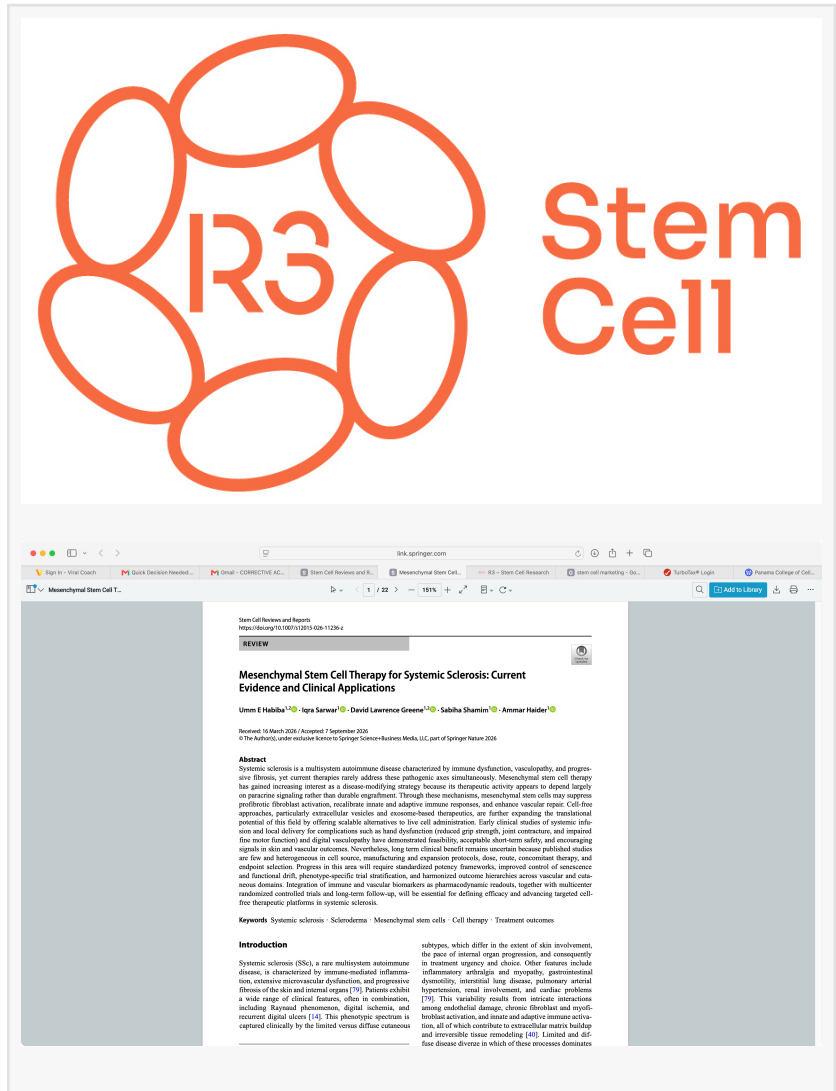


# R3 Stem Cell Research Publishes Peer-Reviewed Article on Mesenchymal Stem Cell Therapy for Systemic Sclerosis

*Springer Nature journal article discusses clinical evidence on stem cell based approaches to systemic sclerosis, and outlines the research still needed done.*

SCOTTSDALE, AZ, UNITED STATES, September 15, 2026 / EINPresswire.com/ -- R3 Stem Cell Research today announced the publication of a peer-reviewed review article examining the scientific and clinical evidence for mesenchymal stem cell (MSC) therapy in systemic sclerosis (SSc), also known as scleroderma. The paper, "Mesenchymal Stem Cell Therapy for Systemic Sclerosis: Current Evidence and Clinical Applications," appears in Stem Cell Reviews and Reports, a journal published by Springer Nature.

The review was authored by Umm E Habiba, Iqra Sarwar, David Lawrence Greene, Sabiha Shamim, and Ammar Haider of the Department of Research and Development at R3 Stem Cell Research. [Dr. David Greene](#), MD, PhD, MBA, is the founder and CEO of R3 Stem Cell



Systemic sclerosis, also known as scleroderma, is a rare, multisystem autoimmune disease marked by immune dysfunction, vasculopathy, and progressive fibrosis of the skin and internal organs. Current immunosuppressive treatments offer only modest benefit and carry significant side effects, leaving a substantial unmet need. The review examines why MSCs — which act largely through paracrine (cell-signaling) mechanisms rather than by replacing damaged tissue —

have drawn increasing research interest as an approach capable of addressing immune, vascular, and fibrotic processes simultaneously, rather than targeting a single pathway.

Drawing on preclinical models and early-phase human studies, the authors report that MSC and MSC-derived exosome approaches have shown feasibility and acceptable short-term safety, with encouraging early signals in outcomes such as skin thickening (measured by the modified Rodnan Skin Score), hand function, and digital ulcer healing. At the same time, the review is explicit that long-term clinical benefit remains unproven: published studies to date are few, small, and heterogeneous in cell source, manufacturing methods, dosing, delivery route, and outcome measures, and few include a control arm.



The paper identifies several barriers to first line mesenchymal [stem cell therapy for scleroderma](#), including the lack of standardized potency and dosing criteria, incomplete understanding of how cell senescence affects therapeutic activity, limited data on immunogenicity with repeated dosing, and the absence of harmonized efficacy endpoints across trials. It also highlights emerging directions the field is pursuing, including cell-free extracellular vesicle (exosome) therapies, cytokine-primed or engineered MSCs, and combination strategies, as ways to potentially improve consistency and scalability of treatment.

“Our goal with this review was to give an honest, comprehensive picture of where the science on mesenchymal [stem cell therapy for sclerosis](#) actually stands — what the early data support, and what is still preliminary,” said Dr. David Greene, co-author of the paper and CEO of R3 Stem Cell. “The early feasibility and safety signals are encouraging, but as the paper makes clear, we need larger, controlled, long-term trials.”

The authors conclude that future progress will depend on stratified trial designs based on disease phenotype and organ involvement, mechanism-linked potency assays, biomarker-guided patient selection, and multicenter randomized controlled trials with standardized background therapy and long-term follow-up.

The full article is available at: <https://rdcu.be/KSXt1TbdUysa>

## About R3 Stem Cell Research

R3 Stem Cell Research conducts clinical research and scientific publication in regenerative medicine. R3 Stem Cell, founded by Dr. David Lawrence Greene, is a multinational regenerative medicine provider operating 80 Centers of Excellence across eight countries. With over 30,000 stem cell and exosome procedures performed in the past decade, R3 is the world's largest provider of regenerative therapies.

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