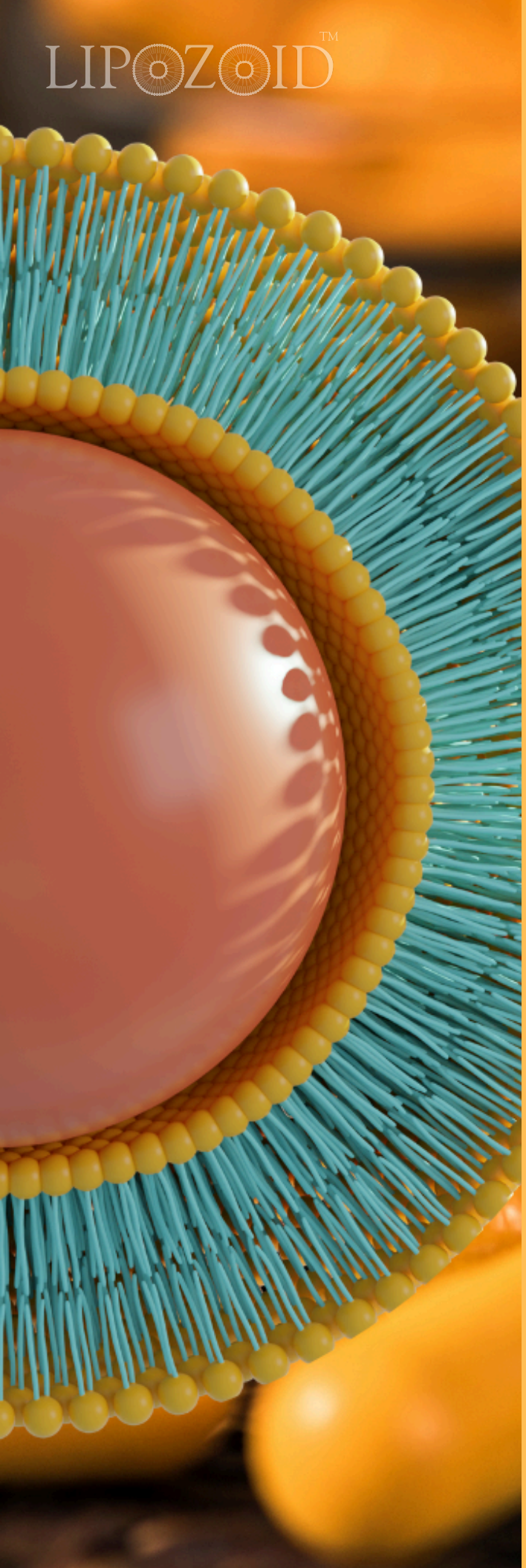
LIPOZOID™



NR CHEMBIO

Liposomal Curcumin

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info@nrchembio.com

Our Location
Hyderabad, India

LIPOSOMAL CURCUMIN – ENHANCED BIOAVAILABILITY WITH LIPOZOID™ TECHNOLOGY

Curcumin, the active compound found in turmeric, is widely known for its powerful antioxidant, anti-inflammatory, and therapeutic properties. However, its clinical efficacy has been largely limited by poor bioavailability due to its low solubility, rapid metabolism, and poor absorption in the gastrointestinal tract. To overcome these challenges, we have developed Liposomal Curcumin using our proprietary LIPOZOID™ technology, ensuring superior stability, absorption, and efficacy.

True Liposomal Structure with Enhanced Stability

Our Liposomal Curcumin is formulated using LIPOZOID™, an advanced liposomal encapsulation technology that provides:

- True Liposomal Structure – Unlike conventional emulsions or micelles, our formulation ensures that curcumin is encapsulated within bilayer lipid vesicles, mimicking the natural phospholipid membrane of cells. This structure enhances its cellular uptake and prevents premature degradation.
- Good Zeta Potential Stability – The zeta potential of our liposomes ensures electrostatic repulsion, preventing aggregation and enhancing stability in suspension. This results in a longer shelf life and better dispersibility in physiological conditions.
- Optimized Particle Size (~455 nm) – Our liposomes are engineered to have an average particle size of 455 nm, ensuring efficient cellular uptake while maintaining stability during storage and transport.

Preclinical Studies Demonstrate Higher Oral Bioavailability:

To validate the superior absorption and efficacy of our Liposomal Curcumin, we conducted preclinical studies on rats, comparing its bioavailability against regular Curcumin 95% extract. Key findings from our research include:

- Significantly Higher Bioavailability – Pharmacokinetic studies revealed that Liposomal Curcumin exhibits **7X** markedly higher plasma concentrations compared to conventional curcumin 95%, demonstrating improved absorption and prolonged circulation time.

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LIPOSOMAL CURCUMIN – ENHANCED BIOAVAILABILITY WITH LIPOZOID™ TECHNOLOGY

Test System Details:

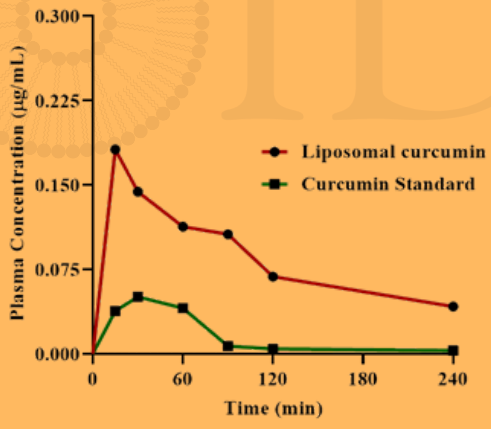
Test Species, Strain	Rat, Wistar
Sex	Male
Age	Age 8-10Weeks
Body Weight	230-260 grams
Number of Animals	06 Rats

Test System Details:

Groups	Group Description	Treatment Description	No. of Animals
G1	Curcumin 95%	500 mg/kg	03
G2	Liposomal Curcumin 25%	500 mg/kg	03

Pharmacokinetic parameters of curcumin 95% and Liposomal Curcumin 25% in male wistar rats

Parameter	Unit	Curcumin	Liposomal Curcumin 25%
K_e	L/min	0.004753865	0.006321098
$t_{1/2}$	min	145.8070754	109.656136
T_{max}	min	30	15
C_{max}	µg/ml	0.0507	0.1814
AUC 0-t	µg/ml*min	3.13525	20.18025
V_d	(mg)/(µg/ml)	24653.02295	2950.525512
Clearance	(mg)/(µg/ml)/min	117.1971477	18.65056087



CONCLUSION:

The study also concludes that Liposomal Curcumin 25% is better bioavailable by **7X** over the Curcumin 95%.

Get in Touch with us

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