Curiteva Gets FDA Nod for Inspire Porous PEEK Cervical Interbody System

2023-02-23

The combination of HAFUSE nanotechnology surface treatment and novel porous PEEK structure will help in cell attachment, proliferation, and healing in preclinical animal and in vitro studies.

Curiteva has received its first US Food and Drug Administration (FDA) 510(k) clearance for its 3D-printed PEEK implant, dubbed Inspire Porous PEEK Cervical Interbody System with HAFUSE Technology.

The company has used a proprietary, patented Fused Filament Fabrication 3D printer to design the Inspire platform. The 3D printer has been designed, programmed, and built by Curiteva.

According to the firm, the additive method produces a fully interconnected and integrated porous structure that spans the entire implant.

Curiteva said that it enhances radiographic evaluation, promotes osseointegration, and provides improved biomechanics.

In pre-clinical animal and in vitro investigations, the first-to-market combination of the HAFUSE nanotechnology surface treatment and new porous PEEK structure produces a hydrophilic, bioactive environment for cell adhesion, proliferation, and healing.

Curiteva chief technology officer Eric Linder said: “The distinctive Inspire implant technology enabled by our innovative 3D printing process incorporates an engineered lattice structure with fully interconnected porosity exhibiting superior mechanical strength and achieving a

modulus of elasticity closely matching human cancellous bone.”

The privately held technology and manufacturing company have plans to commercially launch the implant in key academic centres across the US.

Curiteva CEO Mike English said: “Curiteva is pioneering 3D printing of porous PEEK implants with a bioactive surface to revolutionise how engineered structures and implant biomaterials enhance healing and improve patient outcomes.

“We are uniquely positioned to control the product development process of traditional implants and 3D printed devices from inception to commercialization and scale to meet market demand inside our 35,000 sq. ft production facility in Huntsville.”

Read the original article on NS Medical Device.