Established under the UTAR Education Foundation, a not-for-profit organisation - officially launched on 13 August 2002.

**Vision**
- To be a global university of educational excellence with transformative societal impact

**Mission**
- Universal values in our beliefs
- Tenacity in overcoming challenges
- Agility in facing new frontiers
- Responsibility in pursuit of excellence

**Campuses**

**Sungai Long Campus, Selangor**
- Faculty of Accountancy and Management
- Faculty of Medicine and Health Science
- Faculty of Creative Industries
- Lee Kong Chian Faculty of Engineering and Science

**Kampar Campus, Perak**
- Faculty of Arts and Social Science
- Faculty of Business and Finance
- Faculty of Engineering and Green Technology
- Faculty of Information and Communication Technology
- Faculty of Science
**UTAR Research Centres**

- **Centre for Biodiversity Research**
  
  The establishment of this centre is the amalgamation of 3 diverse but inter-related groups namely, Aquaculture & Aquatic Bio-Diversity, Natural Products and Plant Biotechnology.
  
  Contact person: Dr. Wong Wey Lim, Faculty of Science wongwl@utar.edu.my

- **Centre for Cancer Research**
  
  To develop integrated research programmes for fundamental and translational cancer research in Malaysia. The key areas of research encompass early cancer detection, prognostic monitoring and development of therapeutic strategies for cancer treatment.
  
  Contact person: Prof. Lim Yang Mooi, Faculty of Medicine & Health Science ymlim@utar.edu.my

- **Centre for Research on Non-Communicable Disease**
  
  To conduct research – with special emphasis on priority non-communicable diseases and related risk factors affecting national health and well being of the community and application of new and emerging knowledge towards solution of health problems.
  
  Contact person: Prof. Dr. Shelly Soo, Faculty of Medicine & Health Science shellysoo@utar.edu.my
Research highlight 1: Evaluation of maslinic acid treatment efficacy in nude mice with colorectal cancer via in vivo bioimaging and tumour profiling

**Pl: Prof. Lim Yang Mooi (CCR) – ymlim@utar.edu.my**

**Objectives**

1. To evaluate the effect of maslinic acid (MA) treatment in the nude mice induced with colorectal cancer (CRC) by in vivo bioimaging.
2. To identify alterations of cell morphology in the MA treated and non-treated tissue samples from the normal and CRC study groups by histological analysis.
3. To assess the MA toxicity by determining the expression profiles of cytochrome P450 genes (CYP1-4) in MA treated and non-treated tissue samples from the normal study groups by performing RNAseq.
4. To identify differentially expressed genes associated with MA treatment through comparison of MA treated and non-treated tissue samples from the normal and CRC study groups by performing RNAseq & LC-MS/MS.
5. To elucidate molecular mechanisms involved in response to MA treatment against CRC by performing pathway analysis.

**Selected publications**

<table>
<thead>
<tr>
<th>Study Model</th>
<th>Disease/Cell Type</th>
<th>Key Finding(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>In vitro</td>
<td>Human B cells</td>
<td>Suppressive effect of MA on PMA-induced protein kinase C</td>
</tr>
<tr>
<td>In vitro</td>
<td>Raji cells</td>
<td>Suggest MA induces cell cycle arrest &amp; activates mitochondrial apoptotic pathway</td>
</tr>
<tr>
<td>In vitro</td>
<td>HepG2 Cells</td>
<td>MA induces HO-1 &amp; NOQ1 expression via activation of Nrf2 transcription factor</td>
</tr>
</tbody>
</table>

- Isolated from the tubers of Coleus tuberosus Benth (Lamiaceae) (Lim et al. 2010).
- Also locally known as Ubi Kemili.
Research highlight 2: Isolation, characterisation and evaluation of anti-tumour, anti-adipogenic, neuroprotective properties of phytochemicals from *Calophyllum* sp.

**PI:** Dr. Lim Chan Kiang (CBR) –cklim@utar.edu.my

**Objectives**

1. To isolated and characterise novel phytochemicals from *Calophyllum* sp.
2. To evaluate anti-tumour, anti-adipogenic and neuroprotective properties of these novel phytochemicals in in vitro and in vivo models.

*Selected publications*

<table>
<thead>
<tr>
<th>Study Model</th>
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</tr>
</thead>
<tbody>
<tr>
<td><em>In vitro</em></td>
<td>HeLa cells</td>
<td>All the test compounds displayed potent inhibitory activity against HeLa cells, particularly compound 1</td>
</tr>
<tr>
<td><em>In vitro</em></td>
<td>NIH 3T3 cells</td>
<td>Coumarins from <em>Calophyllum teysmannii</em> have anti-adipogenic effects</td>
</tr>
</tbody>
</table>

*Isolated from stem barks of* *Calophyllum teysmannii*

*Also locally known as bitangor*
**NEUROGENETICS RESEARCH GROUP**

**PI: Dr. Say Yee How (CBR) - sayyh@utar.edu.my**

**Current Members:** Lim Yi Ying, Ng Yee Wen, Ong Hing Huat, Ong Sing Hui

**Past Members:** Chia Phee Phee, Choong Chi-Jing, Cornelius Chieng Kwang Lee, Fan Sook Ha, Goh Kai Wey, Yeannie Yap Hui Yeng

**Collaborators:** Dr. Chew Choy Hoong (UTAR), Dr. Lim Chan Kiang (UTAR), Dr. Tan Yen Nee (UTAR), Dr. Chew Fook Tim (NUS), Dr. Anna Ling Pick Kiong (IMU), Dr. Choo Yun Huoy (UTeM), Dr. Sharmili Vidyadaran (UPM)

**Financial Support:** Ministry of Education, Ministry of Science, Technology & Innovation, Malaysia Toray Science Foundation S&T Grant, UTAR Research Fund

**RESEARCH OBJECTIVES**

- To elucidate the gene (α-synuclein/angiogenin)-environment (agricultural pesticides) interactions involved in microglial neuroinflammation and neuronal cell death in Parkinson’s disease/Amyotrophic Lateral Sclerosis.
- To investigate the roles of α- and γ-synuclein in adipocyte (fat cell) metabolism and the roles of adipokines (hormones secreted by fat cells) in neuroprotection via α- and γ-synuclein in the brain-adipose axis.
- To examine the potential of Malaysian natural product compounds in chemoprevention against adipogenesis, neurodegeneration and neoplasm (collaborative project).
- To study the effect of the Synucleins and PrP^C over-expression or knockdown on the 6 hallmarks of colorectal cancer, specifically protein kinase phosphorylation, apoptosis and angiogenesis cell signaling pathways in *in vitro* cell culture models.
- To study the association of gene variants involved in the energy balance, adipogenesis and chronic inflammation pathways with obesity and obesity-related diseases like metabolic syndrome in the multi-ethnic Malaysian population.
- To study the association of bitter, sweet, salty, sour, umami and ‘fatty’ taste receptor genes variants with food perception and preference in the multi-ethnic Malaysian population.
## Research collaboration opportunities

<table>
<thead>
<tr>
<th>No.</th>
<th>UK Researcher</th>
<th>Research track record/interests</th>
<th>UTAR researcher to showcase/establish collaboration</th>
<th>Research track record/interests</th>
</tr>
</thead>
</table>
| 1   | Dr. Bee K. Tan  
University of Warwick | Adipose hormones in angiogenesis and obesity | Dr. Say Yee How (FSc)  
sayyh@utar.edu.my  
Dr. Chew Choy Hoong (FSc)  
chewch@utar.edu.my | Adipokine secretion and gene variants in obesity and cancer angiogenesis  
Lauric acid as therapeutic intervention for insulin resistance and atherosclerosis |
| 2   | Dr. Ulvi Bayraktutan  
University of Nottingham | Blood-brain barrier, ischaemia, stroke | Dr. Loo Keat Wei (FSc)  
lookw@utar.edu.my | Neuro-epigenetic regulation of genes among ischemic stroke patients |
| 3   | Dr Kamalan Jeevaratnam  
University of Surrey  
Professor Jaipaul Singh  
University of Central Lancashire | Diabetes, natural products, anticancer peptides | Prof. Dr. Lim Yang Mooi (FMHS)  
ymlim@utar.edu.my  
Dr. Lim Chan Kiang (FSc)  
cklim@utar.edu.my  
Dr. Chew Choy Hoong (FSc)  
chewch@utar.edu.my | Evaluation of maslinic acid treatment efficacy in nude mice with colorectal cancer via in vivo bioimaging and tumour profiling  
Isolation, characterisation and evaluation of anti-tumour, anti-adipogenic, neuroprotective properties of phytochemicals from Calophyllum sp.  
Lauric acid as therapeutic intervention for insulin resistance and atherosclerosis |
| 4   | Dr. Pete Monk  
University of Sheffield | Complement C5a, tetraspanins in infections, Amyotrophic Lateral Sclerosis, motor neurone disease | Dr. Say Yee How (FSc)  
sayyh@utar.edu.my | In vitro and in vivo models of microglial activation by angiogenin in Amyotrophic Lateral Sclerosis |