India Pharma Outlook

TOP COMPANY NUTRACEUTICAL R&D MANUFACTURER FOR YEAR 2026

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Pioneering a Made-in-India Bioactive Renaissance for Global Impact

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COVER STORY.

MICROCORE

Pioneering a Made-in-India Bioactive Renaissance for Global Impact

By Himanshu K

Market saturation and repetitive claims have made many bio-actives seem interchangeable, driving competition on price rather than efficacy. Today, differentiation is challenging, as healthcare professionals and marketers struggle to identify clinically validated ingredients. Factors like source material, processing methods, standardization, molecular integrity, bioavailability, and clinical substantiation are critical for true effectiveness. Moreover, real innovation requires a clear mechanism of action, structural specificity, human clinical evidence, advanced delivery technologies, regulatory approvals, and intellectual property protection. At the same time, rising consumer awareness, preventive health focus, and an aging population are accelerating demand for science-backed nutraceuticals.

As a research-driven, Made-in-India innovator, Microcore develops standardized, branded bio-actives with defined biological functionality. By combining rigorous translational research, mechanistic clarity, analytical validation, and clinical substantiation, Microcore transforms complex science into trusted nutraceutical solutions. In total, its approach enables brands to communicate efficacy with confidence while reinforcing India's position as a global leader in "preventive and maintenance" healthcare innovation.

Made-in-India Innovation

Today, Microcore has established itself as a leading innovator in nutraceuticals, delivering science-backed solutions across arthritis, bone and joint health, osteoarthritis, osteopenia, osteoporosis, hair fall, skincare, wound healing, and tissue regeneration. Founded by M. Chandramohan, a biotechnology entrepreneur with expertise in Microbiology and Bio-Process Engineering, Microcore emphasizes indigenous innovation and maintains a 100 percent Made-in-India commitment. Chandramohan pioneered the NESM bioprocess platform, preserving the molecular and supramolecular integrity of extracellular matrix proteins.

Today, the company harnesses targeted bio-actives for measurable health benefits: Egg Yolk Antibodies (IgY) for immune support, Hydroxyapatite (HA), derived from egg calcite an emerging bio-ceramic biomaterial with strong potential in endodontic and dental regenerative applications, including periapical bone regeneration. Modified Egg Membrane Complexes for wound healing, Egg Membrane for peptic ulcer, Bioregenerative healing matrix,

> We aim to start a Made-in-India renaissance, developing high-value bioactive molecules domestically, reducing import dependence, enhancing indigenous manufacturing, and expanding global export potential
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and Probiotic Fermented Turmeric for liver and gut-liver synergy, Cicerpro for vegan protein, Diafibe for metabolism and digestive wellness, Redcabsol for antioxidant and vascular health, and eggshellderived minerals for bone and dental strength. Each bioactive is selected for validated mechanisms, supporting immune function, tissue regeneration, metabolic balance, and structural resilience. Microcore has partnered with a leading medical research Centre to co-develop next-generation biomaterials and scientifically validated bioactive technologies intended for diverse translational medical applications.

Concept to Capsule

Microcore delivers comprehensive, market-ready health solutions by integrating scientific innovation, process engineering, and product development. The company operates on a research-first model, emphasizing standardized bioactive ingredients, mechanistic formulation design, and rigorous analytical validation. It identifies therapeutic gaps, designs evidence-based combinations, and supports stability studies, quality documentation, and global regulatory compliance to ensure a seamless transition from concept to commercialization.

Furthermore, the company collaborates with formulators to produce blended bio actives preparations for tablet, sachet, softgel, gummies, and capsule formats that comply with FSSAI standards and recommended dietary intakes. (Microcore manufactures bio actives and specialized blends only) Its expertise in ingredient characterization, including advanced chromatographic and quality testing methodologies, enables the development of clinically aligned formulations for bone and joint health, inflammation management, skin and hair wellness, and companion animal nutrition. Proprietary egg-derived bioactive platforms, synergistic botanical integrations, and dose-rationalized blends reflect a sophisticated understanding of biochemical pathways and functional nutrition.

Next-Gen Musculoskeletal Care

Microcore's flagship innovations focus on delivering measurable biological functionality rather than generic ingredient positioning. The company addresses the limitations of conventional pharmacological interventions for osteoarthritis, such as Diacerein-based combinations, which carry risks of gastrointestinal intolerance, hepatotoxicity, and long-term safety concerns. As a matter of fact, the company offers clinically validated, disease-modifying alternatives that combine symptomatic relief with structural joint preservation.

Its Natural Egg Shell Membrane (NESM) formulations represent a scientifically robust innovation in musculoskeletal health. Furthermore, standardized NESM is developed through proprietary, patented processes that preserve the native extracellular matrix architecture, maintaining the biological integrity of intrinsic bioactive constituents. NESM also contains multiple physiologically relevant collagen subtypes — Types I, III, V, and X — alongside elastin, chondroitin sulfate, glycosaminoglycans, hyaluronic acid, and bioavailable sulfur compounds. These collagen subtypes collectively support connective tissue strength, elasticity, repair, dermal matrix integrity, and hair follicle anchoring, contributing to joint, skin, and hair health.

Furthermore, the clinically validated NESM formulations reduce joint pain, improve flexibility, support cartilage function, and demonstrate multi-targeted therapeutic modulation, including attenuation of NF-κB–mediated inflammatory cascades, reduction of pro-inflammatory cytokines, support of chondrocyte viability, and enhancement of cartilage matrix homeostasis. Microcore's proprietary NESM, branded as MuttaiJow Complex, maintains the intrinsic extracellular matrix-like structure through advanced patented stabilization, ensuring reproducible bioactivity, enhanced functional performance, and consistent clinical outcomes.

Notably, MuttaiJow Complex has secured PA-II regulatory approval from FSSAI for the claim "For maintaining healthy joints and connective tissues." Clinical data under CTRI/2021/08/035335 demonstrate significant improvements in joint pain, stiffness, functional mobility, and favorable modulation of cartilage degradation biomarkers.

UDCORE-ii, or Undenatured Chicken Sternum Collagen Complex II, is another flagship innovation derived from chicken sternum through backward integration and produced under ISO-22000, GMP, FSSAI/CL, HALAL, and Kosher certifications. UDCORE-ii contains integrated epitopes, enabling undenatured Collagen Type-II to be taken up by dendritic cells in the Gut-Associated Lymphoid Tissue (GALT) in its glycosylated form.

This interaction induces a mild initial immune response and gradually develops oral tolerance, attenuating the immune response against cartilage collagen II. The stimulation of T regulatory cells and suppression of T helper cell activity enhance endogenous collagen synthesis or the effectiveness of collagen peptide supplementation, ultimately mitigating inflammatory cartilage destruction. UDCORE-ii is supplied only as a formulated or finished product.

Collectively, NESM and UDCORE-ii integrate biomaterial science, translational biotechnology, and evidence-based nutraceutical research, providing mechanism-driven, safety-oriented solutions for osteoarthritis and musculoskeletal health. Moreover, patented stabilization and production processes, clinical validation, and regulatory approvals differentiate these ingredients in today's competitive market, offering high-performance alternatives that shift the paradigm from symptomatic pharmacotherapy toward structural joint support and long-term functional resilience.

Engineered for Excellence

Microcore combines precision manufacturing with rigorous R&D to deliver reproducible, high-quality nutraceuticals. The company treats production as a scientifically governed, compliance-driven system, ensuring consistent efficacy across batches. Its infrastructure and certifications include GMP, ISO 22000 with HACCP-based risk management, and FSSAI compliance. Structured production protocols, validated equipment, environmental controls, SOPs, and traceability effectively eliminate variability, while advanced quality control encompasses active marker quantification, stability testing, microbiological profiling, and contaminant analysis.

Notably, raw materials undergo rigorous vendor qualification, identity verification, and marker-based standardization. Finished formulations are later subjected to assay verification, dissolution or disintegration testing, stability validation, and issuance of Certificates of Analysis.

Regulatory compliance spans Batch Manufacturing Records, Batch Packaging Records, full traceability, deviation management, CAPA systems, change control protocols, recall preparedness, and audit-ready documentation, ensuring accountability and reliability throughout the production process.

With respect to its R&D capabilities, the company underpins manufacturing excellence, combining ingredient innovation, process engineering, analytical validation, and clinically aligned formulation design. Its DSIR-recognized infrastructure and advanced laboratories develop standardized bioactive ingredients through proprietary extraction, purification, and stabilization technologies.

Patented processes and trademarked branded bio-actives ensure intellectual property ownership and differentiation. Clinical validation further strengthens credibility through well-designed human studies, mechanistic evaluations, and peer-reviewed publications that substantiate safety, bioavailability, and efficacy. Advanced formulation technologies, including molecular interlocking and nano-preparation systems, enhance bioavailability, enable controlled release, and optimize therapeutic performance, translating scientific concepts into measurable clinical benefits. This integrated approach ensures that every nutraceutical produced by Microcore is scientifically substantiated, reliably manufactured, and performance-driven.

The Map for the Future

Microcore continues to expand proprietary platforms, including NESM, Natural Egg Shell Calcium (NESC), undenatured Type II collagen, eggshell-derived hydroxyapatite, and molecular interlocking biomaterial technologies. With advanced R&D facilities in Tamil Nadu and a 10-acre integrated innovation hub under development, the company offers a fully indigenous, end-to-end biomaterial ecosystem, spanning raw material engineering, molecular stabilization, clinical validation, and commercialization.

Emphasizing research-intensive growth, Microcore reinvests revenue into fundamental and applied research. "We aim to start a Made-in-India renaissance, developing high-value bioactive molecules domestically, reducing import dependence, enhancing indigenous manufacturing, and expanding global export potential," states M. Chandramohan, Founder at Microcore. By integrating innovation, clinical validation, and commercialization, Microcore aims to transform cutting-edge research into a sustainable engine of differentiation, impact, and national scientific leadership. Microcore's future focus is on expanding medical applications of natural eggshell membrane, undenatured type II collagen, and egg-derived calcite through advanced research and clinical validation. These bioactive biomaterials show strong potential in wound healing, gastroenteritis management, and skin grafting, supporting tissue repair, inflammation control, and regenerative processes. Through collaborations with medical research institutions, Microcore aims to translate these natural biomaterials into clinically relevant solutions for several medical procedures. PO