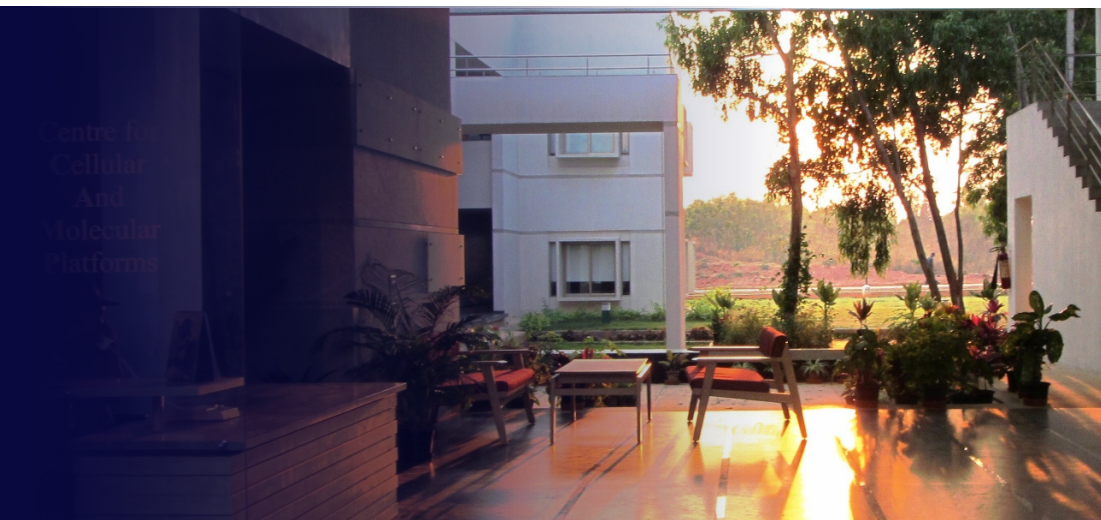


# Marquee

## C-CAMP Newsletter June 2022

### BROWSE TABLE OF CONTENTS BELOW

---



Dear C-CAMP Friend,

Greetings from C-CAMP! Hope you are doing well.

Delighted to bring you the June 2022 edition of the C-CAMP News Bulletin, Marquee. This edition of Marquee highlights our Technology Transfer vertical with a spotlight on 8 high-impact technologies impacting healthcare, agriculture and environment. These have been translated, accelerated and commercialized by the twin Tech Transfer programs of C-CAMP-Discovery to Innovation Accelerator (DIA) and Office of Technology Transfer (OTT).

We invite licensing interests from industry, startups and academic institutions for all 8.

Hope you enjoy reading it!

As always, get in touch if you want more info.  
Best Regards,

Team C-CAMP

### Technology Pick of the Month

---

### Highlights of C-CAMP-DIA Translational Program Portfolio

---

### Top Licensing Technologies of C-CAMP OTT Tech Transfer Program

### Subscribe to all our updates

 <https://www.ccamp.res.in/subscribe>

 [https://twitter.com/CCAMP\\_Bangalore](https://twitter.com/CCAMP_Bangalore)

 <https://www.ccamp.res.in/>

# Technology Pick of the Month

## Novel, Dipeptide-Based Nanoparticle for Dual Cargo Delivery

The nanoparticle with a conformationally restricted amino acid and a charged amino acid arm can host one small molecule and one nucleic acid molecule as cargoes for effective and targeted dual drug delivery.

Applications -

1. mRNA/DNA Vaccine and Adjuvants
2. Anticancer drugs with siRNA
3. Targeted delivery of insulin & other proteins
4. Dermatological / Cosmetics applications for delivery of anti-ageing molecules

For Licensing prospects, contact:  
dia\_licensing@ccamp.res.in

**More Info**

**Technology for Licensing**

**Novel Dipeptide based Nanoparticle Dual Cargo Delivery System**

Vehicle for simultaneous delivery of two different cargoes

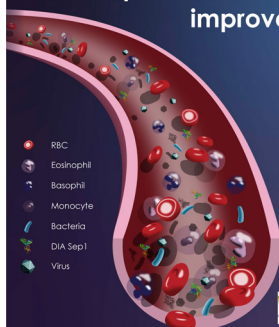
**Applications in**

- mRNA/DNA Vaccine and Adjuvants
- Anticancer drugs with siRNAs
- Dermatological / Cosmetics applications to deliver anti-ageing molecules
- Targeted delivery of cargoes like Insulin, etc

<https://www.ccamp.res.in/dia-projects> [dia\[at\]ccamp.res.in](mailto:dia[at]ccamp.res.in)

# Highlights of C-CAMP-DIA Translational Program Portfolio

## DIA Sep1, a novel adjuvant to standard of care to improve survival in Sepsis



- DIA Sep1, a Nature-derived immunomodulator
- Significantly improves survival in polymicrobial Sepsis as an adjuvant in standard of care
- Demonstrated in ceceal ligation and puncture mice model
- Recombinant form: Stable and scalable
- PCT filed

C-CAMP Discovery to Innovation Accelerator [dia\\_licensing@ccamp.res.in](mailto:dia_licensing@ccamp.res.in)

## Novel Molecule for Adjuvant Therapy in Sepsis

This Molecule is a potent immunomodulator derived from a recombinant helminth protein that binds to Toll like receptors (TLR) and thus blocks interaction of the TLRs with LPS-like toxins in pathogenic infections. This results in down-regulation of the immune flare-up expanding the therapeutic window and increasing chances of survival.

Shows good survival rates in

- endotoxemia model
- Caecal ligation
- Puncture models of sepsis.

For Licensing prospects, contact:  
dia\_licensing@ccamp.res.in

**More Info**

## Microfluidics-based non-Imaging Multiplex Droplet Analyser & Sorter

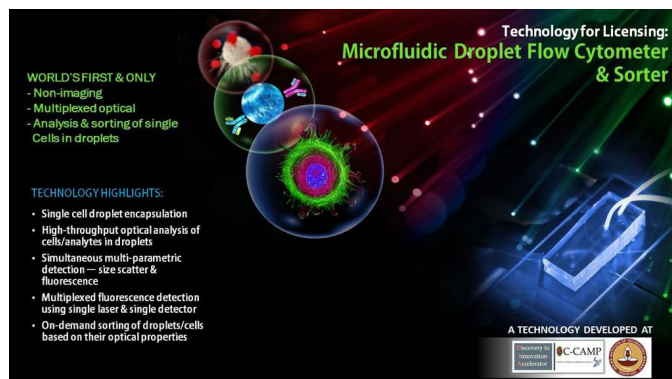
A patented, novel, miniaturized, scalable multiplex fluorescence detection platform for high-throughput optical analysis with a sorting resolution of single cell encapsulated microfluidic droplets.

Applications:

- Precision medicine,
- Single-cell genomics,
- Rare cell identification for cancer detection,
- Point-of-care diagnostics, immunotherapies

For Licensing prospects, contact:  
dia\_licensing@ccamp.res.in

[Read More](#)



**Technology for Licensing: Microfluidic Droplet Flow Cytometer & Sorter**

**WORLD'S FIRST & ONLY**

- Non-imaging
- Multiplexed optical
- Analysis & sorting of single Cells in droplets

**TECHNOLOGY HIGHLIGHTS:**

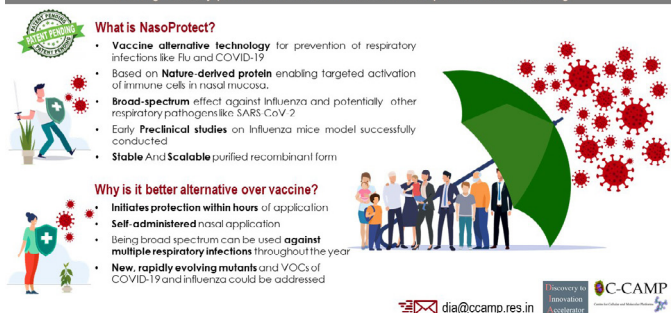
- Single cell droplet encapsulation
- High-throughput optical analysis of cells/analyses in droplets
- Simultaneous multi-parametric detection — size scatter & fluorescence
- Multiplexed fluorescence detection using single laser & single detector
- On-demand sorting of droplets/cells based on their optical properties

**A TECHNOLOGY DEVELOPED AT**

CC-CAMP

## NasoProtect

Inviting Industry partners for NasoProtect co-development or out-licensing



**What is NasoProtect?**

- **Vaccine alternative technology** for prevention of respiratory infections like flu and COVID-19
- Based on **Nature-derived protein** enabling targeted activation of immune cells in nasal mucosa.
- **Broad-spectrum** effect against Influenza and potentially other respiratory pathogens like SARS CoV 2
- Early **Preclinical studies** on Influenza mice model successfully conducted
- **Stable And Scalable** purified recombinant form

**Why is it better alternative over vaccine?**

- **Initiates protection within hours** of application
- **Self-administered** nasal application
- Being broad spectrum can be used **against multiple respiratory infections** throughout the year
- **New, rapidly evolving mutants** and VOCs of COVID-19 and influenza could be addressed

dia@ccamp.res.in

CC-CAMP

## A Vaccine Alternative Approach to Prevention of Respiratory Infections through Non-invasive Immunomodulation

The technology called Nasoprotect is a self-administered, easy-to-use immunomodulatory nasal spray with broad spectrum activity against all pathogens including viruses like Influenza and potentially COVID-19. The molecule is a purified protein increasing targeted activation of immune cells in nasal mucosa.

Preclinical studies on Influenza mice model have shown significant reduction in

- Viral titers,
- Mortality rates
- Clinical symptoms.

For Licensing prospects, contact:  
dia\_licensing@ccamp.res.in

[Read More](#)

# Top Licensing Technologies of C-CAMP OTT Tech Transfer Program

## Novel Germicide Coated Fabric developed by DBT - InStem, Bengaluru

Technology involves coating fabrics with germicidal compounds capable of neutralizing enveloped viruses (e.g. lentivirus, sendi virus, COVID-19 etc). The fabric is washable and retains germicidal property for at-least up to 45 wash cycles, thereby overcoming the drawback of disposable PPEs.

Called G-Fab, the technology has been licensed to Color Threads Pvt. Ltd., and is currently in use as anti-viral masks and athleisure products manufactured and supplied by Color Threads & Aditya Birla Pvt. Ltd.

Contact: [ott@ccamp.res.in](mailto:ott@ccamp.res.in)

[More Info](#)



## Intracellular pH sensor using nucleic acid assemblies by NCBS-TIFR, Bengaluru

Technology is a DNA nanomachine called I-switch, triggered by protons and functioning as an intracellular pH sensor. It is based on fluorescence resonance energy transfer (FRET), inside living cells.

Being a DNA device, this technology helps to understand the effect of analytes on cellular metabolism through measurement of biomarkers including pH, even within intracellular components.

Contact: [ott@ccamp.res.in](mailto:ott@ccamp.res.in)

[More Info](#)

C-CAMP Office of Technology Transfer facilitates patenting of 'I-switch' an Intracellular pH sensor using nucleic acid assemblies by researchers at NCBS

This work will enhance understanding of how analytes affect cellular metabolism





## Effective drug delivery system to target hepatocellular carcinoma developed by M.S. Ramaiah University of Applied Sciences, Bengaluru

The system is a novel thiolated polymer-based nanocomposite that can load the anti-cancer drug 5-fluorouracil (5FU).

Tests on cytotoxicity of this nanocomposite against hepatic carcinoma cells in comparison to ordinary 5FU administration revealed significant increase and targeting efficacy in accumulation of 5-FU in the liver.

Contact: ott@ccamp.res.in

**More Info**

C-CAMP Office of Technology Transfer facilitates patenting of Effective Drug Delivery system to target Hepatocellular Carcinoma developed at M. S. Ramaiah University of Applied Sciences

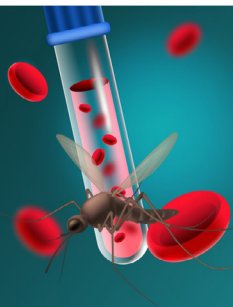


A novel method to deliver anti-cancer drug with high tumor efficacy & specificity



C-CAMP Office of Technology Transfer facilitate Commercialization of Highly sensitive method of detection and control of malaria parasite in humans invented by researcher at Manipal School of Life Sciences

New method is unique and highly sensitive as it allows to detect even low copies of the pathogen present in the human samples



## Highly sensitive and specific method of detection and control of malarial parasite in humans developed by Manipal School of Life Sciences, Manipal, Karnataka

The technology targeting reiterated elements in the *Plasmodium* genome has resulted in improving the specificity and sensitivity of malarial parasite detection in blood, plasma and other bodily fluids.

The method is adapted for detection using enucleated red blood cells, devoid of genetic material so that only DNA from parasites resident in the blood are detected using a) rapid bedside nanoparticles. b) semi-quantitative PCR and c) quantitative RT-PCR. The method allows detection of even low copies of the pathogen present in the human samples.

Contact: ott@ccamp.res.in

**More Info**

# Follow C-CAMP



CCAMPBangalore



CCAMP\_Bangalore



ccamp\_india



C-CAMP



CCAMPBangaloreStreams



Medium C-camp

Centre for Cellular and Molecular Platforms (C-CAMP), is a Dept. of Biotechnology, Govt. of India supported initiative to catalyze Research, Innovation and Entrepreneurship in the Bio Sciences.

