



Ponnaiyah Ramajayam Institute of Science & Technology (PRIST)

# PRIST UNIVERSITY

U/s 3 of UGC Act 1956

(CENTRE FOR HIGHER LEARNING & RESEARCH)

Thanjavur 613 403 • Tamil Nadu • India

Accredited by NAAC & Approved by AICTE

## Centre for Research and Development

### Ongoing Research activities at CRD

- Alternative renewable energy
- Biodiversity and conservational biology
- Bioinformatics
- Clinical microbiological research
- Drug discovery for kidney stone reduction, arthritis, heart attack and stroke, brain health, liver protective, diabetes, wound healing, wound sealing, biomarkers for major diseases
- Effluent treatment
- Laser applications
- Metabolic engineering of microorganisms for H<sub>2</sub> and biochemicals production
- Nanomaterials synthesis
- Optical sensors
- Solar cell
- Stem cell biology
- Tissue culture

**Extramural research projects (completed)** :01

**In-house projects (completed)** :02

**Extramural research projects (ongoing)** :09

- Research projects granted from funding agencies :07 (Total budget size: 2.54 Crore)
- Research proposals presented at taskforce review :03 (Total budget size: 2.57 Crore)
- Projects proposals submitted for funding :06 (Total budget size: 16.57 Crore)

**Funding agencies**

- World Noni Research Foundation (WNRF), Govt. of India
- Department of Biotechnology (DBT), Govt. of India
- Indian Council of Medical Research (ICMR)
- Department of Science and Technology (DST)
- Indo-Korea (DST & Ministry of Energy, Science and Technology, Korea)
- Defense Research and Development Organization (DRDO)
- Women Scientist Scheme-DST
- DST-Fast track scheme

**Academic particulars**

- Total registered Scholars :426
- Ph.D. synopsis under processing :16
- Ph.D. thesis under evaluation :26
- Ph.D. degree awarded :63
- In-house annual journals released :03

**Workshops/Conferences conducted**

- National :06
- International (Indo-US Workshop) :03
- Short-term trainings conducted :04

**Patents/papers publications**

- Patent filed (Indian) :01
- Total number of publications :692
- Total number of Scopus-indexed publications :425
- Book chapters :15
- Lowest impact factor :0.065
- Highest impact factor :6.859
- Average impact factor :1.0
- *h*-index :13

**Invited talks/conference presentation by the faculty** :255

**International recognition**

- Visiting Researcher to Korea, Japan, Israel :03
- Young Scientist award :01
- Fellow membership un international congress :01
- Research papers with extension programs :06
- Book chapter with extensionprogram :01
- Dual degree program with (SDSMT, USA) :01

**Scientist Forum** :09

**Research Scholars Colloquium** :10

**MoU signed**

- National institutions & industries :05
- International institutions :13

**Consultancy services available at CRD -Research support→ Training →Technology support**

- Alternative energy models
- Animal feed formulations
- Animal breeding
- Aquaculture
- Aromatic and medicinal plant cultivation and supplies
- Biofertilizers
- Consolidated bioprocessing
- Disease free plantations
- Effluent treatment
- Embedded systems
- Mushroom cultivation
- Natural health drinks
- Organic farming
- Solar panel construction and process automation
- Vermicomposting
- Analytical support for students, researchers, industrial and technical professionals
- Animal breeding and supplies
- Business support in aromatic and medicinal plants cultivation and marketing
- Farming system and management for agriculturists/farmers
- Pollution monitoring control
- Product and process development for industries
- Production of bulk and fine chemicals, biomaterials and energy related products
- Rural development
- Socio-economic development
- Solid waste and waste water management to industries
- Training programs for students and research scholars on innovative projects

**Incubation and entrepreneurship development initiatives**

- Seeding
- Incubation
- Technology development
- Patenting
- Commercialization
- Marketing

### List of Innovative Projects

1. Evaluation of adsorption potential of deoiled cake from non-edible oil – seeds of *Jatropha curcas* for treatment of wastewater
2. Study on removal of acid violet dye from waste water using mixed culture
3. Bio gas from large abundant biomass (ipomeacarneia, water hyacinth)
4. Adsorption of nickel using castor(de-oiled cake)
5. Nano Bike
6. Manufacturing & performance analysis of world's first electric floating car (ekarbo)
7. Android Application for mobile resource utilization
8. GSM based E- Notice board
9. Intelligent medical care system
10. State load dispatch center automation
11. Feasibility analysis of the positioning of super conducting fault current limiters for the smart grid application using simulink and sim power system
12. Innovation of new techniques in construction(Blast Furnace and Induction furnace steel slag
13. Strengthening of reinforced Concrete beams using glass fibre reinforced polymer composites.
14. Renal stones studies using fuzzy logic and GIS application