff matches and had to disassemble a good portion of the robot, make the hub repairs, and then put it all back together very quickly. It was thirty minutes of extreme pressure with our other two alliance partners watching over us as we rebuilt the robot so we could get back on the field. The students on our team responded well to the pressure and got the robot back together in order to contribute to our alliance in the final match. We ended the weekend by receiving



the **FIRST Robotics Competition "Innovation in Control Award"** for the LA Regional Competition. This award goes to the team that "Celebrates an innovative control system or application of control components - electrical, mechanical, or software - to provide unique machine functions. On prior page and above are a picture of our team after we received the award and a picture of our robot on the practice field." Congratulations to our students and

coaches on having an amazing tournament and showing how they truly apply their knowledge when it counts! Fantastic job, Warriors!



In Troy Athletics news, let us begin with our Warrior Softball Team! On a rare beautiful sunny Tuesday, our team came from behind against La Habra High School. Down 2-3, Addison got the hit. 6th inning, base hit with two RBI's 4-3 Troy. Bottom of the 6th, bases loaded with two out, we get a hit 5-3 Troy. 7th inning, La Habra scores we are still up 5-4. However, our team held and defense ended the game with a La Habra ground out to third base! Troy wins and is 1-0 in Freeway League play! We have Buena Park today. Let's keep it going Warriors!

Yesterday in Boys' Volleyball our team did something it has not achieved in their existence as a CIF sport in the Freeway League. We were playing Sunny Hills and it was a tight

game. Back and forth, the score tied up, over and over again. Finally, Troy began to pull away and in the end won a close and hard fought victory and in the process delivered to Sunny Hills High School their first ever defeat in Freeway League play! There is a reason our team is so



very happy and excited about this victory! To finally put it together and not only defeat Sunny Hills but to also get the job done at home? Priceless! Great job to our players and coaches for putting together this memorable moment in Troy High School history. Let's go, Warriors!





Our NJROTC team is now in Pensacola, Florida for the Navy Nationals and Drill Meet. They are competing today and Saturday with awards on Sunday. Pictured above they are getting in some warm ups and eating lunch. I am looking forward to more news on our team and how they will finish the Navy Nationals! With 1st SGT. Barnes and Master SGT. Yocke, our team has some fantastic coaches who have gone that extra mile to ensure they are prepared for this competition! Let's go Warriors! Also, a heartfelt thank you to our Booster parents and chaperones who are also on this trip, ensuring the supervision and safety of all our cadets on this trip. Thank you for your time and service to our cadets and Troy High School.



We have CyberPatriot News! Over Spring Break, our teams BTS and Runtime Terror went to Nationals and had a wonderful showing! Pictured at left is BTS and at right, Runtime Terror. Here is some on the scene reporting from Coach, Allen Stubblefield! *“Troy (Runtime Terror) won the All-Service despite not earning any networking awards. Amazing effort in a very close competition! We had 6 alumni with us as well to mentor and help the team prepare!”*

Baboons Strong Together finished a respectable 7th out almost 3,000 teams (that's like Final 4 odds...).

David Kim, Christian Nguyen, the teams and I head home Wednesday night after some Washington DC sightseeing!

Go Troy cyber!"



Congratulations to our fantastic students on not only making it to the big show, but also showing up and having a wonderful National Championship! Again, congratulations to Runtime Terror and our cadets for doing the almost impossible and winning a second championship in two years! It is not easy to be the team that every other team in the competition wants to knock off. Fantastic and amazing job to Runtime Terror and BTS and their coaches!



On Tuesday night at the 4th District PTA Administrators' Dinner and Program, our Troy High School PTSA was one of seven schools recognized with an individual award! Troy PTSA received the Creative Program Award for the creation of the PTSA Student Leadership Group. Ms. Tracy Wang, current PTSA vice-president wrote this description of the program.

Troy High PTSA launched a PTSA Student Leadership Group (SLG) in October 2016, purposed for students who are looking to make a difference at the school, in the community, and in the world through service activities, while learning to become and participate as a student leader. The SLG started with 10 students and 2 parent mentors in its first year. This year we grew to 55 students with 1 teacher advisor and 1 parent chair leading a committee of parent volunteers, thanks to active program promotion via PTSA Association meetings and social media channels, riding on prior years' successes.

The scope of PTSA SLG include but not limited to: 1) Plan and implement activities to improve campus life. 2) Attend Leadership Training Workshop to help become an effective leader, participate in team building activities, and develop project planning skills. 3) Support PTSA sponsored events. 4) Earn service hours for International Baccalaureate (IB) program and earn the President's Volunteer Service Award (PVSA). 5) Learn Robert's Rules of Order to govern a

meeting using parliamentary procedure. This is only a partial description of the program, but these students are involved to say the least and their work as positively impacted our school since 2016. Thank you to all of our students who have participated in this program since 2016 and to their parents and staff who have supported their efforts! Go, Warriors!



It is Friday, it has been crazy busy this week for all of us, and I am ready for the weekend. Luna and I will be able to get off the couch this weekend and enjoy the wonderful and sunny weather! I hope everyone will have a wonderful and relaxing weekend, hopefully spending time with family and friends. I will see everyone back here on Monday! W.V. Mynster