

Countdown to the introduction of a norovirus vaccine

February 17 2012

Noroviruses are believed to make up half of all food-borne disease outbreaks in the United States, causing incapacitating (and often violent) stomach flu. These notorious human pathogens are responsible for 90 percent of epidemic nonbacterial outbreaks of gastroenteritis around the world.

On Friday, February 17, 2012, Charles Arntzen, ASU Regents' professor, and professor in the Center for Infectious Diseases and [Vaccinology](#) at the Biodesign Institute will deliver a lecture entitled Countdown to the Introduction of a Norovirus Vaccine. The talk will take place during the American Association for the Advancement of Science's annual meeting in Vancouver, BC.

Arntzen's lecture is part of a special topical seminar: Norovirus—The Modern Scourge of Food and Family.

The seminar title is well chosen—noroviruses are extremely contagious, readily passing from person to person, particularly among those living in the closed quarters of dormitories, nursing homes, child care centers, military bases, and cruise ships. Infections can result from contact with virus particles dispersed in the air or from the ingestion of even tiny quantities of contaminated food. Further, even vigorous hand washing or the use of alcohol wipes or gels may be ineffective in combating norovirus transmission. Noroviruses can persist in a transmissible state for days or weeks even in those who are asymptomatic or are recovering from the disease.

Arntzen will speak about the prospects for a successful vaccine to prevent norovirus infection, based on Virus-Like Particles (VLPs), which are able to mimic actual noroviruses, stimulating a robust immune response, without producing disease symptoms. Due to the frequent mutation of noroviruses, vaccine candidates will need to be adaptable for alternate strains of the pathogen—much the way current vaccines for influenza are modified to keep pace with viral evolution. New strategies for formulating and biomanufacturing such vaccines offer renewed hope for norovirus vaccine development in the near future.

Provided by Arizona State University

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