

# EB GROUP HISTORY

Environmental Biotechnology Research Group (EB Group) is a research group under the Faculty of Biotechnology and Biomolecular Sciences (FBSB), focusing mainly on conversion of sustainable and renewable bioresources into value-added green products. EB Group was founded and led by Professor Dato' Dr. Mohd Ali Hassan in 2004 with the tagline of "Waste to Wealth through Biotechnology". EB Group has grown over the years, and at present, the group has 9 lecturers / researchers as full-time members with several associate members. Currently, there are over 30 postgraduate students working on various research areas including biocompost, biochar, biogas and biofuel, nanocellulose and biomaterials, biolubricant, and enzymes. EB Group has collaborated with several international research partners including from Japan, South Korea, Thailand and Indonesia. EB Group particularly, has a very close relationship with Kyushu Institute of Technology (Kyutech), Japan whereby it started back in 1998 when Prof. Dato' Dr. Mohd Ali Hassan initiated the collaboration with Prof. Dr. Yoshihito Shirai of Kyutech. This duo was entrusted by FELDA in 2002 to lead a big project on the utilisation of oil palm biomass for value-added products. The big amount of grant obtained through the project has contributed to the growth of the research and the establishment of EB Group. Since then, EB Group has succeeded in securing several big RDCI grants from local and international sources, namely MOSTI top-down TechnoFund, MTDC-CRDF grant and SATREPS. EB Group has also actively involved in local and international consultancy projects such as with Worldwide Landfill, Indah Water Konsortium Sdn. Bhd., YPJ Holdings, Nextgreen Pulp & Paper Sdn. Bhd., AMPM Sdn. Bhd., CJ Bio Malaysia Sdn. Bhd., Novozymes Malaysia., Mitsubishi Heavy Industries (Japan), Advanced Industrial Science and Technology (AIST Japan) and Ajinomoto Company Inc (Japan).

Alhamdulillah, EB Group members have published more than 200 scientific articles to date, commercialised some of the research findings, trained more than 100 human capital, and contributed to the community through knowledge transfer programmes. We will continue to be the leader in the Environmental Biotechnology research in Malaysia and in the region. EB Group strives to contribute to the community and strengthen the bioeconomy through collaborations with public and private sectors, in line with the UN sustainable development goals (SDGs).



# DEVELOPMENT OF EB GROUP RESEARCH FACILITIES

2004

- ❖ Establishment of Environmental Biotechnology Research Group (EB Group), operated at Faculty of Biotechnology and Biomolecular Sciences (FBSB) UPM.

2005

- ❖ EB lab moved to Institute of Bioscience (IBS).
- ❖ Remote EB lab was developed at FELDA Serting Hilir Palm Oil Mill with Biogas Pilot Plant facilities (FELDA grant until 2008)

2006-2007

- ❖ Establishment of Biomass Technology Laboratory at Block N1, MTDC UPM (supported by AIST & Ajinomoto grant) for main operation of EB Group.
- ❖ Some research activities are placed at EB lab in BioTech 3

2008

- ❖ Development of Biocompost Pilot Plant at Biorefinery Complex UPM (supported by MTDC-CRDF grant)

2011

- ❖ Biomass Technology Laboratory moved to Biorefinery Complex UPM

2012

- ❖ Biorefinery Complex UPM as the anchor for Serdang Biomass Town project. Installation of Biodiesel Pilot Facility under the project (supported by KPKT and MPSJ, in collaboration with Japan Government)

2013-2018

- ❖ Remote EB lab was developed at Keningau Palm Oil Mill under SATREPS project (JICA-JST-KPT grant)
- ❖ Development of Biochar Pilot Plant and installation of Nanocellulose Processing Facility at Biorefinery Complex UPM under SATREPS project

2018-2020

- ❖ Installation of Biogas Pilot Facility (SWCorp project – Kursi Tan Sri Ali Hamsa)

2020-2021

- ❖ Development of pre-commercialisation facilities for bionanocomposite production (funded by JST Japan under aXis project)