BioSpectrum the business of Bio & Health Sciences

Toshiba and NSTA announce 2015 Winners of ExploraVision

04 May 2015 | News | By BioSpectrum Bureau

Toshiba and NSTA announce 2015 Winners of ExploraVision

From a hearing aid powered by the body's thermal energy to an external microbial cleansing device designed to capture pathogens in the blood stream, the young winners of the Toshiba/NSTA (National Science Teachers Association) ExploraVision competition have dreamed up a wide array of innovative technologies that could help build a better future.

The program has announced the national winners of the world's largest K-12 science and technology competition, which is designed to build problem-solving, critical thinking and collaboration skills that are central to the Next Generation Science Standards.

The Toshiba/NSTA ExploraVision program challenges participants to imagine what technology might be like in 20 years. Students work in teams to propose ideas for innovative future technology based on a challenge of what already exists, simulate real scientific research to outline how they plan to test their idea, and build websites to further illustrate and communicate their concepts.

Since its inception in 1992, nearly 350,000 students have participated in the ExploraVision program. This year, 5,041 team projects were entered in the competition representing 15,473 students from across the United States and Canada.

"This year marks the 50th anniversary of Toshiba's operations in the United States, and throughout this period, the company has maintained a strong commitment to technological innovation. The ExploraVision program represents this ideal, and continues to be the cornerstone of Toshiba's Corporate Social Responsibility initiative in North America. We are extremely proud to see ExploraVision continue to succeed in its 23rd year, inspiring students to explore and develop a passion for the STEM subjects that are vital for our future," said Mr Masaaki Osumi, Toshiba America's chairman and CEO, and Toshiba's corporate representative for the Americas.

"The caliber of the projects entered in the Toshiba/NSTA ExploraVision competition serve as an inspirational reminder of the ingenuity that comes from igniting students' natural curiosity in science. These students are developing innovative solutions to show how our society can do things better and more efficiently, and we couldn't be more excited to showcase their projects. We congratulate the national winners and commend all of the teachers for engaging and empowering their students to make a real difference in the world around them," said Dr Juliana Texley, president, NSTA.

This year, several winning student teams focused on disease prevention and improving treatment for the disabled. Tenth grade students from Salem, Oregon developed The Suture of the Future device, which uses Programmable Bio-Scaffolding (PBS) technology and stem cells to help patients who take blood thinners heal quickly and safely from open wounds. PBS technology accelerates the healing process by precisely scaffolding wounds by binding edges of the cut together with premature stem cells.

A team of 10th grade students from Duluth, Georgia, created the External Microbial Cleansing Device (EMCD). The EMCD functions with the aid of magnetic nanobeads attached to artificially engineered human opsonin-mannose-binding lectins (MBLs) that have the capability to capture a wide variety of pathogens in the blood stream. With the availability to deliver enriching nutrients, monitor blood, and develop medical reports, the technology will drastically improve the outcome of those with pathogenic diseases.

National winners also focused on making the world more environmentally friendly. Fourth grade students from Land O'Lakes, Florida, created The Green Tablet in an effort to reduce e-waste generated each year from the disposal of electronic devices.

Members of the four first place ExploraVision national winning teams will each receive a $10,000 US Series EE Savings Bond (at maturity). Members of second place national winning teams will each receive a $5,000 US Series EE Savings Bond (at maturity).