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Anurudh's VAXXWAGON allows for vaccine delivery to remote locations keeping the vaccine at proper temperatures so the vaccines remain viable. (Photo: Barron Prize for Young Heroes)

Barron Prize honors Young Heroes

By Judith Stanford Miller, SNN

May 31, 2017 - This fall the winners of the 2017 Gloria Barron Prize for Young Heroes will be announced. Meet Anurudh Ganesan, one of the 2016 winners, who invented the VAXXWAGON to keep vaccines at proper temperatures en route to remote locations.

The Barron Prize was established in 2001 by T.A. Barron, an author. The award recognizes and celebrates inspiring, young leaders, ages 8 to 18, from diverse backgrounds in North America who have made a significant positive impact on people, their communities, and the environment.

Since 2001, the Barron Prize has awarded more than \$500,000 to hundreds of young leaders, according to information from the Barron Prize. The top fifteen winners each receive \$5,000 to support their service work or higher education.

"Nothing is more inspiring than stories about heroic people who have truly made a difference to the world," Mr. Barron said in a press release. "The goal of the Barron Prize is to shine the spotlight on these amazing young people so that their example will encourage others to take action."

One of the 2016 winners was Anurudh Ganesan, 16, of Maryland, who invented the VAXXWAGON. It's a wheel-powered cooling system that keeps vaccines viable during the final stages of transport to remote locations. All vaccines are recommended to be kept between 2 degrees Centigrade (C) and 8 degrees C to remain effective. However, keeping vaccines cool while being delivered to remote locations around the world is not an easy task.

One example of a crucial vaccine needed around the world is the polio vaccine. Developed in 1955, the vaccine is given in four doses to young children to prevent polio, a viral disease that spreads from person to person causing a wide range of symptoms from very mild to very severe. The most severe outcome of a polio infection is paralysis, either temporary or permanent, from the virus infecting the brain and spinal cord.

President Franklin D. Roosevelt had permanent paralysis of both legs following a polio infection he acquired as a young man. He was never able to walk on his own again.

According to the Centers for Disease Control and Prevention (CDC), polio still has no cure. Vaccination is the best way to protect people and is the only way to stop the disease from spreading. Once almost eradicated, polio remains a concern today. Polio continues to circulate in three countries: Afghanistan, Pakistan, and Nigeria, according to the CDC.

Anurudh became interested in vaccines because of his own experience as an infant in India.

Student News Net email interview with Anurudh

Through an email interview with Student News Net, Anurudh answered the following questions:

Student News Net: What was the inspiration for your inventions?

Anurudh: When I was an infant, my grandparents had to carry me ten miles to a remote location in Southern India, my birthplace, to vaccinate me. When they got there, the vaccines were useless because they were exposed to high temperatures without being refrigerated.

After my parents told me the story of how I almost did not receive a basic polio vaccine. I was determined to do some research to see if this problem is still prevalent in the world. According to UNICEF, 1.5 million children die annually from vaccine-preventable diseases. This can mean that the vaccines are not being properly refrigerated when they are being

transported and/or the places that the children are living in are remote.

This led me to find a solution to this problem without the use of precious resources such as ice or electricity. After a lot of brainstorming, I came up with the first iteration of VAXXWAGON, a refrigerator that runs on no ice and no electricity that can be used to transport vaccines to remote locations and clinics.

Student News Net: What countries will greatly benefit from VAXXWAGON? How are vaccines transported now to remote locations?

Anurudh: Countries that have warm climates and do not have easy access to resources such as water and electricity will greatly benefit from VAXXWAGON. Currently, vaccines are being transported with icepacks and electricity both of which are scarce resources in developing countries. VAXXWAGON will not need any ice or electricity to keep vaccines cold while in transport to remote locations and clinics.

Student News Net: Who was your most important mentor guiding you along the process of inventing VAXXWAGON? Describe that process.

Anurudh: The most important mentors guiding me through the process of inventing VAXXWAGON were my parents. They provided me with moral support and always encouraged me to push through the multiple development and research failures that I encountered when I was building the various iteration of VAXXWAGON. Without them, I would not be able to invent VAXXWAGON so that it could save lives.

Other 2016 Barron Prize winners include:

1. Rachel Ritchie, age 12, of Kentucky, who has worked tirelessly for more than two years to raise \$85,000 of the \$100,000 needed to build a handicapped accessible playground in her community to benefit children and wounded veterans.
2. Riley Gantt, age 15, of California, who created Rainbow Pack, a non-profit that has gifted over 9,500 new backpacks filled with school supplies to Los Angeles elementary school students in need.
3. Ryan Stackpole, age 17, of Connecticut, who founded TechCorps: Geeks for Good to teach students in the developing world and in impoverished areas of the U.S. how to use off-the-shelf parts to build low-cost computers for their schools.
4. Samantha Petersen, age 19, of Connecticut, who founded SHIFT Scoliosis, a non-profit committed to eliminating the late diagnosis of scoliosis. She and her team have screened over 4,000 underserved children and have taught over 10,000 adults about the signs of the disease.

For more information, visit the [Gloria Barron Prize for Young Heroes](#).