GREEN LIPIDS (Pty) Ltd

Sustainable ionizable lipids for scalable mRNA medicines

The Opportunity

Limited access to ionizable lipids constrains global mRNA manufacturing, particularly in LMICs because of high costs, limited suppliers, and fragile supply chains.

Our Solution

Green Lipids develops Cashew Nut-Shell Liquid (CNSL)-derived ionizable lipids offering sustainable, cost-effective, and scalable alternatives for mRNA delivery systems.

Platform Advantages

- Sustainable bio-based feedstock
- Cost-efficient synthesis
- Designed for regional production
- Compatible with existing LNP systems

Technology Status

- Lead candidates identified
- Early validation complete
- Scale-up synthesis of ionizable lipids is in progress

Commercial Model

Licensing-driven strategy focused on rapid revenue generation and scalable partnerships.

Revenue Pathway

Short-term: RUO products, evaluation licences
Medium-term: CDMO partnerships, platform licensing
Long-term: GMP supply and regulatory-enabled licensing

Competitive Advantage

- CNSL-based sustainable chemistry
- Low adoption barrier
- Strong LMIC positioning
- High-margin licensing model

Origin & Ecosystem

Technology was developed in the School of Chemistry and Antiviral Gene Therapy Research Unit (AGTRU) at the University of the Witwatersrand (Wits). The work is aligned with the WHO and Medicines Patent Pool (MPP) mRNA initiatives. Scale-up synthesis is being supported by the German Agency for International Cooperation (GIZ).

Vision

To enable equitable global access to RNA medicines through sustainable lipid innovation.

Contact

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