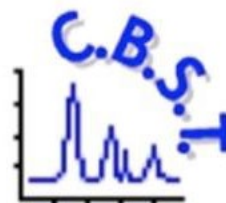




VIT[®]

Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)



CENTRE FOR BIOSEPARATION TECHNOLOGY

Newsletter 2026

The Centre for BioSeparation Technology (CBST) is dedicated to the field of separation sciences and molecular interactions. It has a unique combination of being innovative and highly intellectual, with a keen interest in translation. This has been built as a policy and scientific culture.

The Centre for BioSeparation Technology (CBST) was created under the “Intensification of Research in High Priority Areas” programme funded by the **Department of Science and Technology (DST)**, Government of India. **Prof. M.A. Vijayalakshmi**, having been identified for her expertise in the field of Purification Science and Technology was invited from France to set up the Centre in India with a host structure of her choice to help our country in developing this important area, much required for Industry-Academia in R&D. She chose VIT University, Vellore as the host structure to initiate the Centre and, CBST was formed in the year 2005. The centre is projected by DST as a ‘National Facility’ for research & development. The sustained efforts and inputs from the centre have contributed towards the greater goals of the nation and its significant new developments, such as Make in India, Skill India Mission, etc. The centre aims for a translational mode of work, by taking a working idea from the laboratory bench to the industrial scale to deliver an applicable product.

This innovative research, characterised by high intellectual input, has led to the development of original and simplified systems for both the analytical and preparative aspects of proteins. These methods are complementary to/competitive with conventional ones in terms of efficiency and are being adopted by industries in both India and abroad. This has made an essential contribution to India's scientific and technological advancements in addressing global challenges, resulting in products produced by Indian Industries contributing to its growth. This culture is successfully transferred to youngsters in India, bringing a paradigm shift in the young researchers shaped at CBST.



Dr. N.S. Jayaprakash
Professor and Director, CBST,
VIT - Vellore



Prof. M.A. Vijayalakshmi
Founder Director, CBST,
VIT - Vellore

Vision

- To establish a World-Class R&D facility in Separation Science and related technologies
- To develop young scientists to fulfil the Industrial needs of India, particularly in the biopharma sector, and bring out validated products*

Mission

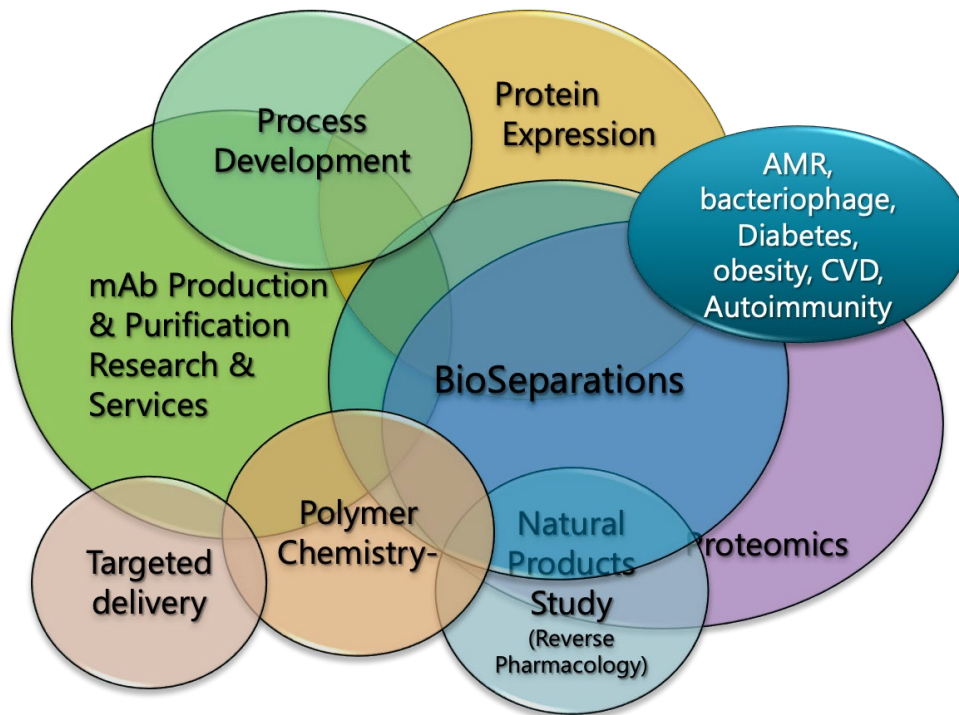
- Focus on Translation Research through multidisciplinary approaches, interfacing Biology and Chemistry

Monitored by a steering committee composed of eminent scientists and top members of VIT University. The Centre developed to new heights, and in May 2009, the Centre went through an independent “Performance Audit” by a committee headed by the President of the Indian National Science Academy (ISA) and was recommended for up-gradation to an “Advanced Centre” with continued funding to maintain its high-level potential and expertise in research activities.

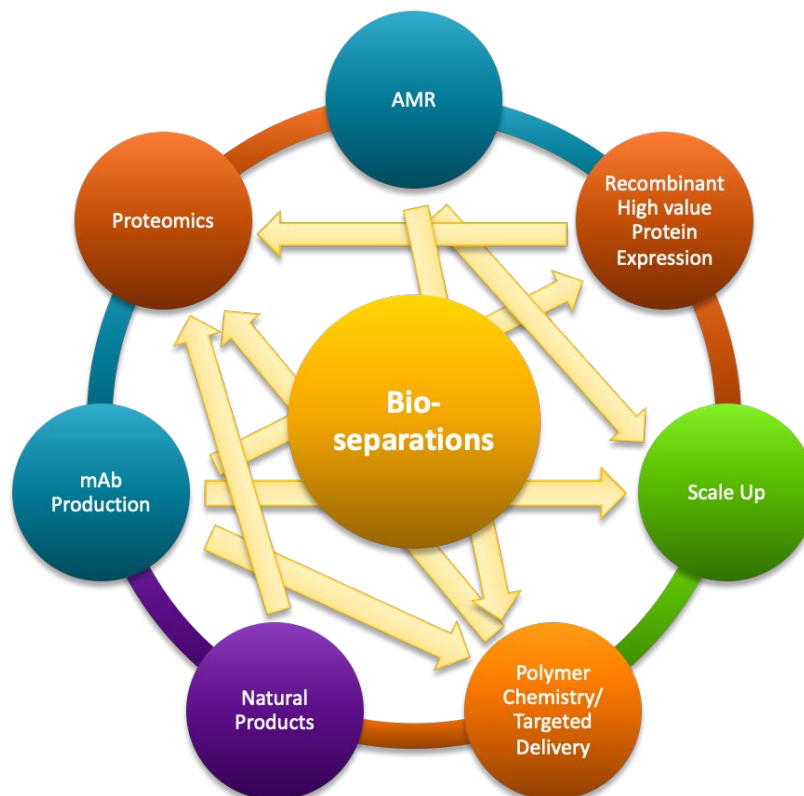
CBST, along with its initial facilities, currently features Chromatographic work stations (FPLC, HPLC, and four manual chromatographic workstations), Proteomic workstations such as Mass Spectrometer (QTOF & Triple Quadrupole ESI LC-MS), mammalian cell culture work, monoclonal antibody production, and recombinant protein expression (comprising mammalian, yeast, bacteria and Lemna expression systems). Renowned for its world-class innovative research and intensive training, CBST approaches research with multidisciplinary links involving state-of-the-art technologies, focusing mainly on translational aspects.

CBST practices and has a setup of “Approach research with a high level of multidisciplinary links”. CBST is one of the rare Centres where the coexisting relation of Chemistry-Biology is realized and projects are done and made with this cross-talk relationship of different fields of Chemistry & Biology.

The Centre revolves around multidisciplinary themes involving BioSeparation or the ‘Science of Purification’ as its major arm, connecting various disciplines.

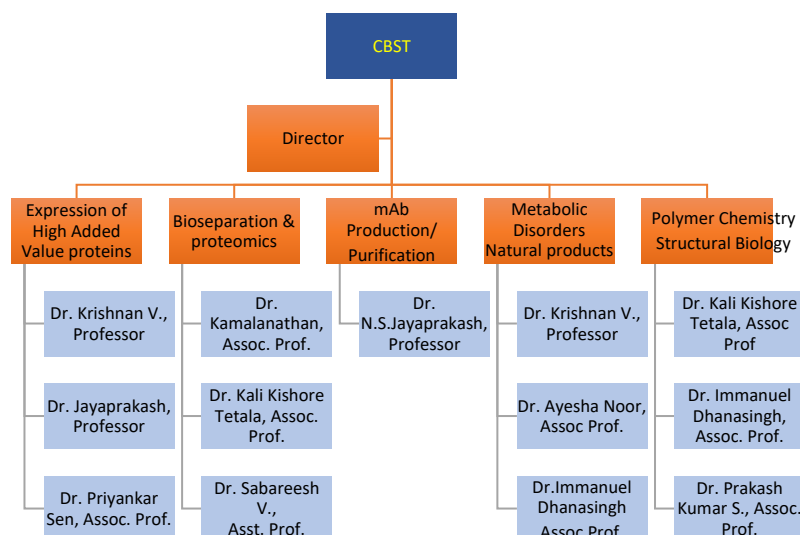


Linked together by Purification Science & Proteomics, the Centres move the rest of the areas forward into the area of translational research work, paving the path to success and development.



CURRENT HIGHLIGHTS

- Synthetic short peptides as a product for their applications in diabetes control. A patent has been filed.
- Antimicrobial resistance (AMR) is predicted to be the leading cause of death throughout the world, surpassing cancer in 2050. All the nations around the world have prioritized their research focus on the criteria of antibiotic resistance and next-generation antibiotics development. Our centre not only prioritizes finding a solution to AMR using structural biology, but also is in the process of developing fast detection kits for AMR at primary point of care.
- Novel lytic bacteriophage and functional evaluation of its endolysin against multidrug-resistant *Shigella dysenteriae* (collaboration with TANUVAS).
- Enrichment of Vit B12 – Frugal methods of enrichment of Vit B12 in foods. A patent has been filed. Negotiating with a company for Technology transfer.
- Scrub typhus (ST), also known as tsutsugamushi disease and caused by *Rickettsia Orientia tsutsugamushi*, is an underestimated fatal epidemic in the Asia-Pacific region. Our center works on the identification and use of scrub typhus-specific antigens in the rapid diagnostic system based on an electro-immunosensor (collaboration with National Institute of Epidemiology).
- Structural, functional, and regulatory studies of ubiquitin-conjugating enzymes involved in chromatin modification (DBT Ramalingaswamy Re-entry fellowship)
- Haplotype based validation of the role of a lectin gene (SaLT) operational at the interface of abiotic (salinity) and biotic (blast disease) stress resistance through in-planta as well as ex- planta strategies (collaborative ANRF project with M.S. Swaminathan Research Foundation)



MAJOR PROJECTS AT CBST (with collaborations)

- **Indo-French collaborative project:** Indo-French consortium consisting of one academia & one industry partner funded by BIRAC and CEFIPRA for the development of a novel diagnostic for cardiovascular disorders.
- **ICMR Project on Typhoid diagnosis:** Indian Council for Medical Research (ICMR) funded project for the development of novel peptide-based diagnostics for the specific detection of typhoid infection. A joint patent through ICMR has been filed along with Kanchi Kamakoti Childs Trust Hospital, Chennai.
- **Bio-TIFAC,** Govt. of India, New Delhi. Development of novel process in isolating standardized extract of *Aloe vera* and its application for diabetes control. Bioprocess and Bioproducts Programme. A patent has been filed on the Synthetic short peptides as a product for their applications in diabetes control.
- **PALL Life Sciences,** Europe was involved with CBST for 'Study and evaluation of new chromatographic supports' for effective purification of biological molecules.
- **Christian Medical College (CMC), Vellore** and CBST: joint proposal submitted to DBT.
- **Centre for Stem Cell Research (a unit of inStem, Bengaluru)** and CBST: collaboratively involved in the purification of significant FRIL protein from *Lablab purpureus*. In addition, collaboration of insilico structural studies were performed for their Sars-cov mRNA vaccine project.
- **ICMR - National Institute of Epidemiology, Chennai:** Collaboration in diagnostic development.

INDUSTRIAL COLLABORATORS



POPULATION AT CBST

- Total number of Internal Full-Time (IFT) PhD : 54
- Total number of External Part-Time PhD : 2
- Total number of faculty : 10

RESEARCH HIGHLIGHTS

- Total Number of Publications: 260+
- Total Number of Publications (2025-26): 37
- Patents (Granted): 7
- Patents (Published): 12

2025- 2026

- Patents (Published): 5
- Patents (Filed): 3

FINANCIAL RESOURCES

2005 to 2010

- | | | |
|--------------------------------|----------|---|
| 1) Government Aided Support | | |
| a) DST | : | 3 crore |
| b) DBT | : | 2.3 crore |
| c) Total | : | 5.3 crores |
| 2) Industrial Support | | |
| a) PALL Life Science | : | 40,000 EUROS |
| b) Agilent Technologies | : | 56 Lakhs |
| c) Total: | : | 1 crore (approx.) |
| 3) Other Funding | : | 4 crores |
| 4) Institutional Support (VIT) | : | Infrastructure, Management and Facilities |
| (5) Grand Total | : | 10.3 crores |

2010 to 2017

- | | | |
|-----------------------------|----------|----------------------|
| 1) Government Aided Support | | |
| a) DST | : | 11.8 crores |
| 2) Industrial Support | | |
| a) BIA Separations | : | 1 crore (approx.) |
| 3) Other funding | : | 4.3 crores (approx.) |
| 4) Total | : | 17.1 crores |

CBST was supported and funded by Indian Government and other funding agencies till 2017 and was functioning as an autonomous unit.

2018 to Present

- | | | |
|--------------------------------|---|--------------------------|
| 1) External Funding | : | 6.91 Crores |
| 2) Institutional Support (VIT) | : | Approx. 1 crore per year |
| 3) Industrial support | : | Rs. 13.8 lakhs |

RESEARCH EXPERTS AT CBST

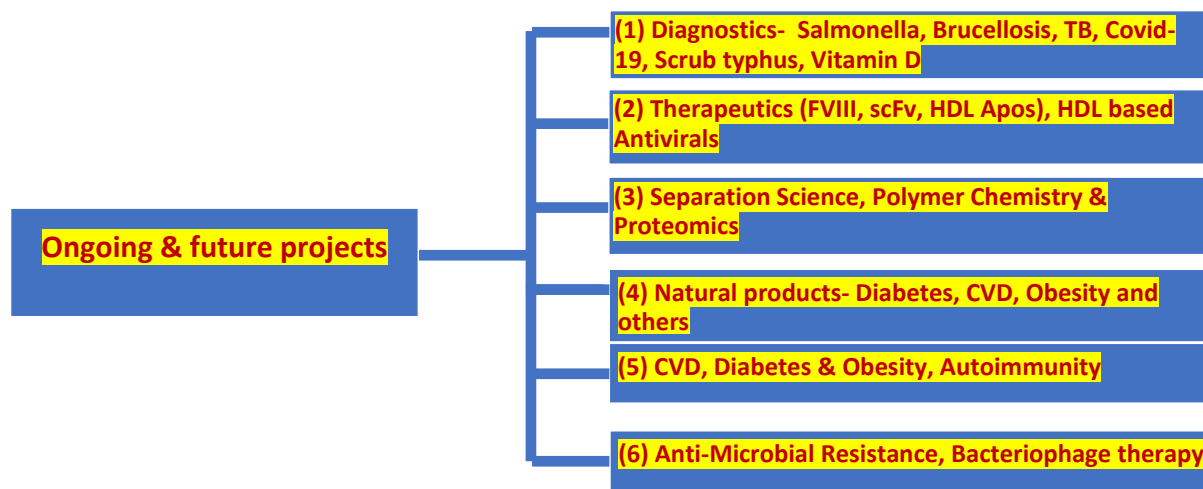
1	 Dr. Jayaprakash N.S <i>Professor & Director</i>	AREAS OF INTEREST Immunotechnology, Polyclonal & Monoclonal Antibody Development, Animal Cell Culture, Bacteriophage as biocontrol agents against AMR pathogens
2	 Prof. M.A. Vijayalakshmi <i>Founder Director</i>	AREAS OF INTEREST Biochromatography and Pseudo bioaffinity systems, Molecular Recognition and Interactions, Affinity Technology, Biorecognition and Downstream Processing Research.
3	 Dr. Krishnan Venkatraman <i>Professor</i>	AREAS OF INTEREST Cardio Vascular Studies, Cell Biology, Metabolic disorders, Therapeutic Protein Expression and Mamallian Cell Culture.
4	 Dr. Ayesha Noor <i>Professor</i>	AREAS OF INTEREST Natural Products Research, Metabolic disorders (Diabetes and Obesity) research and Nutraceuticals
5	 Dr. Kishore Reddy <i>Associate Professor</i>	AREAS OF INTEREST Biosensors, Surface Chemistry, Polymer Material (Monoliths, Membranes, Beads) development, Organic Synthesis and Microfluidics

6	 Dr. Kamalanathan A.S <i>Associate Professor</i>	AREAS OF INTEREST Purification Science, Understanding the Molecular Features and Mechanism of Biomolecules.
7	 Dr. Priyankar Sen <i>Associate Professor</i>	AREAS OF INTEREST Recombinant protein expression using plant based expression system, purification of enzymes and their Biophysical and Biochemical Characterization
8	 Dr. Sabareesh Varadarajan <i>Assistant Professor (Senior)</i>	AREAS OF INTEREST Biomolecular Mass Spectrometry and its applications with specific interest in Tandem Mass Spectrometry and Proteomics
9	 Dr. Dhanasingh Immanuel <i>Associate Professor</i>	AREAS OF INTEREST Structure and functions of proteins related to antimicrobial resistance, keratinolysis, Bioinformatics and Structural Biology
10	 Dr. Prakash Kumar Shukla <i>Associate Professor</i>	AREAS OF INTEREST Protein structural biology, epigenetic mediated cancer biology, and drug designing

More information: <https://vit.ac.in/center/faculty/cbst>

RESEARCH AT CBST

Development phase and translational research



A. CHROMATOGRAPHY AND PROTEOMICS

The Separation Science and Technology field is the central axis of the Centre. It is being developed both as a science to understand the molecular recognition and also as a technology to be exploited for (i) Efficient product recovery; (ii) Development of studies on protein-protein, protein-DNA and protein-ligand interactions; and (iii) As an exclusive tool for various proteomics approaches.

- Pseudobiospecific chromatography for recovery of high-added-value plasma proteins and recombinant proteins.
- Affinity traps - upstream and downstream in LC-MS approach: Applications demonstrated include plasma proteins, PPD for tuberculosis, microbial fermentation broth.
- Chromatographic stationary phase development through ultra-high performance technology using connective interaction media (CIM) supports all possible chemistries.
- BIA platform of excellence setup at CBST (BIA-PEC) with the BIA separations, a multinational company with its HQ in Austria.

B. MICROFLUIDICS DEVICES AS TOOLS

During the last decade, there has been a surge in the life science research domain to develop efficient microfluidic devices to perform sample pre-treatment, screening and detection of biomolecules such as proteins from biological sources such as serum, milk, etc.

Currently, we are working on:

1. Develop efficient microfluidic chips for protein purification for plasma proteomic applications (1 research project funded by SERB-DST)
2. Develop microfluidic-based diagnostic chip for vitamin D detection (1 research project was funded by DBT)

C. AFFINITY TECHNOLOGY AND CHROMATOGRAPHY

Pseudobiospecific ligand L-histidine is an inexpensive, highly stable, non-toxic ligand explored successfully over the last twenty years for the purification of immunoglobulins in immobilized histidine ligand affinity chromatography. It is of great interest to know the molecular recognition sites of IgG to immobilized L-histidine.

- We have used an in silico approach to explore the molecular recognition of L-histidine by IgG.
- We have assessed the feasible binding modes of histidine and its moieties at different sites of IgG and considered only those binding conformations which are exhibited via the imidazole ring NH group or any other OH-donating group, apart from the ones which are terminally conjugated with the support matrix.
- We categorised the binding site into two categories: category I: inner binding groove, and category II: surface binding groove, and observed that the hinge region of IgG has the most favourable binding pocket for L-Histidine and histidyl moieties.
- Serine and tyrosine residues on the hinge region make several significant interactions with L-Histidine and histidyl moieties, as hypothesized by Prof. Vijayalakshmi, the Hydrogen bond interactions making it a Hydrophobic interaction chromatography.

D. AUTOIMMUNE DISORDER STUDIES

Autoimmune diseases are conditions in which the immune system attacks normal, healthy tissues, resulting in structural and functional damage to the host. The initiation and perpetuation of diseases are unclear, and they are investigated in multi-dimensional approaches. At CBST, research is conducted to understand the pathobiology of autoimmune diseases at the molecular and cellular levels. The focus of our research activity is on characterization of the anti-immune antibodies or anti-idiotypic antibodies and understanding of their role(s) in autoimmune pathologies. In the past, we have worked on anti-phospholipid syndrome (APS) antibodies, systemic lupus erythematosus (SLE) and rheumatoid arthritis (RA) diseases.

At present, we are working on the following -

- Rheumatoid arthritis: Understanding the molecular features of the molecules involved in the inflammation or triggered due to inflammation and their consequences.
- Neuro-immunology diseases: Here we are working on the Major Psychoses disorder, wherein a study is carried out to understand the dysregulation of the immune system and, if any, connectivity to the autoimmune disorder conditions.
- Inflammatory diseases: Neuro-inflammatory conditions and inflammatory conditions of the eyes and their autoimmunity studies are under discussion and preparation for a future project work with associated partners.

E. HIGH VALUE ADDED PROTEIN: Expression, Purification and Validation

Recombinant Therapeutic Proteins: The Centre is developing Recombinant Therapeutic proteins of very high value with a “Gene to Vial” concept. This implies the gene construction, expression, optimization of the expression systems, purification, characterization and product formulation. Three important proteins with high value were chosen. They are anti-TNF α , single-chain variable fragment (ScFv), functional Factor VIII and ApoA1.

- Functional coagulation Factor VIII (FVIII) expression has been done both in CHO and in a glycol-engineered strain of Yeast (*Pichia pastoris*).

- Expression and purification of anti-TNF single chain variable fragments and increasing its avidity using Chemical dimerization studies.
- Expression of anti TNF- α -ScFv in plants: *Spirodela punctata* or *Lemna* with invitro culture, growth & Expression of *Lemna*.
- Generation of wild type and variants of ApoA1 with studies on protection for Cardiovascular diseases with reduced effect of oxidation.

Diagnostically important proteins: We have developed recombinant proteins that can be used in the field of Medical Diagnosis to detect diseases which would normally be very difficult to diagnose.

- Truncated HRP 2 against *Plasmodium falciparum* for the detection of Malaria.
- Recombinant HRP 3 for detection of *Plasmodium falciparum*.
- Recombinant Brucella porin for the detection of Brucellosis in humans and animals.
- Recombinant Salmonella porin for the detection of Salmonella in humans and animals.
- Recombinant COVID-19 NCP protein- For diagnostic mAb development.

F. STRUCTURAL BIOLOGY

At CBST, we use protein crystallography and associated biophysical techniques (surface plasmon resonance, Circular Dichroism) to understand the function of biological macromolecules.

We are working on the following challenges:

1. RNA Modifying Enzymes: Three-dimensional structure determination of tRNA adenosine deaminase and Dihydrouridine synthase from *Salmonella typhi*
2. Lipid A Biosynthesis Pathway in Gram-negative bacteria, making this pathway an excellent antibiotic target.
3. Structure and functional studies Proteins in *Enterococcus faecalis* involved in the formation of biofilms (Sortase A)
4. Understanding, biochemical studies of glycoproteins from plants.
5. Structural and functional characterization of novel vibrio antibiotic resistance (var) regulon in *Vibrio* sp.
6. Structural and functional characterization of novel toxin-antitoxin module MazE-MazF from antibiotic resistant *A.baumannii*

G. CELL CULTURE AND ANTIBODY PRODUCTION

CBST has a keen interest in producing monoclonal and polyclonal antibodies due to their significant value in modern-day diagnostics. CBST has produced and is currently producing monoclonal antibodies (mAbs) against various biological molecules of diagnostic interest for the development of rapid diagnostics for the early and specific detection of infectious diseases. CBST is also developing a mini-bioreactor module with a new super-macro porous cryogel matrix for the continuous production of monoclonal antibodies, which produces nine times more antibodies than the conventional T-flask batch method. This cryogel work was adapted from the initial work of Prof. Ashok Kumar, IIT Kanpur. Some of the work includes,

- Monoclonal antibodies highly specific to *Plasmodium falciparum* have been developed.
- Anti-Human Serum Albumin monoclonal antibodies (Anti-HSA monoclonal antibodies) for depletion of HSA in proteomic studies.
- Antibodies against the porin protein of *Brucella* sp. and *Salmonella* sp. for specific detection of brucellosis and enteric fever & typhoid, respectively.
- Antibody against chlorinated ApoA1 (HDL) for early detection of cardiovascular diseases.
- Antibodies against COVID19 NCP for specific detection of COVID19.

H. CARDIO VASCULAR STUDIES

CBST has extensively studied and continues the search in the field of cardiovascular diseases (CVD), for understanding important and salient features of HDL, for their functions with which they are involved in various metabolic pathways that connect them to CVD.

Antibody-based targeted approaches have also been undertaken in order to develop a novel rapid diagnostic that can help to detect CVD at an early level.

A new research finding has led us to identify an *Aloe vera*-based extract that has been known to drastically reduce triglycerides and VLDL levels, significantly

impacting CVD and providing a new pathway for its application as a possible therapeutic agent.

I. NATURAL PRODUCTS AND DIABETES

CBST is engaged in product development from Natural sources such as indigenous medicinal plants. Main focus is on developing Nutraceuticals with good understanding of the mechanism(s) involved in alleviating the pathology. The Centre has already marked its success in a project using *Aloe vera* as a supplement for alleviating Diabetes.

- In-vivo studies performed in streptozotocin-induced diabetic rats with the *Aloe vera* extract.
- Extract was validated as per 'AYUSH' (regulatory structure for alternative medicine systems) guidelines.
- Human clinical trial in safety and efficacy evaluation has been carried out in collaboration with Laila Pharmaceuticals, Vijayawada.
- Understanding the molecular mechanisms of regeneration is underway, and a single molecule has been identified which is involved in one of the regeneration pathways.

J. TARGETED DRUG DELIVERY

Polymer chemistry has played an important role in the synthesis, derivation, degradation, application and evaluation of biocompatible and biodegradable polymers, which can be used as drug delivery. Many of the pharmacological properties of conventional free drugs can be improved through the use of polymeric drug delivery systems.

- Poly (ethylene oxide) [PEO]: non-toxic, ion-transporting ability, water solubility, and non-recognition by immune system. A potential polymeric delivery system.
- Bouquet structure of PEO with two ends: One holding target agent and the other holding a functional compound at the other extremities.
- Plant based anti-cancerous agent: Lupeol, extraction, identification and purification from Aloe vera. Stabilization and targeted delivery of Lupeol using PEO dendrimers.

K. PROTEIN BIOCHEMISTRY

Among the various biomolecules studied and explored, CBST focuses and has a keen interest in understanding and studying the nature of proteins for its beneficial nature from a natural source, as well as a recombinant product, for its practical purpose in various applications. At the protein biochemistry branch of science at CBST, we explore the following

- Anti-TNF α ScFV isolation, purification and characterization.
- Benzothiazole dye-based microfluidic system for amyloid detection, to develop as a diagnostic kit.
- Isolation, purification, and characterisation of recombinant proteins as expressed in monocot plant systems.

RESEARCH HIGHLIGHTS

- Technology Transfer done: A developed product (Vitamin D diagnostic) was transferred to Azaygen India Pvt Ltd.
- Published 37 articles in high-impact journals during the academic year (2025-2026)
- 2 consultancy projects obtained in the current academic year
- A total of Rs. 1.51 crores sanctioned grant resources.
- Four R&D products have been developed (technology transfer with companies ongoing)

National Patents (2025-2026)

1. METHOD FOR EXPRESSION AND PURIFICATION OF TAGLESS RECOMBINANT HUMAN INTERLEUKIN-6 IN BACTERIAL SYSTEM: published.
2. PROCESS FOR PREPARING A ZEIN ALGINATE NANOFORMULATION OF ENRICHED POLYPHENOLS AND THE FORMULATION THEREOF: published
3. VITAMIN C AND VITAMIN B3 ENRICHED SLUG MUCUS FOR USE IN COSMETIC AND THERAPEUTICS APPLICATIONS AND ITS PREPARATION: published
4. DINUCLEAR ROHIDIUM (III) COMPLEX FORM FROM DOUBLE OXYGENATION OF COD USING AMBIENT OXYGEN: published
5. PURIFICATION OF D-PINITOL FROM DESMODIUM GANGETICUM LEAVES USING UPLC AND ITS APPLICATION FOR RHEUMATOID ARTHRITIS: published

International Patents Awarded

1. Methods for producing recombinant factor viii chains from non-filamentous fungi, their functional reconstitution and applications thereof (USA Patent) (2017)
2. Dendrimers, Conjugates And methods Thereof (USA Patent) (2017)
3. Double mutant coagulation factor VIII and methods thereof (EU Patent) (2018) – Germany and France.
4. Monolith-based pseudo-bioaffinity purification methods for Factor VIII and applications thereof (EU Patent) (2019) - Germany and France
5. Methods for producing recombinant factor viii chains from non-filamentous fungi, their functional reconstitution and applications thereof (EU Patent) (2019)- Germany and France

STUDENT & FACULTY ACHIEVEMENTS (2025-26)

- **Mr. Lokesh Kumar (20PHD2120)** - selected as the Visiting Research Scholar with a monthly stipend of US\$2,660 for one year, - City University of New York (MEC, CUNY, USA), under the supervision of Prof. Michele Vittadello.
- **Ms Jansi Rani-** Best Poster Presentation Award at the International Conference and workshop on Global Summit on Innovative Drug Design, Discovery and Translational Research (GLOBALDDT 2025) between 29-10-2025 to 31-10-2025 -Pondicherry University
- **Ms. Ritee Basu (20PHD0161)** - 3rd Prize for the Best Oral Presentation in the International Conference -RABT (Recent Advances in Bioresource Technology), 13-14th August 2025 in Thiruvalluvar University, Vellore
- **Ms. Bhagya Jyothi JL 22PHD0675** was awarded the Best Oral Presentation during the International Seminar on Recent Biochemical Approaches in Therapeutics – X (RBAT-X-2026) organized by Department of Biochemistry, University of Kerala from 6th to 8th January, 2026
- **Md Harun Rashid [19246]** selected for ‘Hypoglycaemia and diabetes course’, by Cold Spring Harbor Lab, New York, USA with full coverage of tuition, lodging and travel from 10-06-2026 to 17-06-2026
- **Mr. Harshil Samir Bhatt [22PHD0068]**, received the ACS Best Poster Presentation ACS Best Poster Presentation in ICCB – 2026, held during February 9-11, 2026, by the Department of Biotechnology, Guru Ghasidas Vishwavidyalaya, in collaboration with the Chemical Biology Society (CBS), India.
- **Mr. Jai Naik [24PHD0771]**, received 3rd in Best Poster Presentation ACS Best Poster Presentation in ICCB – 2026, held during February 9-11, 2026, by the

Department of Biotechnology, Guru Ghasidas Vishwavidyalaya, in collaboration with the Chemical Biology Society (CBS), India.

- **Mr. Soumyadip Mukhopadhyay [24PHD0620]**, received the ACS Best Poster Presentation ACS Best Poster Presentation in ICCB – 2026, held during February 9-11, 2026, by the Department of Biotechnology, Guru Ghasidas Vishwavidyalaya, in collaboration with the Chemical Biology Society (CBS), India.
- **Ms. Uma Devi A [23PHD0570]** received the ACS Best Poster Presentation ACS Best Poster Presentation in ICCB – 2026, held during February 9-11, 2026, by the Department of Biotechnology, Guru Ghasidas Vishwavidyalaya, in collaboration with the Chemical Biology Society (CBS), India.
- **Dr Immanuel D-** Scientific High Level Visiting Fellowships (SSHN) 2025 programme by Embassy of France in India and visit to Prof. Stephanie's lab at Lyon, France.
- **Dr. Priyankar Sen [13452]** was faculty advisor for the VIT team that won iGEM award-Silver Medal
- **Priyankar Sen [13452]** was selected for I-NITIATE boot-camp program by GDC, Research Park, IIT Madras during 6-03-2026 to 08-03-2026
- **Dr. Kali Kishore Reddy Tetala, [13986]** and Mr. Lokesh Kumar S [20PHD2120] developed a product which was transferred to Azaygen India Pvt Ltd on 23rd Jan, 2026

CONFERENCES, INTERNSHIPS & WORKSHOPS

- ❑ One-Day Hands-On Training Workshop on 'Protein Purification and Characterization' 12-09-2025 (with sponsorship from industry)
- ❑ One-Day Hands-On Training Workshop on 'Phytochemical Extraction and Characterization' 13-09-2025 (with sponsorship from industry)
- ❑ One-Day Hands-On Training Workshop on 'Molecular Docking And Simulation: From Concept To Practical Applications' 29-08-2025
- ❑ Conducted a two-day hands-on training workshop on "Molecular biology-cloning, expression, and purification" on 20 and 21-02-2026. (with sponsorship from industry)

SERVICES PLATFORM

- Mass spectrometry sample analysis: CBST encourages sample analysis to be performed for VIT residents and outsiders.

- BIACORE 3000 SPR: Using Surface Plasmon Resonance, it is possible to calculate the binding affinity, such as protein-protein interactions.
- Both monoclonal antibody and polyclonal antibody production in mice and rabbits, respectively, are rendered for antibody production with a defined collaboration.
- Purification experiments are designed at lab-scale, and scale-up advising is also provided.
- Molecular biology service platforms (protein expression) are also available at CBST.
- Structural-based drug designing through in silico and in vitro approaches.

REACH US

Centre for BioSeparation Technology (CBST)

6th Floor, Technology Tower

Vellore Institute of Technology - Vellore

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