



Production of High-value Bioproducts



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| 1. Project name | Production of high-value bioproducts from an innovative algal bioreactor treating domestic wastewater. |
| 2. AIT Lead Faculty | Prof. Thammarat Koottatep |
| 3. Objective | To optimize the algae-based wastewater treatment systems, which are domestic wastewater treatment systems such as PSBR and AG-HRP for the product. |
| 4. Short Descriptions | For the nutrient recovery from wastewaters, AIT has developed technologies including the Photo Sequencing Batch Reactor (PSBR) and attached-growth high-rate pond (AG-HRP) (Shin and Polprasert, 1988; Polprasert and Charnpratheep, 1989). Using algae-bacteria consortia is an eco-compatible technology to treat the wastewater coming from the effluent of conventional anaerobic digesters/septic tanks. Moreover, nitrogen and phosphorus from wastewater also support algal biomass production. Microalgae have recently become interestingly significant as an alternative source for biofuel and high-value compounds. People are paying more attention to how microalgae can be used in different fields, such as food, chemical feed, and the production of high-value bioproducts from new algal bioreactors that treat household wastewater. |
| 5. Output/Social Impact | Transfer of knowledge and dissemination of technology. |
| 4. Partners | Naresuan University |
| 5. Donors | Bangchak Corporation Public Company Limited |
| 6. Project Duration | 1 July 2019 – 30 June 2022 |
| 7. Total grant amount | 2,810,000 THB |
| 8. Please specify SDG s to which this project belongs | |