



PROJECT COMPLETION REPORT

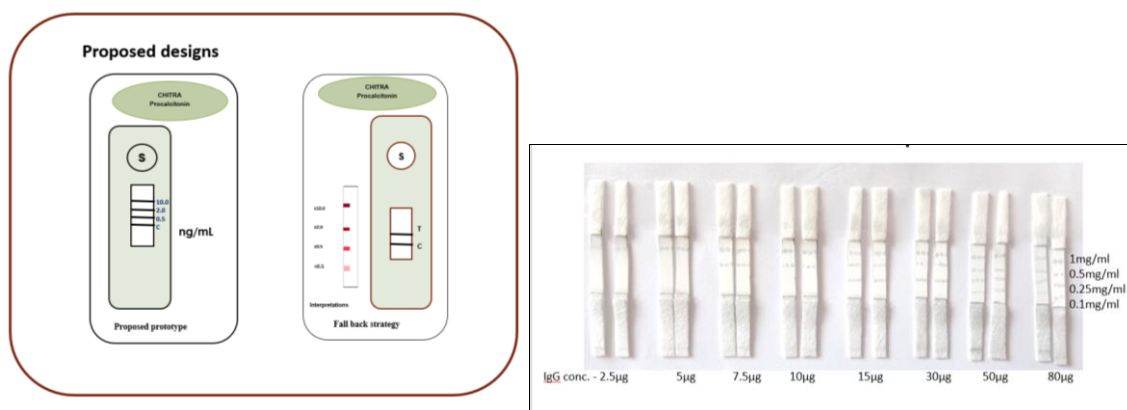
1. **Project Number** : 8233
2. **Title of the Project** : Development of Rapid diagnostic kit for 1. Sepsis (Procalcitonin) 2. Chlamydia trachomatis
3. **Funding Agency Name** : TRC
4. **Project Reference Number provided by the Funding Agency:** TRC/8233/PSN dated 11/05/2020
5. **Principal Investigator (Name & Address)** : Dr. Manoj G, Scientist D, Division of Artificial Internal Organs, Department of Medical Devices and Engineering, Biomedical Technology Wing
6. **Co-Investigators (Name & Address):**

i.	Dr. Dinoop K.P, Department of Microbiology, SCTIMST
ii.	Dr. Jyothi EK, Department of Microbiology, SCTIMST
iii.	Dr. Jayasree Vaman, SATH, Trivandrum
7. **Implementing Institution** : SCTIMST
8. **Collaborating Institutions** : a) SCTIMST
b) Biogeniex Inc, Lucknow
9. **Date of Commencement** : 11th May, 2020
10. **Duration** : 2 years
11. **Date of Completion** : May, 2022
12. **Objectives as approved:**

Rapid diagnostic kit for 1. Sepsis (Procalcitonin) 2. Chlamydia trachomatis
13. **Deviation made from original objectives if any, while implementing the project and reasons thereof :**

No

14. **Field/Experimental work giving full details of summary of methods adopted, data collected supported by necessary tables, charts, diagrams and photographs :**



15. **Detailed analysis of results:**

Preliminary data generated

16. **Summary sheet of not more than 2 pages under the following heads :
(Title, Introduction, Rationale, Objectives, Methodology, Results, Translational Potential)**

17. **Contributions made towards increasing the state of knowledge in the subject :**

Immunotechnology-based product development was introduced.

18. **Conclusions summarising the achievements and indication of scope for future work :**

Lateral flow immunoassay is the simplest and most commercially available point-of-care (POC) test with a rapidly growing market worldwide. The immunoassay technique relies on the binding affinity of an antibody to quantify the amount of an antigen present in a biological sample. Implementing ultra-sensitive and ultra-specific detection mechanisms in the lateral flow test could meet the demand for high-throughput medical devices. The kit developed herein deals with improved signal detection using CNTs as a label for rapid and quantitative immunosensing. The study uses CNTs as a sensing label, forming a visible indication corresponding to the amount of captured analyte at the capture line due to binding reactions between CNT-tagged antibody and target molecule. In addition to signal detection, this lateral immunosensing technique provides a simple, sensitive, low-concentration, and rapid detection mechanism suitable for point-of-care devices. Targeted for two rapid testing kit products 1. Sepsis and 2. Chlamydia (More data to be generated)

19. Science and Technology benefits accrued :

a. List of research publications with complete details :

b. Manpower trained on the project : 01

i. Research Scientists or Research Fellows : 0

ii. No. of PhD's produced : 0

iii. Other Technical Personnel trained : 2

c. Patents taken, if any :

d. Products developed, if any :

20. Abstract: (In 300 words for possible publication in Bulletin)

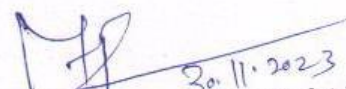
21. Procurement/Usage of Equipment:

a. Details of Equipment:

Sl. No.	Name of Equipment	Make/ Model	Cost (Rs.)	Date of Installation	Utilization	Remarks regarding maintenance breakdown
1	Refrigerator	Remi	40023.00	22/10/2023	Regular use	-
2	Dehumidifier	White Westing House	44000.00	17/02/2023	During Expt.	-

b. Suggestions for disposal of equipment(s):

Dr. Manoj G



(Name and Signature of PIs with date)

Routing: Signed copy of "Project completion Report" by PI → root@sctimst.ac.in, rpc@sctimst.ac.in