



Stratasys Introduces BioMimics – Highly Realistic, 3D Printed Models of Human Anatomy for Physician Training and Medical Device Testing

- Unveiled at RSNA 2017, 3D printed anatomical structures with disease pathology deliver highly realistic look and feel to accelerate medical guidance, testing, and education
- Engineered in conjunction with top researchers and manufacturers, service initially includes fully-functional bone and heart models – with vascular structures expected in early 2018
- Eliminating restrictions associated with research on animal, mannequin, or cadaver models – BioMimics effectively mirrors intricacies of both soft tissue and hard bones via multi-material 3D printing
- Available now in North America through Stratasys Direct Manufacturing, see BioMimics in action at RSNA 2017 – North Hall B, #7565

MINNEAPOLIS & REHOVOT, Israel--(BUSINESS WIRE)-- [Stratasys](http://www.stratasys.com) (NASDAQ: SSYS), a global leader in applied additive technology solutions, today unveiled BioMimics – a highly advanced capability to 3D print medical models that are engineered to meet demands of the industry's leading hospitals, researchers and medical device manufacturers. Offered initially in North America as a service through Stratasys Direct Manufacturing, BioMimics provides incredibly realistic, functionally-accurate 3D printed replicas of complex anatomical structures - empowering more effective medical training, education and advanced device testing.

This press release features multimedia. View the full release here:

<http://www.businesswire.com/news/home/20171127005421/en/>

Eliminating restrictions associated with training, research and testing on animal, mannequin, or cadaver models - BioMimics effectively mirrors the intricacies of both soft tissue and hard bones via multi-material 3D printing. Combining Stratasys' proven PolyJet 3D printing technology alongside new materials and software, organizations can create specific 3D printed models that match what professionals encounter during live medical scenarios. Additionally, OEMs can gain real-time feedback on device performance in realistic environments - prior to actual deployment.

"Testing innovative medical devices, teaching principles of surgery, providing continuing medical education, and demonstrating new products to clinicians all require 'bench-top' models that simulate human bodies and diseases. Much like simulation and co-piloting



True-to-life anatomical structures: A pedicle screw driven into 3D printed model of a patient's spine. (Photo: Business Wire)

builds expertise for pilots, medical practitioners hone skills throughout their careers to provide exceptional care,” said Scott Rader, GM of Healthcare Solutions at Stratasys. “The challenges of today’s solutions include animal models that only approximate human anatomy, and cadavers that don’t retain the live-tissue feel and often lack targeted pathology.”

Rader continued, “BioMimics is a revolution in medical modeling, capitalizing on advanced 3D

printing techniques for clinically accurate representations of complex human anatomies - from microscopic patterns of tissue to replicating soft to hard texture of body structures. Armed with unmatched realism of BioMimics, researchers, educators and manufacturers can finally utilize the tools to prove out new ideas long before clinical trials, and demonstrate innovations to the skilled physicians who rely on them.”

Available today in North America through Stratasys Direct Manufacturing, BioMimics is initially designed to model the complexities of heart and bone structures – with vascular anatomies expected in early 2018. Engineered alongside the industry’s top researchers and manufacturers, the service empowers customers to either capitalize on a variety of existing BioMimics models, or design enhanced anatomical structures that match distinct clinical requirements.

“The Jacobs Institute has been using Stratasys 3D printing solutions to replicate vascular anatomy for many years. The BioMimics capabilities Stratasys has now developed enable a level of biomechanical realism and clinical sophistication not previously available in any vascular model.” said Dr. Adnan Siddiqui, Chief Medical Officer at Jacobs Institute, Vice-Chairman and Professor of Neurosurgery at University of Buffalo Neurosurgery. “BioMimics will enhance medical innovation in vascular disease by enabling improved pre-clinical validation of new devices and clinically realistic training simulators.”

“As one of the top research and pediatrics hospitals in Canada, SickKids is committed to unprecedented innovation to positively impact the well-being of children around the world. We have developed new training programs through 3D printing that allow surgeons to

practice procedures on replicas of real patient's pathology," said Shi-Joon Yoo, MD, PhD, Cardiac Radiologist at the Hospital for Sick Children and Professor of Medical Imaging and Pediatrics at University of Toronto. "BioMimics enhances the realism and clinical validity of the models even further – allowing the surgeons to develop the techniques and skills that will translate into live patient cases."

BioMimics is being demonstrated for the first time at RSNA 2017 – the 103rd Scientific Assembly and Annual Meeting of the Radiological Society of North America. Stop by Stratasys' booth – North Hall B, No. 7565 – to see BioMimics in action.

Available Multimedia Assets

[Video: Case Study at Hospital for Sick Children](#)

[Video: Using BioMimics for Surgical Planning](#)

[BioMimics web page](#), including:

- Written case study
- BioMimics Brochures

About Stratasys Direct Inc.

Stratasys Direct Inc. is an indirect subsidiary of Stratasys Ltd. Stratasys Direct Manufacturing is a leading provider of 3D printing and advanced manufacturing services utilizing the latest technologies and decades of experience. With a broad range of additive and conventional manufacturing services, Stratasys Direct Manufacturing assists companies at all stages of product development to bring better products to the market faster. Stratasys Direct Manufacturing has more than 500 employees across seven manufacturing facilities in the United States. Online at: www.stratasysdirect.com.

About Stratasys

Stratasys (NASDAQ: SSYS) is a global leader in applied additive technology solutions for industries including Aerospace, Automotive, Healthcare, Consumer Products and Education. For nearly 30 years, a deep and ongoing focus on customers' business requirements has fueled purposeful innovations—1,200 granted and pending additive technology patents to date—that create new value across product lifecycle processes, from design prototypes to manufacturing tools and final production parts. The Stratasys 3D printing ecosystem of solutions and expertise—advanced materials; software with voxel level control; precise, repeatable and reliable FDM and PolyJet 3D printers; application-based expert services; on-demand parts and industry-defining partnerships—works to ensure seamless integration into each customer's evolving workflow. Fulfilling the real-world potential of additive, Stratasys delivers breakthrough industry-specific applications that accelerate business processes, optimize value chains and drive business performance improvements for thousands of future-ready leaders around the world.

Corporate Headquarters: Minneapolis, Minnesota and Rehovot, Israel.

Online at: www.stratasys.com, <http://blog.stratasys.com> and [LinkedIn](#).

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