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**High Hydrostatic Pressure Research Will Inactivate Hepatitis A Virus in Shellstock Oysters**

*Infectious disease research part of \$119K grant from NOAA/Virginia Sea Grant*

**Blacksburg, VA** – Virginia Sea Grant announced an award of \$119,000 to study the effects of high hydrostatic pressure (HPP) in inactivating Hepatitis A virus in both shucked and unshucked oysters. The project, led by Dr. Daniel Holliman, MD, and Ms. Laura Douglas will identify one or more high pressure processing schedules resulting in inactivation of the virus.

Hepatitis A virus (HAV) is one of the more serious illnesses transmissible by shellfish. Worldwide, HAV is responsible for over 1.5 million cases of disease each year, with 260,000 cases and over 100 deaths in the United States. Hepatitis A infection is characterized by fatigue, malaise, fever, loss of appetite, nausea, vomiting, joint and muscle aches, and abdominal pain, coupled with the onset of jaundice, a yellowing of the whites of the eyes, and dark urine. The disease generally runs its course in two months, but can linger as long as six. While survival rates for Hepatitis A are above 99%, the disease can be very dangerous for infants, the elderly, immunosuppressed persons, and those with existing liver disease.

Bivalve shellfish, such as oysters, have been demonstrated to concentrate pathogenic organisms from their environment. In some cases, sewage contamination of harvesting areas, either from coastal runoff or ship discharges, has been shown to result in HAV contamination of oysters. Several studies have demonstrated remarkable concentration and persistence of HAV in shellfish exposed to the virus through their surrounding seawater. Even with depuration, HAV may persist in oysters for several weeks after exposure. The virus is also fairly resistant to heating and may remain viable in shellfish after up to five minutes of steaming.

For these reasons, high hydrostatic pressure treatment of raw oysters is especially appealing to oyster processors and distributors, as well as public health officials. HPP makes it possible to eradicate or inactivate pathogens while still delivering a ‘raw’ product to the consumer.

The study will benefit processors and distributors by mitigating their food safety liability, but most importantly, will also help protect consumers from foodborne infectious disease.

**For more information, contact:**

Angela I. Correa, Public Information  
(540) 231-2075  
acorrea@vt.edu