

# KADAMBA

## Nano Ayurveda Supplement for **HIV-AIDS**



### From Conventional Complexity to Precision Therapy

**Human Immunodeficiency Virus (HIV)** infection remains a significant global public health challenge, affecting approximately 40.8 million individuals worldwide, with nearly 1.3 million new infections and over 630,000 AIDS-related deaths annually. Despite expanded treatment access, the burden remains disproportionately high in sub-Saharan Africa, with emerging clusters across Asia, the Middle East, and India.





These realities underscore the urgent need for safer, more effective, scalable, and patient-centric therapeutic strategies capable of supporting lifelong disease management with minimal toxicity.





## Contemporary Antiretroviral Pharmacotherapy

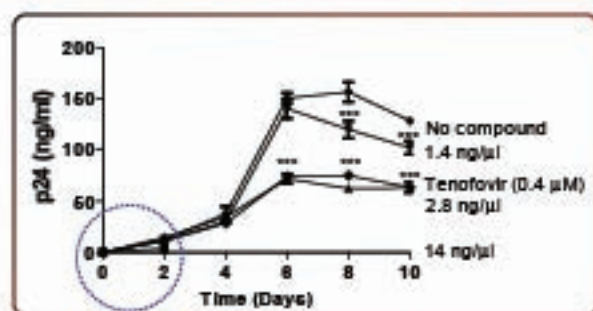
Current combination Antiretroviral Therapy (ART) suppresses viral replication by targeting multiple viral enzymes and replication pathways. Although clinically effective, conventional ART presents inherent limitations:

-   
**Lifelong daily dosing requirements**
-   
**Risk of resistance with suboptimal adherence**
-   
**Variable pharmacokinetics and tissue penetration**
-   
**Systemic toxicities and organ-specific adverse effects**
-   
**Reduced long-term patient adherence**

## Nano-Ayurvedic Precision Therapeutic Supplement

The green nano-Ayurvedic platform engineers plant-derived phytochemicals into precisely controlled nanoparticles to optimize pharmacokinetics, intracellular targeting, and therapeutic efficiency. This approach enables superior bioavailability, receptor-level delivery, sustained release kinetics, reduced dosing thresholds, and minimal systemic toxicity, thereby establishing a safe, biocompatible, precision nanomedicine strategy for advanced clinical applications, including HIV care.

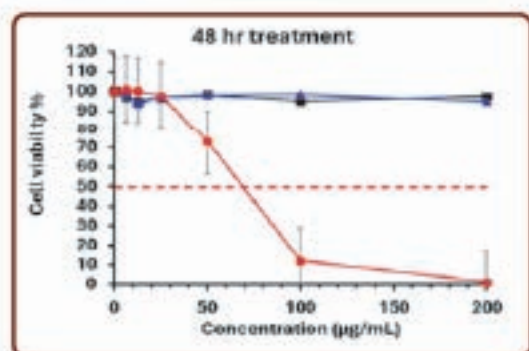
## Anti- HIV Potential of Kadamba Green-Nano Supplement



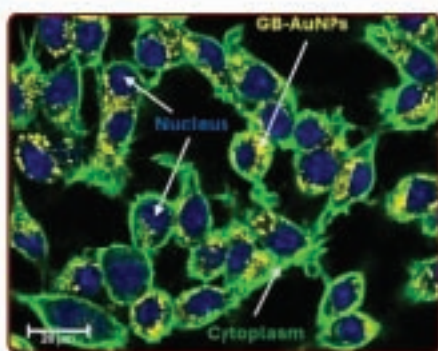
**14 ng/µl was highly effective against HIV with significant reduction in infected cells within two days**

The nano-Ayurvedic formulation demonstrated potent inhibition of viral replication with maintained cell viability, facilitated by efficient intracellular nano-delivery, optimized pharmacodynamic targeting, and enhanced antiviral bioavailability—indicating a high-precision, safe, and therapeutically efficient nano-engineered strategy.

## Biosafety of Kadamba nano-Supplement



**Human Aortic Endothelial Cells (HAEC)**



**Macrophage (Raw 264.7)**

### Cytotoxicity assessment in human in vitro model

The experimental evidences suggests that Kadamba nano formulations are safe (100 %) for humans, showing no toxic effect on the normal cells even after 48 hours of treatment (200 µg/mL; NOAEL 10mg/Kg in mice).

# KADAMBA

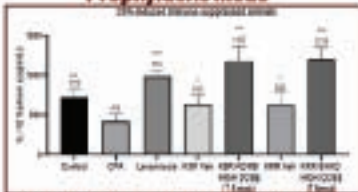
## Anti-HIV Experimental Assessment

Parameter	Conventional ART	Nano-Ayurveda Therapeutics	Resulting clinical advantage with Kadamba's product
Drug distribution	Systemic circulation	Targeted intracellular delivery	Higher localized antiviral action
Bioavailability	Moderate, variable	Enhanced nano-enabled absorption	Greater efficacy at lower doses
Dosing	Lifelong daily	Controlled dosing with sustained release	Prolonged viral suppression
Toxicity risk	Organ-specific adverse effects	Designed biocompatibility	Improved safety profile
Therapeutic model	Enzyme inhibition	Precision nano-delivery & cellular targeting	Superior drug-virus interaction
Patient adherence	Variable	Simplified low-dose regimen	Improved compliance and outcomes

## Immune reprogramming with Kadamba Supplement: Cytokine Profiling

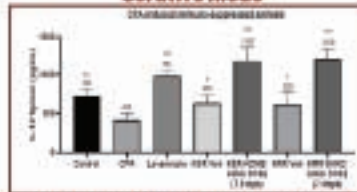
Spleen IL-12 (n=6)

Prophylactic mode



\*KSR-KDHB and KRR-SHKD-treated mice, have showed remarkable 152% and 152% increase respectively in IL-12 levels.

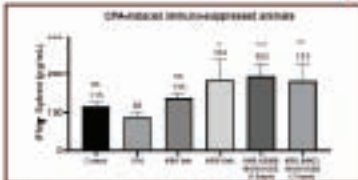
Curative mode



\*KSR-KDHB and KRR-SHKD-treated mice, both have showed remarkable 165% increase in IL-12 levels.

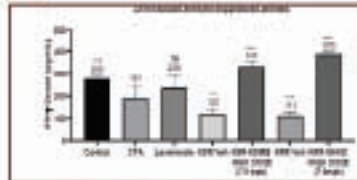
Spleen IFN-γ

OPN-treated immunosuppressed animals



\*KSR-KDHB and KRR-SHKD both have showed remarkable 174% increase in IFN-γ levels compared to control group

OPN-treated immunosuppressed animals



\*KSR-KDHB and KRR-SHKD, elevated the IFN-γ levels compared to control group

Cytokines are small regulatory glycoproteins/proteins (5-25 kDa) secreted mainly by immune cells (Dendritic cells, Macrophages, T cells and B cells) that amplify the immune responses by binding to specific surface receptors, often influencing cell growth, differentiation, and intercellular communication.





## **KADAMBA**

Pioneers' precision nano-Ayurveda therapeutics by integrating advanced green nanotechnology with targeted intracellular delivery, maximizing efficacy, minimizing systemic toxicity and enabling scalable functional nutrition alongside innovative therapeutic solutions for HIV-AIDS management

**Nanocare**



[doctor@kadambamail.com](mailto:doctor@kadambamail.com)  
**+91-63642 33860**

[director@kadambamail.com](mailto:director@kadambamail.com)  
**+91-96204 39307**