



Consano Bio Announces Peer-Reviewed Publication Supporting the Therapeutic Potential of C-1101 in Chronic, Painful Lumbosacral Radiculopathy (LSR) or Chronic Sciatica

Research published in Frontiers in Bioengineering and Biotechnology demonstrated C-1101 reduced inflammation and tissue breakdown while activating repair pathways — acting on the disease, not just the pain — in a nonclinical study

Pain sensitivity also decreased in a second species, adding a functional readout to the mechanistic findings

BURLINGTON, MA — September 10, 2026 — Consano Bio, Inc., a clinical-stage biotechnology company advancing novel therapeutics for serious, painful orthopedic conditions, today announced the [publication](#) of nonclinical research in *Frontiers in Bioengineering and Biotechnology* evaluating the biological activity of C-1101, the Company's lead candidate, in clinical development for chronic painful lumbosacral radiculopathy (LSR), commonly known as chronic sciatica.

“Chronic painful LSR, or chronic sciatica, is a condition with no FDA-approved pharmaceutical treatment, and patients often live with it for years,” said Jennifer Schmitke, Ph.D., Chief Operating Officer and Head of Research and Development of Consano Bio. “In LSR, the pain is actually caused by injury and inflammation at the nerve root in the affected region of the spine. Across in vitro and in vivo studies, C-1101 demonstrated immunomodulatory and cellular repair and regrowth activity. These data support the potential for C-1101 to modify the underlying disease of LSR by treating the source of the pain. These findings further reinforce why we chose chronic painful LSR for our first study in patients.”

“This initial work combines in vitro and in vivo work to interrogate the biological activity of C-1101. The functional reduction in pain sensation with C-1101 was observed in the murine peripheral neuropathy model, indicating potential therapeutic efficacy. C-1101 induced a mixed inflammatory response, with secretion of both pro- and anti-inflammatory cytokines in cultured cells, warranting further investigation of the mechanism of action,” said Lynn M. Pezzanite, DVM, MS, Ph.D., Assistant Professor of Cellular and Molecular Biology in the Department of Clinical Sciences, Colorado State University College of Veterinary Medicine and Biomedical Sciences, and corresponding author of the publication.

Building on these nonclinical findings, Consano Bio is advancing C-1101 in a randomized, double-blind Phase 1 study ([C-1101-101, NCT07264270](#)) in patients with chronic painful LSR, each receiving a single epidural injection.

Key findings from the published research include:

- **C-1101 demonstrated immunomodulatory activity in vitro**
 - Increased cytokine release in annulus fibrosus (AF) and nucleus pulposus (NP) sheep disc cells, spanning both pro- and anti-inflammatory mediators
- **C-1101 downregulated inflammatory and upregulated cell growth pathways in vitro**



- C-1101 downregulated interferon signaling and extracellular matrix pathways in AF and NP cells, while upregulating cell cycle and replication pathways, indicating potential anti-inflammatory activity and promotion of cell growth
- Downregulated interferon gamma and other inflammatory pathways in dorsal root ganglia, supportive of anti-inflammatory immunomodulatory activity in nerve cells
- **C-1101 reduced neuropathic pain and inflammation of nerve cells in vivo**
 - In a murine model of paclitaxel-induced neuropathic pain, systemic C-1101 reduced neuropathic cool allodynia at both doses; elicited transient increases in cytokines, and the high dose also reduced markers of macrophage and microglial activation in sciatic nerves.

About Chronic Lumbosacral Radiculopathy (LSR)

Chronic, painful LSR, or chronic sciatica, is a chronic lower back pain condition caused by damage or irritation of spinal nerve roots in the lower back, leading to radiating pain, numbness, and weakness from the spine into the leg. There are no FDA-approved pharmaceutical treatments for chronic sciatica despite its prevalence and widespread societal and economic impact.

About C-1101

C-1101 is Consano Bio's lead investigational clinical candidate and the first pharmaceutical therapy of its kind in development: a novel, platelet-derived multi-protein biologic therapeutic. It is designed to treat LSR, or chronic sciatica, by modulating inflammation and stimulating and enhancing cellular repair at the site of injury. The product contains consistent concentrations of cytokines, growth factors, and matrix proteins designed to help trigger the body's natural healing response. Delivered via an epidural injection for sciatica, C-1101 is intended to provide supraphysiologic concentrations of these proteins directly to the site of nerve injury. C-1101 has received Fast Track designation from the U.S. Food and Drug Administration and is currently being evaluated in a Phase 1 clinical trial.

About Consano Bio

Consano Bio is a clinical-stage biotechnology company dedicated to transforming the treatment of painful and debilitating orthopedic conditions through a new class of multi-protein biologic therapeutics. For more information, visit www.consanobio.com.

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