

SAAWA

Science Fair 2016



Sunday April 10, 2016

VFW Post 2718,
68 Lincoln Road,
Franklin Square, NY 11010

JUDGES

Chairperson: Dr. Suresh K. Sahni

Biology

Michael Wyrwa, PhD, William Paterson University of NJ

Anand Saxena, PhD, Brookhaven National Laboratory

Sonu Sahni, MD, Feinstein Institute for Medical Research, Manhasset, NY

Sameer Verma, MD, Feinstein Institute for Medical Research, Manhasset, NY

Michael Mule, PhD, William Paterson University of NJ

Bryant Catano, PhD, William Paterson University of NJ

Chemistry/Physics

Suresh K. Sahni, PhD, William Paterson University of NJ, Brookhaven National Laboratory, SUNY at Stony Brook

Gary Hiel, PhD, Michigan State University, Suffolk Community College

Mukesh K. Sahni, PhD, William Paterson University of NJ

Teresa Antony, PhD, Brooklyn Polytech(NYU), Nassau Community College

Behavioral Science

Elizabeth Roness, PhD, South Shore Psychological Services

Alice Zieher, PhD, Private practice specializing in

Psychotherapy and Neuropsychology

Wolfgang Zieher, PhD, Private practice specializing in Psychotherapy and Neuropsychology

Vimala Vadhan, PhD, CUNY, South Shore

Environmental Science

Ashley New, PhD, William Paterson University of NJ

Gary Hiel, PhD, Michigan State University, Suffolk Community College

Thanks To All Judges

Without these judges volunteering their time and expertise, we would not be able to deliver a superior Science fair experience. SAAWA extends gratitude to all these professionals. The decision of all judges is final.

PARTICIPATING SCHOOLS and STUDENTS

Listed by School, Subject, Category, Name and Project Title

West Hempstead High School

1001BEHB: Unsha Monaj

Does Ethnic background play a role in a student's performance and achievements?

2007BIOB: Natalia Roberts

Analysis of Color Deficiency in Different Populations

2007BIOB: LyLybell Teran

Antimicrobial Properties of Graphene Oxide Versus Herbal Supplements on E. Coli

2007BIOB: Muhammad Moughal

New Kids on the Block

3018CHEB: Varun Dhir

Creating Ocean Energy with Salt Water and Graphene

5002ENVB: Liam Brew

One Small Step for Man, One Giant Leap for Sustainability

5022ENVB: Laura Eivazi

Bottled Water: Is it Really Better?

5022ENVB: Haley Gravalis And Tina Tudisco

Tree Resilience in the Sustainability of Urban Environments

5022ENVB: Fiona O'Neill

Survey of Soils around Hempstead Lake Park: Tests for Metals and Organics

5023ENVB: Tarana Chittineedi

Biosolid Management

5019PHYB: Nathaniel Vadutahala

Effect of the 4-arm Branches on the Mechanical Properties of PEG Hydrogels

Mineola High School

1001BEHA: Hugo Olcese

The Effect of Music on Brain Activity

1001BEHB: Raquel Galan

Does Having a Pet Provide Similar Benefits as Animal Assisted Therapy

1001BEHB: Melissa Valente

Most teenagers do not get enough sleep, is this due to homework, school activities and/or technology

Mineola High School

1002BEHB: Mansi Kutwal

The Effect of Peppermint Oil on Daytime sleepiness and the ability to stay awake

1002BEHB: Preeti Singh

Chewing gum: Positive or Negative Affect on Memory?

1002BEHB: Aileen Miller

Hitting the Right Note of Music Education on Cognitive Abilities

1002BEHB: Maya Narvekar

A Wake Up Call on Cell Phone Use

2007BIOA: Pratibha Anand

The Anti-bacterial Efficacy of Tea Tree Oil

2008BIOA: Claudia Serna

The Effect of Carbon Nanotubes as an Environmental Pollutant on the Survival and Regeneration of *Lumbriculus variegatus*.

2008BIOA: Emily Skupp

Muscle Fatigue in High School Athletes

2008BIOA: Jubilee Hwang and Maria Cerqueira

Aldicarb's Influence on *Chlorella vulgaris*' cell development

2008BIOA: Katie Shi

The Effect of Extremely Low Frequency Electromagnetic Fields on the Early Development of *Danio rerio*

2009BIOB: Molly Donelan

Can a Cure for Cancer be Found in Peach Pits? A Study on Cell Growth

2009BIOB: Michelle Rafi

Silver nanoparticles as an antimicrobial agent

2009BIOB: Nerogica Nimaian

Do Flame Retardants Cause More Harm Than Good?

2009BIOB: Anisha Shah

Fighting Bacteria: Herbal Remedies or Antibiotics?

Manhasset High School

2010BIOA: Joshua He And Bongseok Jung (Herricks HS)

Salicin as a Multipurpose Therapeutic Approach for Colorectal Cancer: Striking a Balance in the Regulation of COX to Maximize Benefits While Minimizing Side Effects

2010BIOB: Emily Cruz And Todd Qiu

The Effects of Electromagnetic Fields on the Expression of GFP in *C. elegans* Strains CL2070 and BZ555, and Locomotion

2010BIOB: William Peng And Calvin He

The Effect of Iron Supplements and CaEDTA on Locomotion and Reaction Times in *C. elegans*

3018CHEA: Kevin Sadhu

Inducing Dental Pulp Stem Cell Differentiation Using Novel PCBM Poly (4-Vinylpyridine) Electrospun Fiber Matrices for Tissue Engineering Applications

3018CHEB: Stephen Lee And Fred Chu

Optimizing Dye-Sensitized Solar Cells through the Co-Adsorption and Tri-Adsorption of Natural Dyes and the Application of a Copper Infrastructure and Their Effectiveness in the Electrotaxis of *C. elegans*

5023ENVB: Ryan Thorpe and Rachel Chang

The Use of a Potentiostatic CVD Graphene Biosensor with p- p Interacted Lactate Oxidase to Detect Lactate Presence from *E. coli* in Water

5023ENVB: Sung Won Seo, Ashley Kim And Emma Fleishman

Utilizing Wastewater as a Nutrient Source for *Chlorella vulgaris*: Removing Nitrate and Phosphate Ions from Wastewater and Producing Biodiesel with Excess *Chlorella vulgaris*

Freeport High School

2010BIOA: Amanda Roque-Tobar And Selena Muzac

Structural Analysis of the Laccase Family of *Cryptococcus neoformans* in Relation to Melanin Production and Function

2011BIOB: Zoe Stetson

Using Genetics and Cellular Morphology to Identify Cells Early in the Progression of Differentiation

2011BIOB: Nickolas Contreras

The Effect of Ultraviolet Radiation and 10-20 nm Gold Nanoparticles on Regeneration of *Lumbriculus variegatus*

2011BIOB: Kynley Crouch

Should we be Concerned about Levels of Mercury in Our Pet Food?

Freeport High School

2011BIOB: Ashley Hernandez

Is Environmental Pollution Resulting in Biodiversity of Indigenous Species from the North and South Shores of Long Island?

3019CHEB: Gabriel Lemmie

The Relationship between Gold Nanoparticle size and Ferrofluid

3019PHYA: Luis Lopez Cardona

"Are 20-30nm Gold Nanoparticles Capable of Improving the Efficiency of Commercial Solar Panels?"

3019CHEB: Michelle Luongo

Is an extract of Dandelion Root Effective in Treating Rapidly Dividing Cells?

5023ENVB: Joseph LaRocca

Evaluating Efficient Means of Producing Electricity Using Magnets and Gold Nano Particles

4019PHYB: Rajiv Chanda

The Relationship between Temperature and Radius of SX Phe

3020PHYB: Leah Hochman

What is the Optimal Concentration of Sodium Chloride Required to Produce Nanoparticles of a Specific Size?

Elmont High School

5023ENVA: Augusta Uwamanzu-Nna

Rheological characterization of attapulgite nanoclay modified cement slurries for oil well cementing applications

2012BIOB: Ifeoluwa Tugbobo

Mechanosensory and locomotor analysis of Acorus calamus treatments in a C. elegans Schizophrenia model

2012BIOB: Iyinoluwa Tugbobo

Pyrrroloquinoline quinone treatment of tdp-1 C. elegans: an ALS model

2012BIOB: Michael Lawes

Dithiothreitol treatment of Parkinson's disease in Caenorhabditis elegans strain SJ4100

3018CHEA: Joel Lima

Conformation and Stability of Recombinant Spider Silk: Investigation of Osmolytes and denaturants

2012BIOA: Selamawit Moges

Evaluation of Pegylated and un PEGylated turtle (Chelonia mydas and Caretta caretta) hemoglobin: development of a hemoglobin based oxygen carrier

Herricks High School

2013BIOA: Naeha Pathak

GSK3B Modulates Chemoresistance in Epithelial Ovarian Cancer

North Shore Hebrew Academy High School

5003BEHA: Neda Shokrian

An Exploratory Analysis of Article and Twitter Factors Associated with Online Reach in a Biomedical Journal

3020CHEA: Shani Kahan

A Novel Bioorthogonal Trans-synaptic Tracer for Neural Circuitry

2013BIOA: Arielle Rothman

Development of Plasmids Containing Immune Suppressant Genes to Protect Transplanted Stem Cell-Derived Beta Cells in Type I Diabetics

6026HC ENGB: Scott Soifer

Heat Free Car (Life-Saver)

2013BIOB: Gabriella Orbach And Elior Levy

Can X-Ray Radiation Turn Unsafe Water into Drinkable Water?

6026HC ENGB: Kayla Lieb And Shaina Lavi

Stay Safe

Garden City High School

1003BEHB: Seunghyun Woo And Mairead Pfaff

Analysis of Different Learning Methods

Frank Carey High School

2013BIOB: Shaina Zafar

The Development of Escherichia Coli cultures in the assessment of Gastric Digested Probiotics

2014BIOB: Maira Khan

An Analysis of the Type of Plant Species on Heavy Metal Removal

Commack High School

1003BEHB: Christine Kim And Julianna Sikorski

The Effect of Mental Imagery on Competitive and Recreational Figure Skaters

1003BEHA: Caitlin Passaro

Stress, Compassion Satisfaction/Fatigue and Burnout in Mental Health Professionals

2014BIOB: Ruslan Burns, Gabriel Chan, And Paul Moon

How Philodina Rotifers Survive in Extreme Conditions by Transitioning Between the Animated and Tun States

2014BIOB: Alyssa Byrnes, Bridgette Flynn And Pragati Muthukumar

The Effect of Different Substances on Regeneration in Planaria

2014BIOB: Cathleen Deutsch And Daniel Czop

The Effect of Laundry Detergent on the Regeneration of Blackworms

2015BIOB: Jessica Fecht,

Light and its Relationship to Phototropism

2015BIOB: Alexa Karadenes

Light and its Relationship to Phototropism

2015BIOB: Austin Heller And Schare

Using Allometry to Describe the Phenotypic Adaptation of Bean Plants (*Phaseolus vulgaris*) to Simulated Wind

2015BIOB: Charity Russell

Do Planaria (*Dugesia antillana*) Exhibit Addictive Withdrawal Responses after Exposure to Sucrose and Condition Place Preference to Sucrose?

2016BIOA: Lauren Tuffy

Is there a Difference in the Density of Antibiotic Resistance in the Rhizosphere Compared to the Non-Rhizosphere?

2016BIOA: Daniel Choi, And Johann Yang

The Effect of Ginger (*Zingiber officinale*) on the Neuroinflammation Precipitated by Environmental Copper

2016BIOA: Julia Cicalo, Megan Padgett And Kelly Page

An Exploration of the Similarities and Differences of the Structural Components of Both Computational and Experimental Protein Methods

2016BIOA: Jordan Cooper

Evaluation of the NF- κ B Pathway after BCL6-BTB Inhibition in Activated B-Cell Diffuse Large B-Cell Lymphomas

Commack High School

2017BIOA: Lucas Marmorale

The Structure of the Nuclear Pore Complex in Primary and Metastatic Prostate Cancer Cells

2017BIOA: Vincent Pennetti

Dedifferentiation of Clover (*Trifolium repens*) Plants

5025ENVA: Ryan von Hof

An Economic and Stoichiometric Investigation into the Viability of Green Diesel

5025ENVB: Jake Gelfand ,Taylor Lipton And Sam Morris

Heating a Home Using Boiler Emissions

5025ENVB: Raymond Janis And Kyle Mitra

Curbing Storm Surge Inundation: Computational Fluid Dynamics Simulation for Cost and Damage Reductions New York City Subway Stations

4020PHYA: Ibrahim Khan

Dampening of Resonance Vibration on Bridge Platforms

Douglas McCarthur High School

4025PHYA: Leanne DeMartino

Nassau County facilities and Demographic

4020PHYB: Casey Butcher

Running on Running

Saint Anthony High School

1003BEHB: Christopher Mendoza And Nicolas Zaferiou

Working Hard or Hardly Working?

1003BEHB: Olivia Gatto Sara Mullan And Rebecca Parmentier

Does Hand Dominance Have an Impact on School Performance?

1004BEHB: Devin Link, Lillie Renck And Maggie Riley

The Correlation Between Amount of Homework Completed and Academic Performance

1004BEHB: Juliet DeNapoli ,Sydney Zagar And Samantha Borruso

How Gender Affects Academic Motivation

1004BEHB: Rachel Fine And Ashley Mullan

How Common is Common Sense?

1004BEHB: Hannah Graff

An Analysis of Underlying Causes of the Underrepresentation of Females in STEM Undergraduate Majors and Careers

Saint Anthony High School

1005BEHB: Jared Meyers

The Effect of Socioeconomic Factors on Studying Habits and Preferences

1005BEHB: Christopher Koch

The Effects of Problem Solving and Social Skills on the Gender Gap in STEM Fields.

1005BEHA: Gavin McGuire

A Comparative Study Regarding the Effects of Individualized Learning Strategies and Collaborative Learning Strategies

1005BEHA: Jack Stanton

Correlations between Religious and Pro-Social Behaviors; An Examination of Factors Contributing to the Development of Self-Esteem and Compassion in Adolescents

2017BIOB: Nick DeFrancisco

Examining the Effects of CD73/CD39 Inhibition on Bone Marrow Derived Mesenchymal Stem Cells when in Co-culture with Macrophage Cells

2017BIOA: Katrina Avilla

The Effect of Melatonin on Bloom's Syndrome cells treated with Doxorubicin Hydrochloride

5026ENVA: Christopher Mikolaitis

The Impact of *Crassostrea virginica* on Water Quality and Phytoplankton Concentration

Valley Stream North High School

2017BIOA: Krishna Pandit

The risk of Chronic Kidney Disease Progression

Lawrence High School

1006BEHB: Barbara Williams

The risk of Chronic Kidney Disease Progression

Projects Categories

1. Behavioral and Social Science
2. Chemistry
3. Physics
4. General Biology
5. Earth and Environmental Science

Award Ceremony

Sunday, May 15, 2016

At

Levittown Hall,
201 Levittown Parkway,
Hicksville, NY 11801

12 to 3 pm

Keynote Speaker:
Amol Punjabi

Intel Science Talent Search 2016

Winner for Basic Research for developing software
that could help drug makers develop new
therapies for cancer and heart diseases

Lunch will be served

Self
Empowerment:



Education:



Good
Health:



Ekal Abhiyan

Fostering vibrant markets in marginalized villages through empowerment rooted in education



At the core of our mission is an empowered, aware individual living with dignity while contributing to society at large.

Vibrant
Livelihoods:



Good
Governance:



*Our Daughters our
Future.....*

