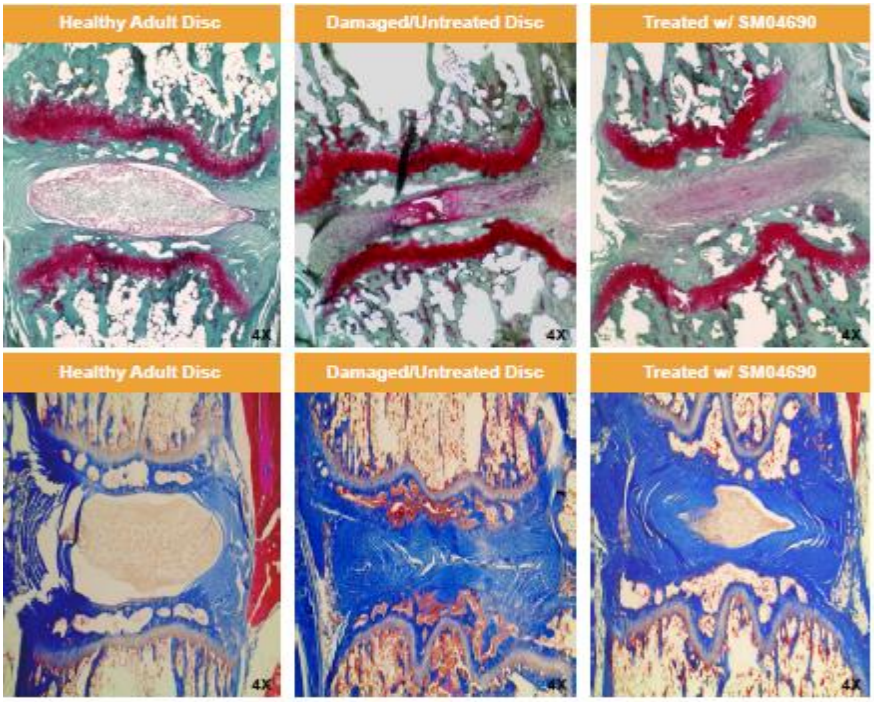
samumed

Media Contact:
Chrissy Randall
crandall@brunswickgroup.com
202-393-7337

SAMUMED PRESENTS DATA FOR A SMALL MOLECULE MODULATOR OF WNT PATHWAY AS A POTENTIAL TREATMENT FOR DEGENERATIVE DISC DISEASE

San Diego, CA—November 15, 2016 – Samumed presented at the 2016 American College of Rheumatology (ACR) Annual Meeting results from *in vitro* and *in vivo* studies regarding the use of its small molecule compound SM04690 for the potential treatment of degenerative disc disease. SM04690 is one of two small molecule Wnt modulators (together with SM04755, which is in a clinical trial for chronic tendinopathy) for which Samumed has presented clinical and/or preclinical data across five different rheumatic diseases. Degenerative disc disease is one of the leading causes of low back pain and is characterized by the degeneration of intervertebral discs. (Colombier PJ, et al. *Joint Bone Spine.* 2014;81(2):125-129.)

In preclinical studies, SM04690 induced the proliferation and differentiation of nucleus pulposus (NP)-derived progenitor cells into chondrocyte-like NP cells, which are essential to the proper functioning of intervertebral discs, providing both structure and hydration. (White AP, et al., *The Lumbar Intervert Disc.* 2009:121-125; Ludwinksi FE, et al. *Regen Med.* 2013;8(1):5-87; Choi YS. *Asian Spine J.* 2009;3(1):39-44; Clouet J et al. *Rheum (Oxford).* 2009;48(11);1447-1450; Vasiliadis ES, et al. *Mol Med.* 2014;20:400-409; Risbud MV, et al. *Spine (Phila Pa 1976).* 2007;32(23):2537-2544; Wei A, et al. *Translational Pediatrics.* 2014;3(2).)



Images from intervertebral discs treated with vehicle or 33µg/mL SM04690 (C8/9 and C9/10) 8 weeks post-injury and stained with Safranin O/Fast Green (top panels) or Masson's Trichrome (lower panels)

In rat model studies, animals were administered a single injection of SM04690 or inactive vehicle one week following disc injury. Eight weeks after disc injury, images of intervertebral discs stained Safranin O/Fast Green or Masson's Trichome were taken of healthy adult discs, damaged untreated discs, and discs treated with SM04690 (see images above). Discs treated with SM04690 showed more NP cells and larger NP areas than vehicle-treated discs, with improved disc height and health.

The abstract for the presentation is available at ACR's website here: Discovery of a Small Molecule Inhibitor of the Wnt Pathway (SM04690) As a Potential Treatment for Degenerative Disc Disease. The poster presented at this session is available here.

"Based on our preclinical study results, we are excited about SM04690's potential as a treatment for degenerative disc disease, a widespread and debilitating disease, for which current treatments are limited to pain relief or surgery aimed at relieving symptoms," said Yusuf Yazici, M.D., Chief Medical Officer of Samumed. "We have an Investigational New Drug Application open with the FDA and anticipate starting a Phase I clinical trial in 2017."

###

ABOUT SAMUMED, LLC

Based in San Diego, CA, Samumed (www.samumed.com) is a pharmaceutical platform company focused on advancing regenerative medicine and oncology applications through research and innovation. Samumed has discovered new targets and biological processes in the Wnt pathway, allowing the team to develop small molecule drugs that potentially address numerous degenerative conditions as well as many forms of cancer.