

# 微藻資源庫之建置與開發計畫

執行單位

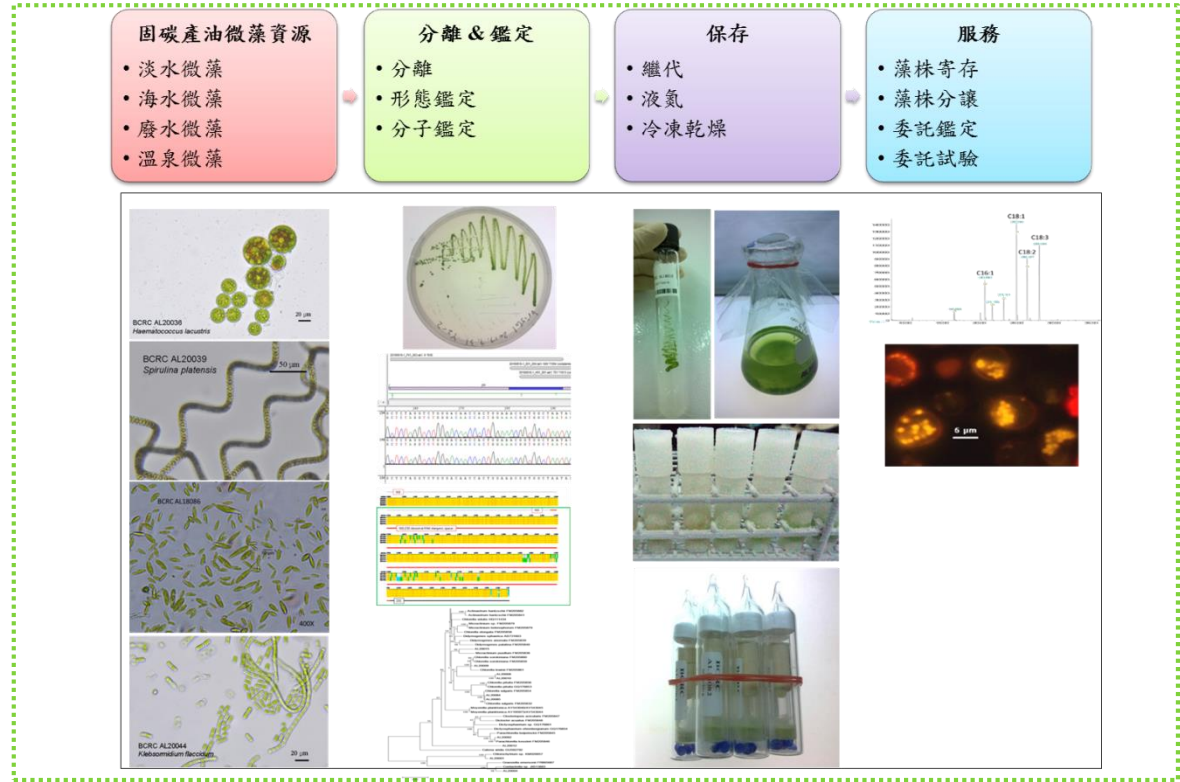
財團法人食品工業發展研究所

計畫主持人

廖麗玲

- 食品所生物資源保存中心致力於建置微藻資源庫，提供藻株分離、純化及保存之服務；同時，開發微藻冷凍乾燥保存技術及培養系統，減少繼代保存及養殖之成本，提升微藻產業的永續性

項次	專利名稱	國家
1	微藻 <i>Chlorella lewinii</i> 及其應用	中華民國
2	微藻 <i>Chlorella lewinii</i> 及其應用	中國
3	一種可生產油脂之新穎性微藻	中華民國
4	一種可生產油脂之新穎性微藻	中國



- 本計畫建立多元化微藻資源庫，包含淡水微藻、海水微藻、廢水微藻與溫泉微藻等，目前已保存200多株微藻，可提供國內外產學研單位進行分讓之服務
- 本計畫開發冷凍乾燥保存技術，已成功保存11株微藻，其中包含重要商業藻種*Chlorella vulgaris* (2株)與*C. sorokiniana* (3株)
- 本計畫從禽畜廢水中篩選潛力微藻並進行廢水培養驗證，可降低微藻養殖成本，並具有減碳效益，並可有效降低廢水中氨氮及磷的含量，提高水資源再利用效率

# Establishment and Development of Microalgae Resource Bank

Execution Unit

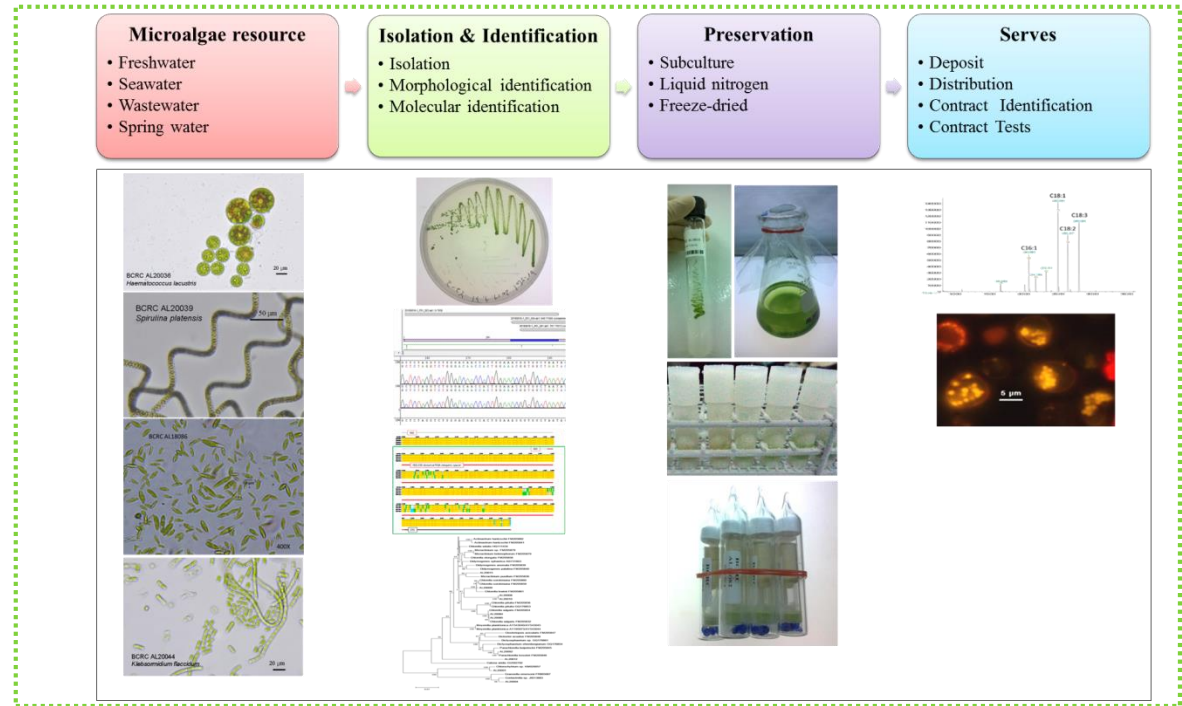
Food Industry Research and Development Institute

Project Director

Li-Ling Liaw

- BCRC is dedicated to establish microalgae library and offers a series of microalgae related services, such as microalgae isolation, purification and preservation. In addition, we develops microalgae freeze-dried preservation technology and cultivation system to reduce the cost of subcultures and cultivation and improve the sustainability of microalgae industry.

NO.	Patent	Country
1	A strain of <i>Chlorella lewinii</i> and uses thereof	Taiwan
2	A strain of <i>Chlorella lewinii</i> and uses thereof	China
3	A novel microalgae for bio-oil production	Taiwan
4	A novel microalgae for bio-oil production	China



- In this project, we established a diversified microalgae resources library that contains freshwater microalgae, seawater microalgae, waste water microalgae and hot spring microalgae. Up to now, there are more than 200 microalgae strains preserved and available for distribution.
- We developed freeze-dried preservation technology for microalgae and had successfully preserved 11 strains of microalgae, including *Chlorella vulgaris* (2 strains) and *C. sorokiniana* (3 strains), which are important commercial microalgae species.
- We isolated potential microalgae from wastewater of poultry and livestock and established a culture system to reduce the cultivation cost with additional benefit of carbon dioxide fixation. Moreover, it can effectively reduce the ammonium nitrogen and phosphorus in wastewater.