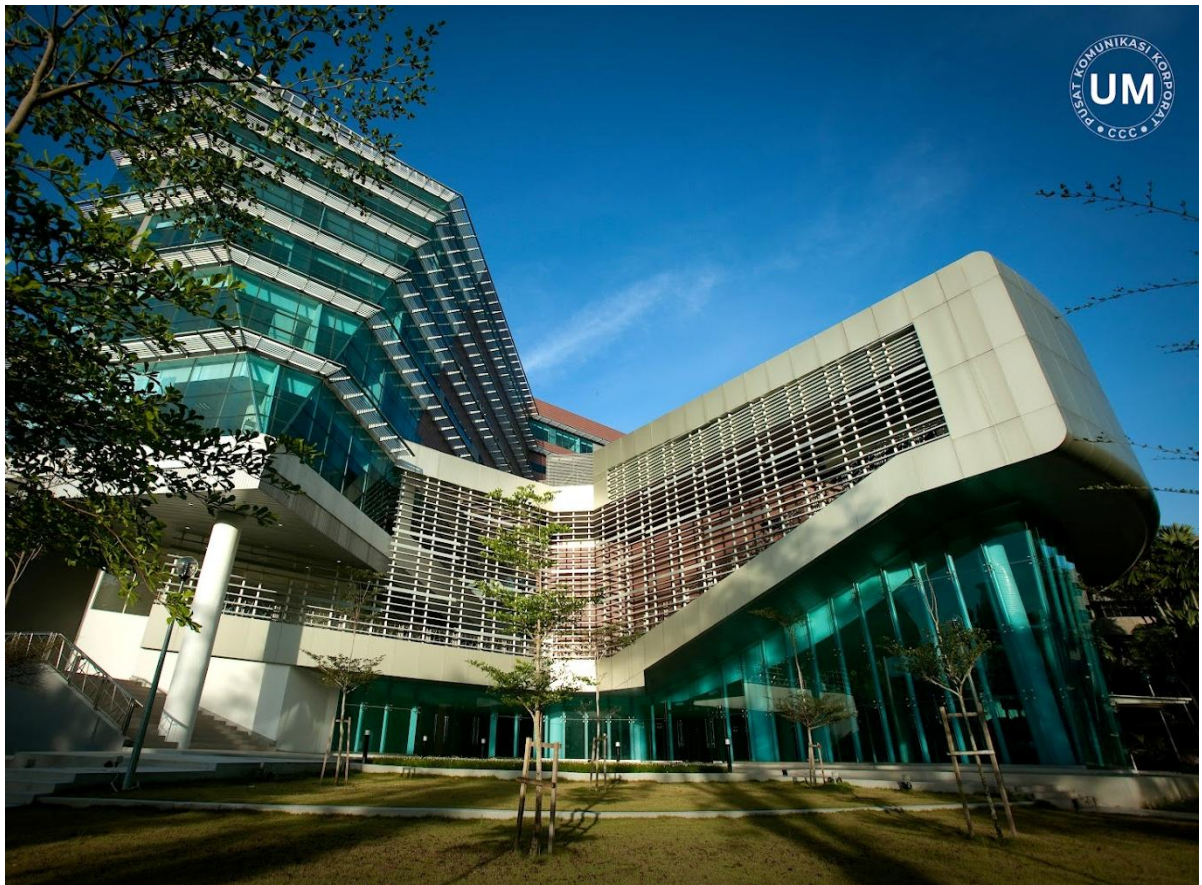


CEBAR Industry Services Catalogue

Centre for Research in Biotechnology for Agriculture
Universiti Malaysia



Bridging research and industry through innovative biotech solutions

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Director's Message



It gives me great pleasure to present the *CEBAR Industry Services Catalogue*, which reflects our commitment to advancing agricultural biotechnology through impactful research and industry collaboration.

At the Centre for Research in Biotechnology for Agriculture (CEBAR), Universiti Malaya, we strive to bridge the gap between scientific innovation and real-world application.

Our expertise spans plant biotechnology, disease diagnostics, microbial solutions, and sustainable agricultural technologies, designed to meet the evolving needs of industry partners.

Through our state-of-the-art facilities, experienced researchers, and strong collaborative networks, we provide reliable, science-driven solutions that support productivity, quality, and sustainability in agriculture.

This catalogue highlights our core services and facilities. We look forward to building meaningful partnerships and contributing to innovation in the agricultural sector.

Your sincerely

Associate Professor Dr. Tan Boon Chin
Director
Centre for Research in Biotechnology for Agriculture (CEBAR)
Universiti Malaya
Email: boonchin@um.edu.my

CEBAR

Training Workshops



Our Team



Assoc. Prof. Dr. Tan Boon Chin

Director

Areas of Expertise:

Plant Cell and Molecular Biology;
Crop Improvement and Breeding;
Crop Manipulation and
Genetic Engineering



Dr. Teo Chee How

Head of Research &
Development

Areas of Expertise:

Plant Biotechnology;
Artificial Minichromosome;
Molecular Cytogenetics



Dr. Fiqri Dizar Khaidizar

Head of
Global Partnerships

Areas of Expertise:

Molecular Biology; Cellular
Aging and Senescence;
Functional Genomics



Dr. Chua Kah Ooi

Head of Academic
Programmes

Areas of Expertise:

Molecular Microbiology;
Microbial Biotechnology;
Environmental and Agricultural
Microbiology



Dr. Purabi Mazumdar

Head of Industrial Partnerships

Areas of Expertise:

Plant Molecular Biology; Crop Stress and
Disease Physiology; Sustainable Agriculture
and Urban Farming Technologies



Dr. Norhafiza Mohd Arshad

Head of Strategic Outreach

Areas of Expertise:

Immunology; Molecular Oncology and Cancer
Biology; Nanobiotechnology and Bioactive
Natural Products, Aquatic Animal Health

Our Team

MANAGEMENT AND PROFESSIONAL STAFF



Dr Lau Su Ee

Research Officer (Q12)

Areas of Expertise:
Plant Molecular Biology;
Crop Improvement;
Crop Genetic Engineering



Dr Najiah Mohd Sadali

Research Officer (Q10)

Areas of Expertise:
Plant physiology;
Crop Improvement



Mdm Siti Nur Akmar Mazlin

Research Officer (Q9)

Areas of Expertise:
Plant Disease;
Nanobiotechnology

SUPPORT STAFF



Nuratikah Mohd Zainodin

Assistant Science Officer (C5)



Nor Nadirah Abd Hamid

Administrative Assistant (N1)

CEBAR

CEBAR is a leading research centre specialising in agricultural biotechnology, molecular biology, and plant health solutions.

What We Offer

- Industry collaboration
- Contract research
- Pilot testing
- Analytical services

Why Choose CEBAR?

- ✓ Expertise across plant, microbial & molecular systems
- ✓ Strong research–industry integration
- ✓ Proven track record in applied research
- ✓ Flexible and customisable services



Our Services

1. Plant Biotech Services

I. Plant Tissue Culture

Establishment of culture systems
for crops & ornamental plants



Sample Types: Explants / seeds / plant tissues

Timeline: 3–4 months

Output:

- ✓ Optimised tissue culture protocol
- ✓ Healthy, contamination-free plantlets ready for propagation

II. Greenhouse Bioproduct Testing

Biofertilisers /
biostimulants evaluation



Sample Types: Plants / soil / treatment applications

Timeline: 4–5 months

Output:

- ✓ Quantitative performance evaluation (growth, yield, physiological health parameters)
- ✓ comparative analysis against control treatments
- ✓ Validated technical report for product efficacy

Our Services



GP-BSL2 Plant Biotech Facility

Our Services

2. Molecular & Microbiology Molecular Analysis

I. Gene Cloning & Expression

PCR / qPCR

Sample Types : DNA / RNA

Timeline : ~20 – 30 days

Output:

- ✓ Amplified and validated gene constructs
- ✓ Gene expression analysis data (quantitative results)
- ✓ Ready-to-use sequences or expression profiles



II. Microbial Identification

Bacteria (16S rRNA)

Fungi (ITS)

Sample Types: DNA / pellet / culture

Timeline: 10 days – 2 weeks

Output:

- ✓ Accurate microbial identification (species / genus level)
- ✓ Sequence data with database comparison
- ✓ Phylogenetic analysis (if required)



III. Microbiome Analysis

16S & ITS sequencing

Sample Types: Soil & food samples

Timeline: ~2 months

Output:

- ✓ Comprehensive microbial community profile
- ✓ Diversity and abundance analysis
- ✓ Bioinformatics report with visualizations (charts, taxa distribution)

Our Services

3. Crop Quality & Phytochemical Analysis

I. Antioxidant & Bioactive Compound Analysis

Phenolics / flavonoids / antioxidant capacity

Sample Types: Plant / food extracts

Timeline: 3–4 weeks

Output:

- ✓ Quantification of key antioxidants and bioactive compounds
- ✓ Comparative analysis across samples/treatments
- ✓ Detailed analytical report with interpretation



II. Nutritional Quality Analysis

Protein / carbohydrates / vitamins C

Sample Types: Plant / food samples

Timeline: 2–3 weeks

Output:

- ✓ Comprehensive nutritional profile
- ✓ Quality assessment aligned with industry standards
- ✓ Technical report for product validation



Our Services

Plant Growth Chamber



Our Services

4. Cell & Biopharma Services

I. Cell Culture Services

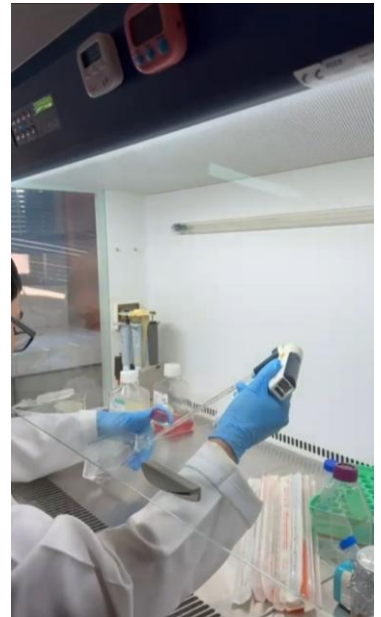
Cell line optimisation / maintenance
Contamination troubleshooting

Sample Types: Cell lines / cultures

Timeline: 2–3 weeks

Output:

- ✓ Optimised culture conditions
- ✓ Contamination-free validated cell lines
- ✓ troubleshooting report



II. In Vitro Drug Screening (IC50)

Cytotoxicity testing / dose-response analysis

Sample Types: Compounds / extracts / formulations

Timeline: 3–4 weeks

Output: IC50 values

- ✓ Dose-response curves
- ✓ Cytotoxicity evaluation report



III. Custom Experimental Design

Workflow planning / statistical design

Sample Types: Research projects / study concepts

Timeline: 1–3 weeks

Output:

- ✓ Experimental workflow plan
- ✓ Statistical design framework
- ✓ Study optimisation report

Contacts

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