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U.S. Students Win 2017 Stockholm Junior Water Prize for Project to Detect, Purify Water for Bacteria

ALEXANDRIA, Va. – Two U.S. high school students – Rachel Chang and Ryan Thorpe of Manhasset, N.Y. – have won the world’s most prestigious competition for water-related research for their novel approach to detect and purify water contaminated with bacteria.

Chang and Thorpe were awarded the 2017 Stockholm Junior Water Prize on August 29 in Stockholm for their project that judges believe could prevent waterborne diseases and expand potable water throughout the world.

Noting that waterborne diseases cause 3.4 million deaths annually, Chang and Thorpe constructed a system that detects and purifies water contaminated with E. coli., Salmonella, Cholera, and Shigella more rapidly and sensitively than conventional methods. Their system detects as little as one reproductive bacteria colony per litre instantaneously and eliminates bacterial presence in approximately 10 seconds. In contrast, conventional methods have detection limits of up to 1,000 colonies and take one to two days.

“The winners used fundamental science and an eloquent way to address pathogenic bacteria in drinking water,” said Victoria Dyring, chair of the Stockholm Junior Water Prize jury. “The project has the potential to revolutionize the future of water quality. The winners displayed exceptional intelligence, enthusiasm, and passion for water and human health.”

The Stockholm Junior Water Prize competition is organized by the Stockholm International Water Institute and sponsored by Xylem Inc., and brings together the world’s brightest young scientists to encourage their continued interest in water and the environment. Thousands of students in countries all over the globe participated in competitions for the chance to represent their nation at the international final held during the World Water Week in Stockholm. Teams from 33 countries were represented in the competition. Chang and Thorpe earned the trip by winning the U.S. Stockholm Junior Water Prize in June. In the U.S., the Water Environment Federation and its Member Associations organize the national, state, and regional competitions with support from Xylem Inc.

“WEF is extremely proud of Rachel and Ryan, who have impressed us with their intelligence and interest in protecting our precious water resources,” said Eileen O’Neill, WEF Executive Director. “All of the students in this competition give us great confidence in the future of water science and research.”

The prize was awarded to Chang and Thorpe by H.R.H. Crown Princess Victoria of Sweden, the Patron of the Stockholm Junior Water Prize, and included \$15,000.

Photo of Chang and Thorpe with HRH Crown Princess Victoria of Sweden:
https://www.flickr.com/photos/siwi_water/36770218731/

View an interview with Chang and Thorpe: https://siwi-mediahub.creo.se/siwi-sofa/2017/siwi_sofabrmeet_the_sjwp_winner_founding_sponsor_xylem_ceo

For more information about the international Stockholm Junior Water Prize:

<http://www.siji.org/prizes/stockholmjuniorwaterprize/>

For more about the U.S. Stockholm Junior Water Prize: <https://www.wef.org/sjwp/>

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About WEF

The Water Environment Federation (WEF) is a not-for-profit technical and educational organization of 34,000 individual members and 75 affiliated Member Associations representing water quality professionals around the world. Since 1928, WEF and its members have protected public health and the environment. As a global water sector leader, our mission is to connect water professionals; enrich the expertise of water professionals; increase the awareness of the impact and value of water; and provide a platform for water sector innovation. To learn more, visit www.wef.org