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**56th Hawai'i State Science & Engineering Fair
April 7-9, 2013 at the Hawai'i Convention Center
Top Division Winners**

SENIOR DIVISION:

1st Place

Viola Mocz, Grade 11, Mililani High School: "**Helicotoroidal Topology of Leptons, Quarks, and Hadrons**"

2nd Place

Nathan K Lee, Grade 11, Kamehameha School, Kapalama: **The Intersection of the HGF/c-Met and COX-2 Pathways in Lung Cancer**

3rd Place

Matthew Thomas Sturm, Grade 10, Baldwin High School: **Frictionless Floating Train: Part 3**

Honorable Mentions:

Reid T Akana, Grade 11, Kamehameha School, Kapalama: **Effects of Fractionated Melissa officinalis Extracts on Leukemia**

Brandon Kinard, Grade 10, Mililani High School: **Engineering a Low-Cost Alternative Navigational Aid for the Visually Impaired**

Aaron AK Ponce, Grade 12, Kamehameha School, Kapalama: **Identifying the Mechanisms of AFP and GPC3 Internalization by Hepatocellular Carcinoma (HCC) Cells**

JUNIOR DIVISION:

1st Place

Anne A Nakamoto, Grade 7, Waiakea Intermediate School: **Two Bees or Not Two Bees...(Pollinating invasive Fireweed)?: That is the Question
A Study of Native Hylaeus Bee and Introduced Honey Bee Visitations to Flowering Fireweed as Compared to the Native Mamane Tree**

2nd Place

Benjamin Weiss, Grade 7, Hawaii Technology Academy: **Using a Fibonacci Curve to Increase Wind Turbine Output**

3rd Place

Chayse I Tamaki, Grade 8, Iao School: **Dose-Response Testing of Marine Algae with Antibacterial Properties**

Honorable Mentions:

Felix C Peng, Grade 8, Waiakea Intermediate School: **Twin Disasters: The Effects of Global Warming on Ocean Acidification**

Sam Cadotte, Grade 6, Hawaii Technology Academy: **Improving Solar Panel Efficiency**

Celeste Jongeneelen, Grade 7, Home School: **Disk-O Stars**