

## Horseshoe Crab Action Month: Sample Op-Ed

### **Vaccine Testing Relies on Horseshoe Crabs, but a Better Way Exists**

A species older than the dinosaurs is under attack – the iconic American Horseshoe Crab.

The energy-rich eggs of horseshoe crabs, deposited under the light of full spring moons on the Atlantic Coast, fuel the entire marine ecosystem. Yet over the years the horseshoe crab has endured mass killing for use as fertilizer, overharvest for use as bait by commercial fishing interests, and now widespread bleeding for biomedical safety testing of vaccines and therapeutic agents to battle the COVID-19 pandemic.

For decades, the content of specialized cells found in the bright, blue blood of horseshoe crabs has been the gold standard in testing for toxicity in vaccines and other biomedical products. But today, a safe, consistent, and animal-free alternative exists. It is known as recombinant Factor C – or simply rFC.

Last year, a group of some 35 healthcare and conservation interests formed a group known as the Horseshoe Crab Recovery Coalition. The Coalition's goal is full restoration of horseshoe crab populations by 2030 and is calling May Horseshoe Crab Action Month to call attention to the challenges this ancient species faces.

Largely from man-made consequences, horseshoe crab populations are suffering. In the Delaware Bay, which has the largest population of crabs in the world, crabs declined by *two-thirds* from two decades ago and have yet to recover. Crab populations outside the Delaware Bay are believed to have fared even worse.

Long-distance migratory shorebirds depend on horseshoe crab eggs to fuel their journeys. Some 150,000 Red Knots once stopped over in Delaware Bay each spring, but today, less than a third remain, and the bird is now listed as threatened under the Endangered Species Act. Overall, shorebird populations have declined by 70 percent since 1973. Restoring horseshoe crabs is one of the best ways to help shorebirds thrive in the future.

In a technologically advanced society, we can do better. The organizations that set quality control standards for the biopharmaceutical and medical device industries around the world recognized this when they acknowledged rFC as an equivalent alternative to the substance derived from the blood of horseshoe crabs – that is, everywhere except the United States.



We certainly share respect for the role the horseshoe crab has played, not just in human health, but across ecosystems on the Atlantic Coast. We believe there is a better path forward that does not contribute to the further decline of the American Horseshoe Crab, Red Knots and other shorebirds, or numerous other nearshore species. Please call on your elected officials, the US Food & Drug Administration, and the US Pharmacopeia to immediately remove barriers to the adoption of this modernized way of testing – a big win for conservation without jeopardizing public health.