LISEF Project Listing for North Shore Hebrew Academy High School

Students	Project Title	Project Code	Certified	
Rachel Hanan Jennifer Katz	Genetic and Phenotypic Comparison of Four Arabidopsis thaliana Strains when Exposed to Heavy Metals, for Future Applications in Agriculture	PLNT2642	Certified	Details
Jeremy Noah Bernstein Aaron Michael Baruch Joseph Abraham Masri	Addressing SIDS: Analyzing the Respiratory Rate of Infants Using Image Processing Algorithm	ENBM3780	Certified	Details
Justin Blake Ganjian	The Effect of Microplastics on Tissue Regeneration and the Homeostasis of Dugesia tigrina	ANIM1582	Certified	Details
Jeremy Adam Sofiev	Tackling Food Poisoning: Monitoring Methane Concentration Produced by Spoiled Food Using Arduino Sensors	CHEM1598	Certified	Details
Daniella Azar Ashley Hakakian Leah Samantha Mayeri	A Meta-Analysis to Elucidate the Link Between Tocopherol Acetate and Lung Illnesses of Vape Users	BMED3630	Certified	Details
Ethan Basaleli	A Novel System for Detecting and Mitigating Gas Hazards within the Home	COMP1762	Certified	Details
Ikey Croog	Using RGB Pixel Data to Generate a Stream of True Random Numbers for Encryption	COMP1123	Certified	Details

A Meta-Analysis to Elucidate the Link Between Tocopherol Acetate and Lung Illnesses of Vape Users

(Project ID# 441)

Project Certified

School

North Shore Hebrew Academy High School

Adult Sponsor

Lisa Runco

Category - Subcategory

Biomedical and Health Sciences(BMED) - Pathophysiology(BMP)

Project Files

Download Project PDF | Human Subjecct Consent Form Not Uploaded

Project Abstract

A meta-analysis was performed to determine if, and possibly how, tocopheryl acetate (Vitamin E acetate) plays a destructive role through vaping. Several recent findings have been linking Vitamin E acetate to vape illnesses (https://www.vox.com/science-and-health/2019/11/11/20959198/vaping-vitamin-e-acetate) Vaping is the act of inhaling and exhaling the aerosol, often referred to as vapor, which is produced by an e-cigarette or similar device. When the device is used, the battery heats up the heating component, which turns the contents of the e-liquid into an aerosol that is inhaled into the lungs and then exhaled. There has been 1,479 cases of mysterious lung disease over the last six months linked to vaping. At least 33 people have died since this outbreak began. (https://www.latimes.com/projects/vaping-deaths-long-term/.) This study aims to uncover whether tocopheryl acetate is an allergen or plays another role within lung tissue, specifically focusing on pneumocytes. Tocopheryl acetate is an ingredient that is normally found in cosmetic products and dietary supplements but is not safe to inhale in its pure form. Thus, this study will examine the uses of tocopherol acetate (Vitamin E acetate), recent findings linking tocopherol acetate and vaping illnesses, (allergic) reactions to tocopherol acetate, and the lung pathology under stressful conditions.

ISEF Form Wizard Used

Yes

Other Competitions

none

Will Submit

Form 1
Form 1A
Form 1B

Involves

none

Qualified Scientist

No

Designated Supervisor

No

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