Second University of Colorado vaccine approved by FDA for shingles

October 28 2017

The Centers for Disease Control's Advisory Committee on Immunization Practices recommended new treatment practices Wednesday for shingles based on a vaccine initially developed at the University of Colorado Health Sciences Center, now the University of Colorado Anschutz Medical Campus.

Paul Tabor, Associate Director of CU Innovations at the University of Colorado Anschutz, said, "The Shingrix vaccine is an important advance in the prevention of a very painful disease that affects millions of people each year and disproportionally impacts patients over 50 years old."

Shringrix received approval by The Food and Drug Administration last week and is the second vaccine approved to prevent Shingles. The existing drug treatment, Zostrafax, also was developed at the University of Colorado and has been prescribed in the US since 2006.

According to the CDC, one in three people in the US will contract shingles during their lifetime. Shingles is caused by the Varicella Zoster virus, which also causes chicken pox. It presents as a painful, itchy rash that is particularly debilitating for the elderly and people with weak immune systems. It causes blisters that last for several weeks and cause shooting, burning pain.

The virus remains latent in the body, even if contracted as chicken pox in youth, to present as shingles later in life.

"We are proud that this breakthrough was initially discovered and developed at the University of Colorado," said Kimberly Muller, Managing Director of CU Innovations. "It is a powerful example of how CU, CU Innovations and its partners translate cutting-edge research into products that significantly improve lives."

Shingrix is a recombinant plasmid vaccine based upon a truncated Varicella-Zoster virus glycoprotein which is effective at immunizing humans against shingles. It stimulates an immune response that can be more powerful and longer lasting than current therapies. The technology was developed by former CU professor of neurology and microbiology Abbas Vafai in the 1980s.

"It was a long road to get here, but the obstacle was because it is a unique vaccine," Vafai said. "The vaccine involves single-gene genetic engineering. The vaccine contains a single viral protein purified in the lab - not the whole virus."

The CU Board of Regents was granted two patents related to Shingrix, both now assigned to a commercial partner.

Don Elliman, Chancellor of the University of Colorado Anschutz Medical Campus, said, "The CU Anschutz Medical Campus has a history of rigorous research and innovation, as the development of these vaccines illustrates. The pace of these innovations is only quickening. Last year alone, more than 20 patents were granted, six more start-up companies were formed and invention disclosures increased by 125%. We're continuing the CU Anschutz tradition of translating research into practice, leading to important discoveries that improve lives."

Provided by CU Anschutz Medical Campus