

## **GRG BIRAC EYUVA CENTRE**

Biotechnology Industry Research Assistance Council (BIRAC) is a not-for-profit Section 8, Schedule B, Public Sector Enterprise, set up by Department of Biotechnology (DBT), Government of India as an Interface Agency to strengthen and empower the emerging Biotech enterprise to undertake strategic research and innovation, addressing nationally relevant product development needs. BIRAC is a industry-academia interface and implements its mandate through a wide range of impact initiatives, be it providing access to risk capital through targeted funding, technology transfer, IP management and handholding schemes that help bring innovation excellence to the biotech firms and make them globally competitive. One such Scheme is establishing E YUVA Centres.

E YUVA Centre (Encouraging Youth for Undertaking Innovative Research through Vibrant Acceleration) is being established at PSGRKCW with a grant of Rs.266.5 Lakhs by BIRAC (Biotechnology Industry Research Assistance Council).

### **E YUVA scheme provides support under following two categories:**

#### **I. BIRAC's Innovation Fellows - Post-doctoral fellows**

- Fellowship grant: INR 50,000 per month
- Annual research grant: INR 5,00,000 per year

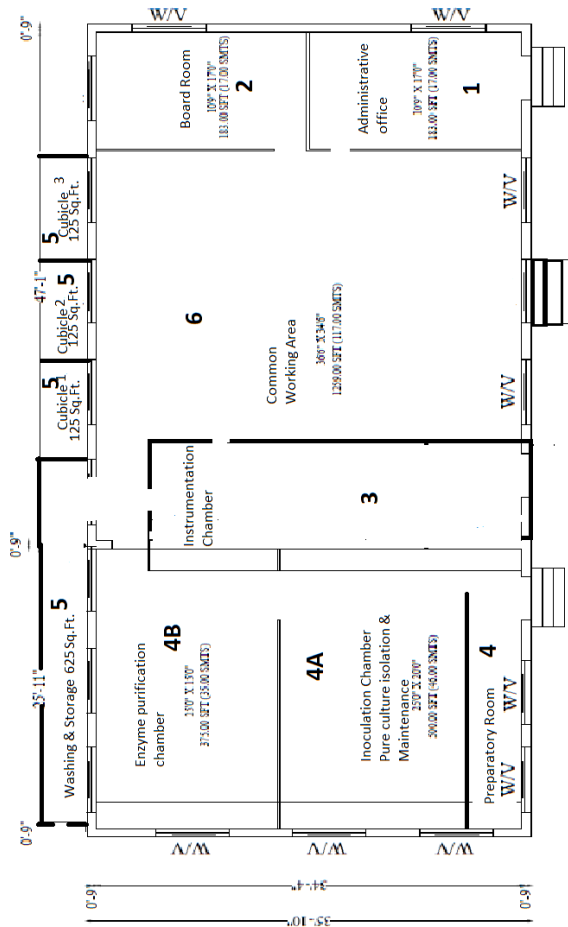
#### **II. BIRAC's E-YUVA Fellows - Under Graduate students)**

- A team of upto 5 Indian students from Indian Institutes/College pursuing under graduation.
- Each EYC will support up to 5 teams with upto 5 students each every year.
- Fellowship is provided for a period of 12 months.
- Quarterly Stipend: INR 7,500 per quarter per student of the team
- Annual research grant: INR 2,50,000 per team

### **Objective:**

- Manage Fellowships for students under the following two categories:
  - Innovation Fellows (Post-doctoral)
  - E YUVA Fellows (UG)
- Exposure to bio incubation model
- The BIRAC supported pre-incubation space will offer infrastructure and equipment for research and experimentation for selected fellows.
- Orientation to entrepreneurial culture, etc. to undergraduates, and at post-doctoral level
- Conduct Entrepreneurial Awareness Workshops for students.
- The GRG BIRAC EYUVA Centre shall act as anchor and extend requisite support in Technical and Business Mentoring, Product Development, Commercialization, IP Creation and Innovation to Company (I to C).

# GRG BIRAC EYUVA Centre



## Equipment:

1.	Bioreactors
2.	Olympus trinocular microscope
3.	NAT water distillation
4.	Refrigerated High Speed Centrifuge
5.	Bioclean
6.	Orbital Shaker
7.	Hot air oven
8.	Refrigerator
9.	Incubator
10.	colorimeter
11.	Autoclave
12.	Homogenizer
13.	Weighing balance
14.	pH meter
15.	Vortex Mixer
16.	Magnetic stirrer
17.	Mixer

**Action Plan:**

- Setting up of facility at EYUVA centre
- Selection and mentoring of EYUVA Fellows and Innovation Fellows
- Organize Awareness Workshops/ Seminars/ Workshops/ Investor meets – (Technical / Business), Lectures, exposure visits to other incubators
- Establish connects with technical, business mentors and investors
- Industry connect

**Proposed Activities:**

Theme - “Waste Valorization”

Tonnes of fruit waste generated by our City every day shall be used as raw materials for the production of highly useful products such as Enzymes, Solvents, Fuels, Oils, Surfactants by microbes

**Linkages:**

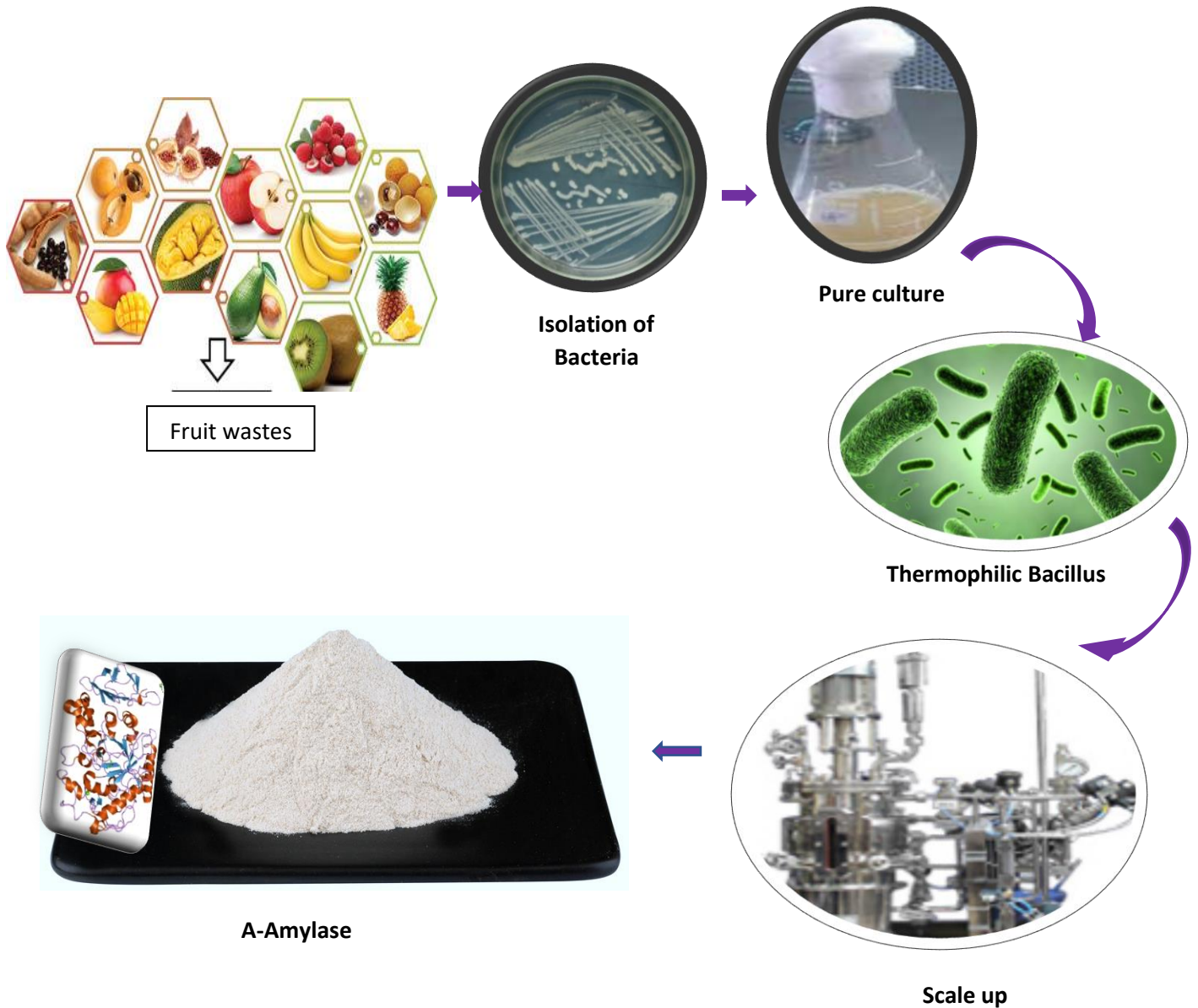
- PSG-Science & Technology Entrepreneurial Park (PSG-STEP), Coimbatore
- Technology Business Incubator- Agribusiness Incubation Society (ABIS), Directorate of Agribusiness Development, Tamil Nadu Agricultural University, Coimbatore
- Institute of Forest Genetics and Tree Breeding, Coimbatore
- Sugarcane Breeding Institute, Coimbatore
- Bharathiar university, Coimbatore
- ICAR-Indian Agricultural Research Institute, Regional Station, Wellington (Nilgiris)
- Bioline Laboratory, Coimbatore
- AWE CARE Analytical and Research Laboratory, Erode
- Centre for Bioscience and Nanoscience Research, Coimbatore
- Golden Jubilee Biotechnology Park for Women, Chennai (Under Process)
- Jananom Private Limited, Coimbatore (Under Process)

**Outcomes:**

- Create a culture of research innovation at Undergraduate student level in academic Institutions
- Capacity building at UG Level
- Opportunity creation and access for Biotech Entrepreneurship facilitated by BIRAC
- Industry Connect
- Product Development
- Commercialization
- IP creation
- Innovation to Company (I to C)
- Biotechnological interventions for sustainable bio-economy through characterization, prospection, conservation and utilization of bioresources.

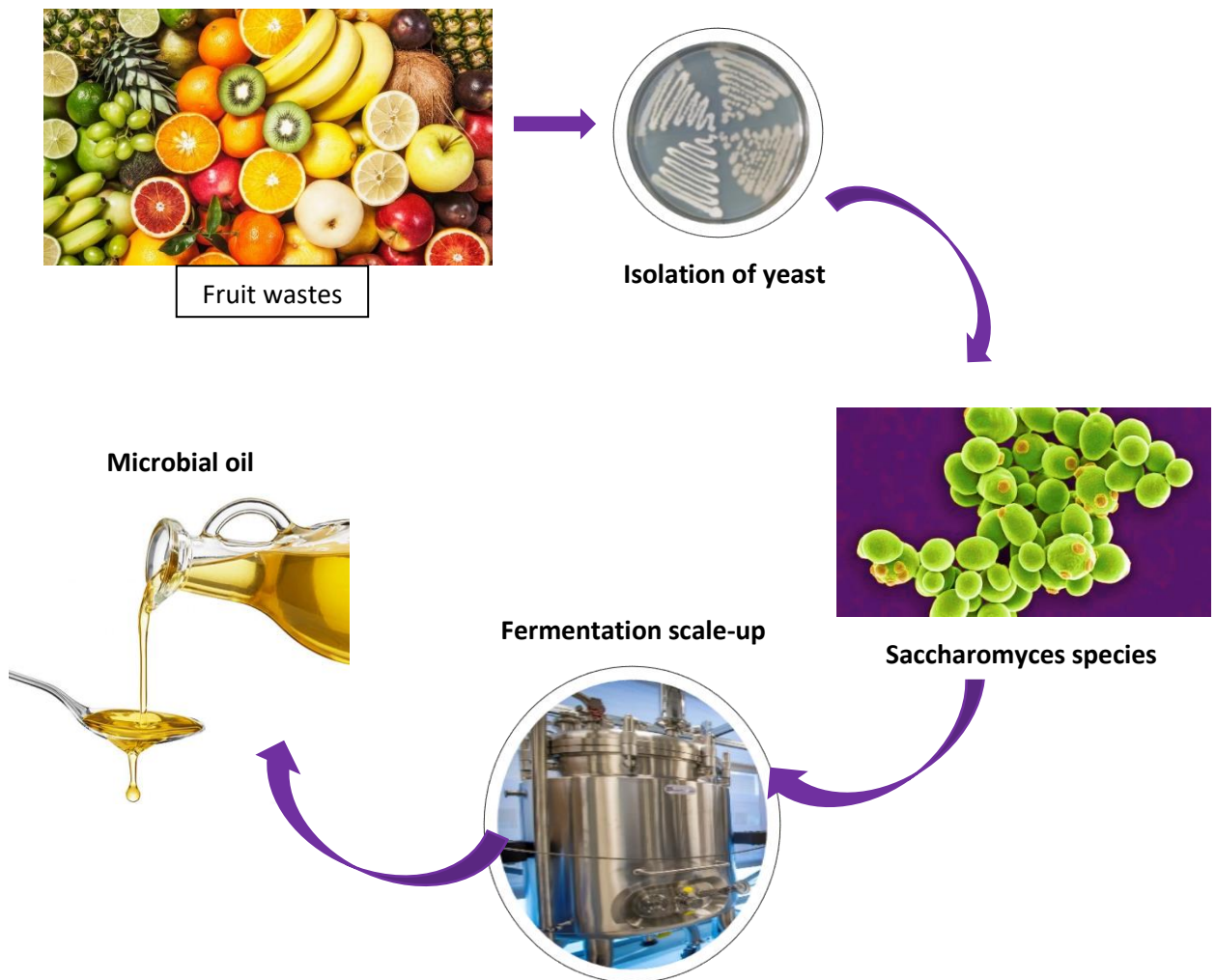
## Project 1: Production of Microbial Ecofriendly Amylase Enzymes

- Amylases are among the most important enzymes and are of great significance for biotechnology, constituting a class of industrial enzymes having approximately 25% of the world enzyme market.
- The amylases of microorganisms have a broad spectrum of industrial applications as they are more stable.
- The global  $\alpha$ -amylase enzyme market is expected to increase due to escalating demand for textile enzymes.



## Project 2: Microbial oil production

- Microbial oil production has received significant attention as a potential precursor for the production of biofuels and as raw material for oleochemicals such as detergents, soaps, plastics, surfactants, lubricants, paints and additives in food and cosmetic industry.
- Microbial oil is a better substitute for crude, plant, and fish oil.
- Microbial oil production is independent from season, climate, and location, can be realized using a wide range of carbon source
- It is a very valuable resource with the advantages of short cultivation times and high product purity



### Designated Project Investigator:

Dr. B.S. Chithra Devi, Assistant Professor, Department of Botany