



**AISAM 2020**

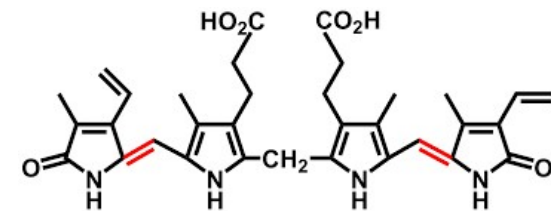
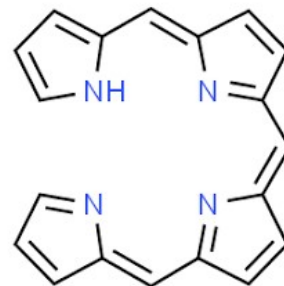
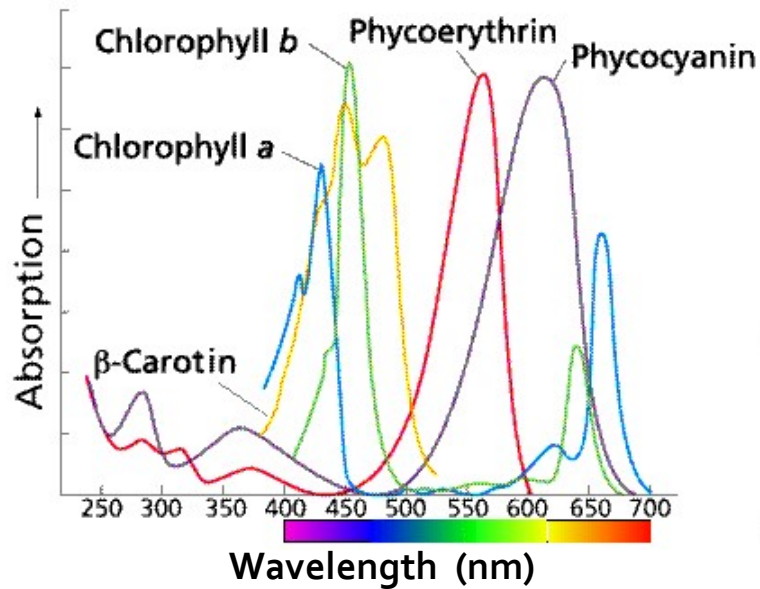
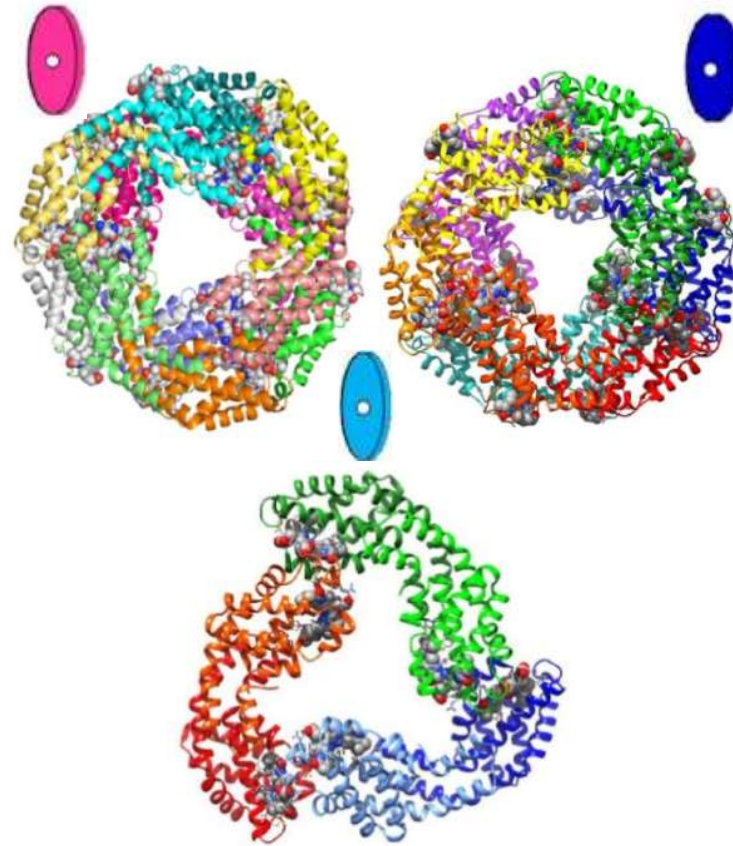
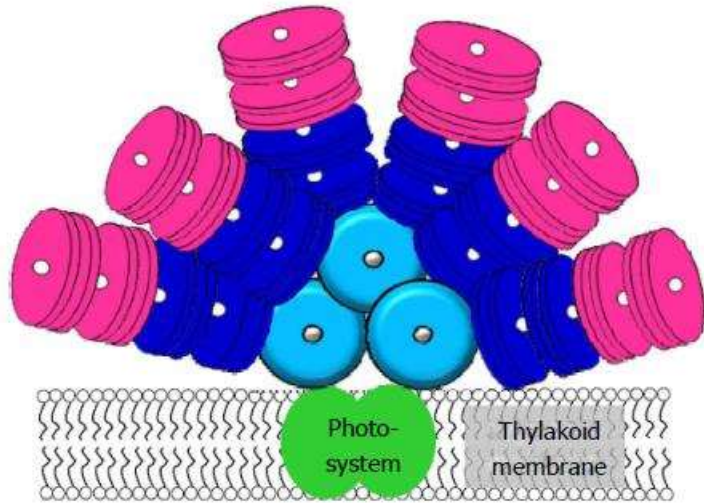
**UN METODO SEMPLICE PER  
PURIFICARE LE FICOBILIPROTEINE  
BASATO SULLA CROMATOGRAFIA  
SU MEMBRANA**



**ROSARIA LAUCERI  
CNR-IRSA**

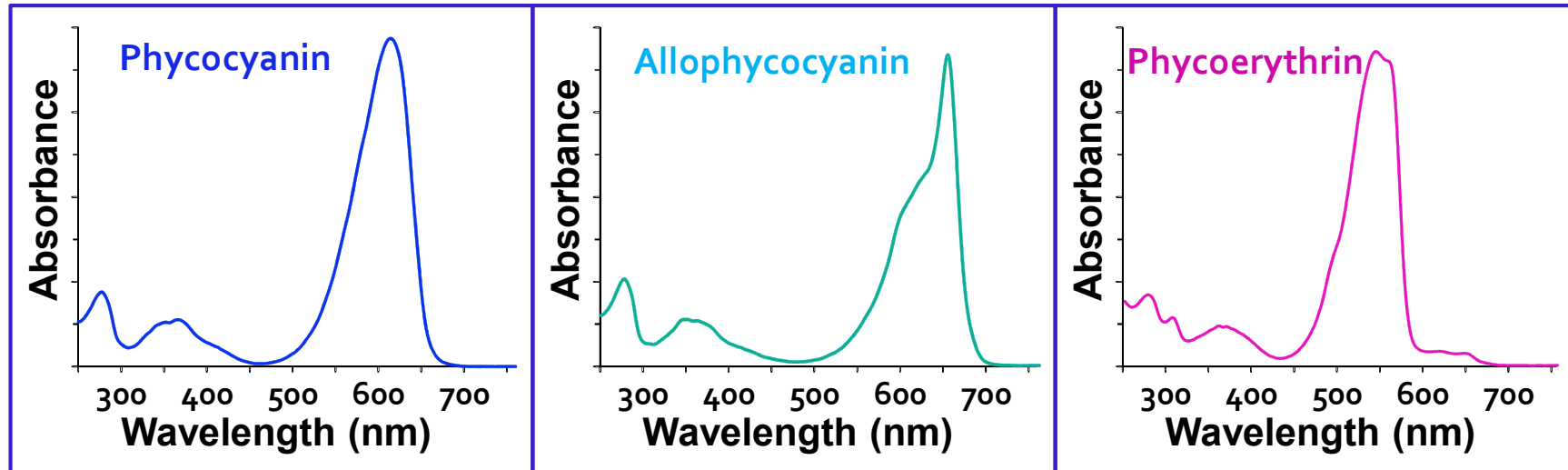


## Ficobiliproteine: pigmenti fotosintetici del sistema antenna dei cianobatteri ed alcune alghe



PCB

## Le ficobiliproteine: pigmenti di interesse commerciale



**Le ficobiliproteine sono prodotti di alto valore e trovano impiego in differenti settori applicativi:**



- **Alimentare** (colorante naturale, alimento nutraceutico etc.)
- **Cosmetica** (colorante naturale, anti-invecchiamento della pelle etc.)



- **Medico-Farmaceutico** (antiossidante, antiinfiammatorio, antitumorale, neuroprotettivo etc.)
- **Kit diagnostici** (marcatore fluorescente: citofluorimetria, immunofluorescenza, test ELISA etc.)

# Cosa serve per la purificazione basata sulla cromatografia su membrana?

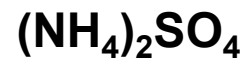
**Apparato di microfiltrazione da vuoto**



**Membrana in PVDF**

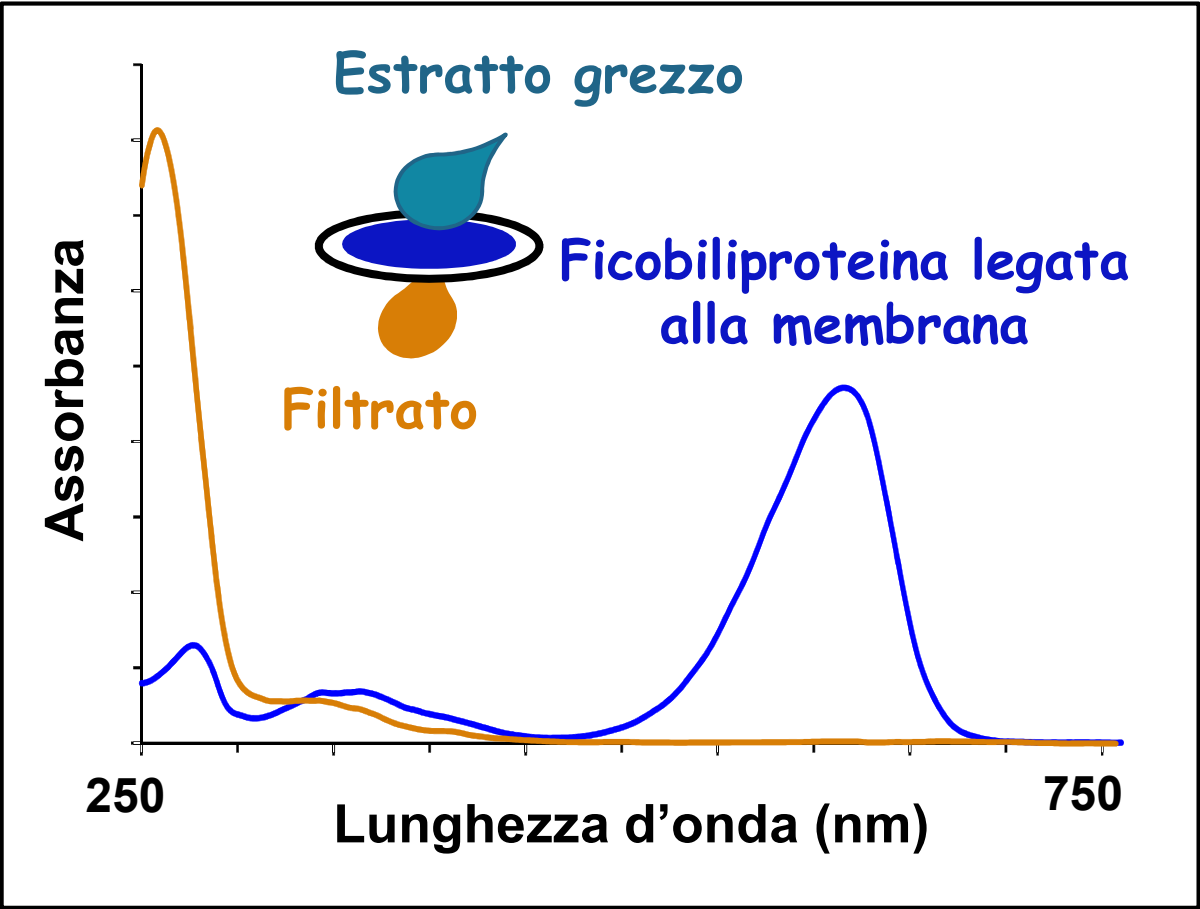


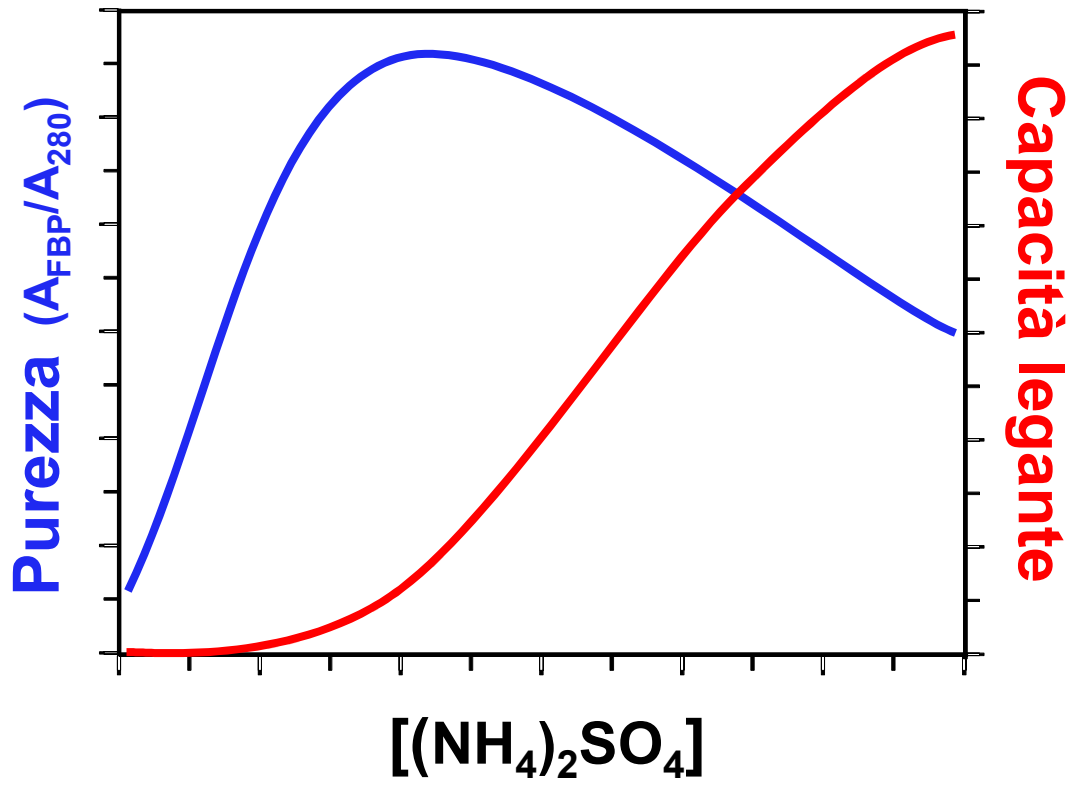
**Pompa da vuoto**

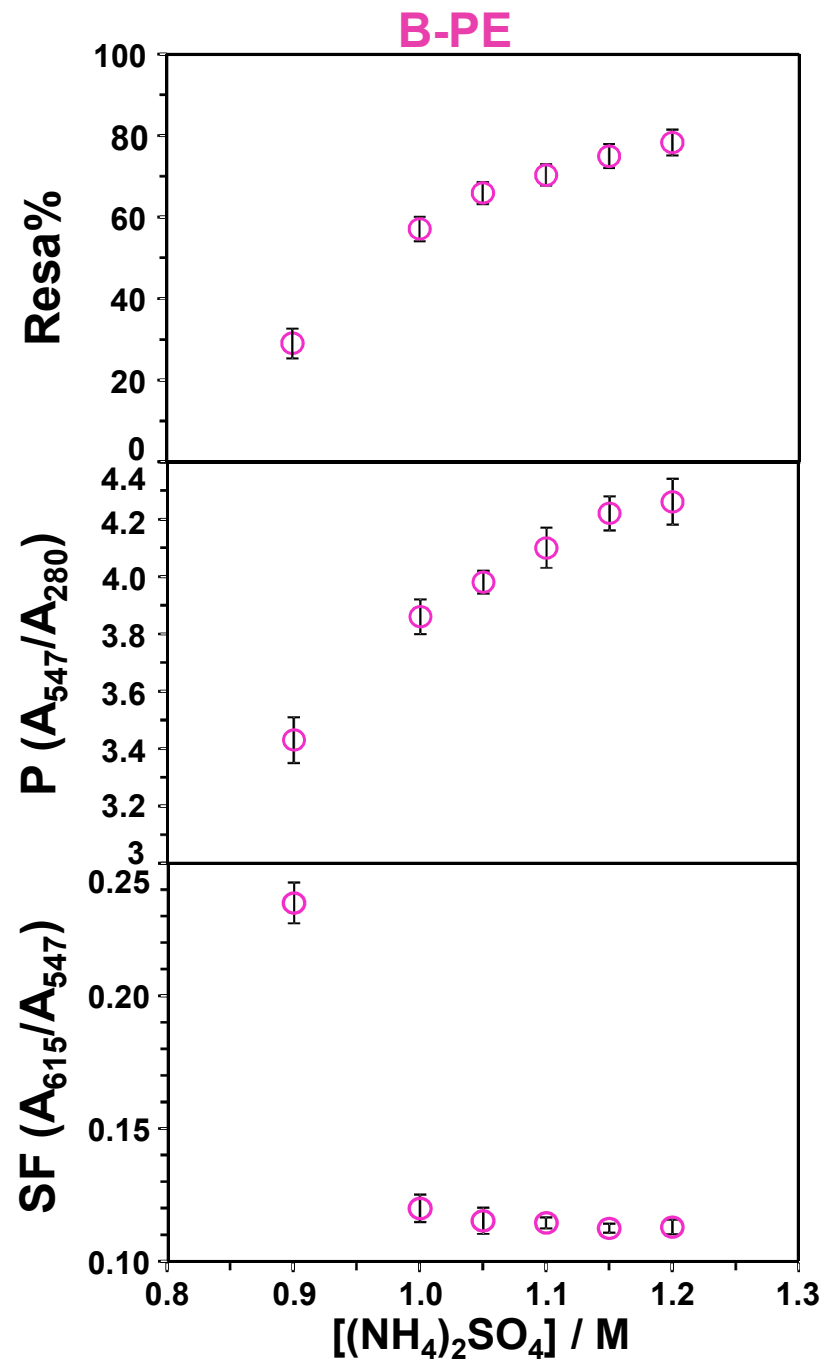
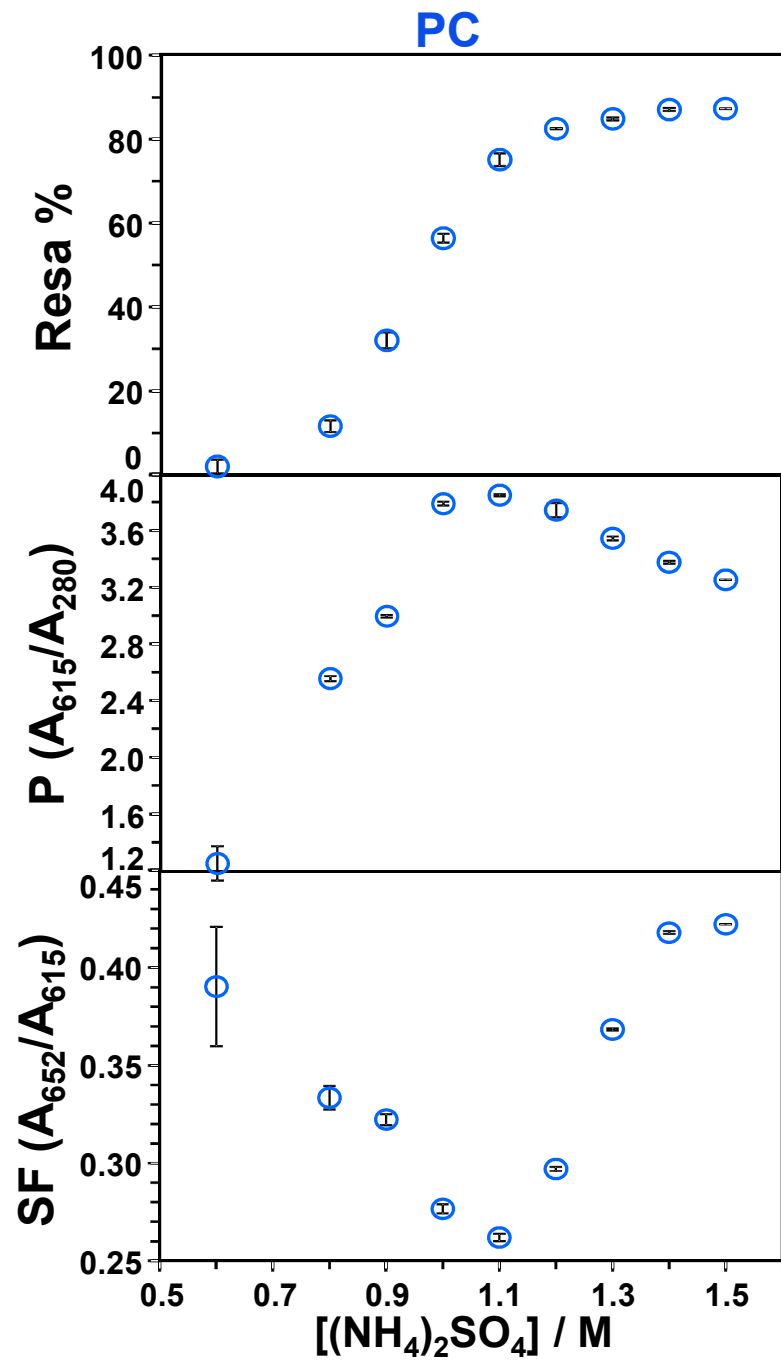


**Filtri da siringa in PVDF**

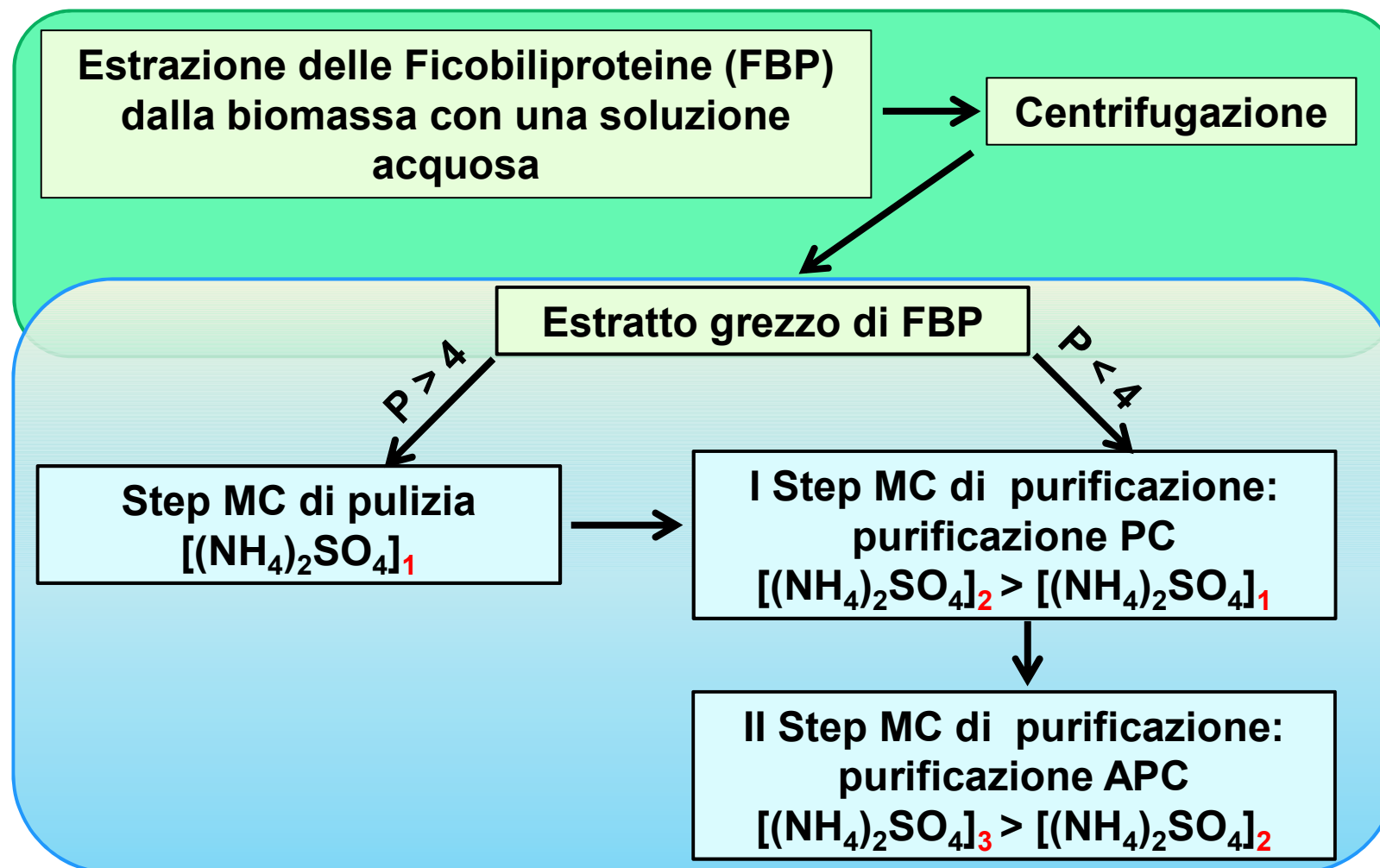








## Ficocianina e Alloficocianina estratte da *A. platensis*



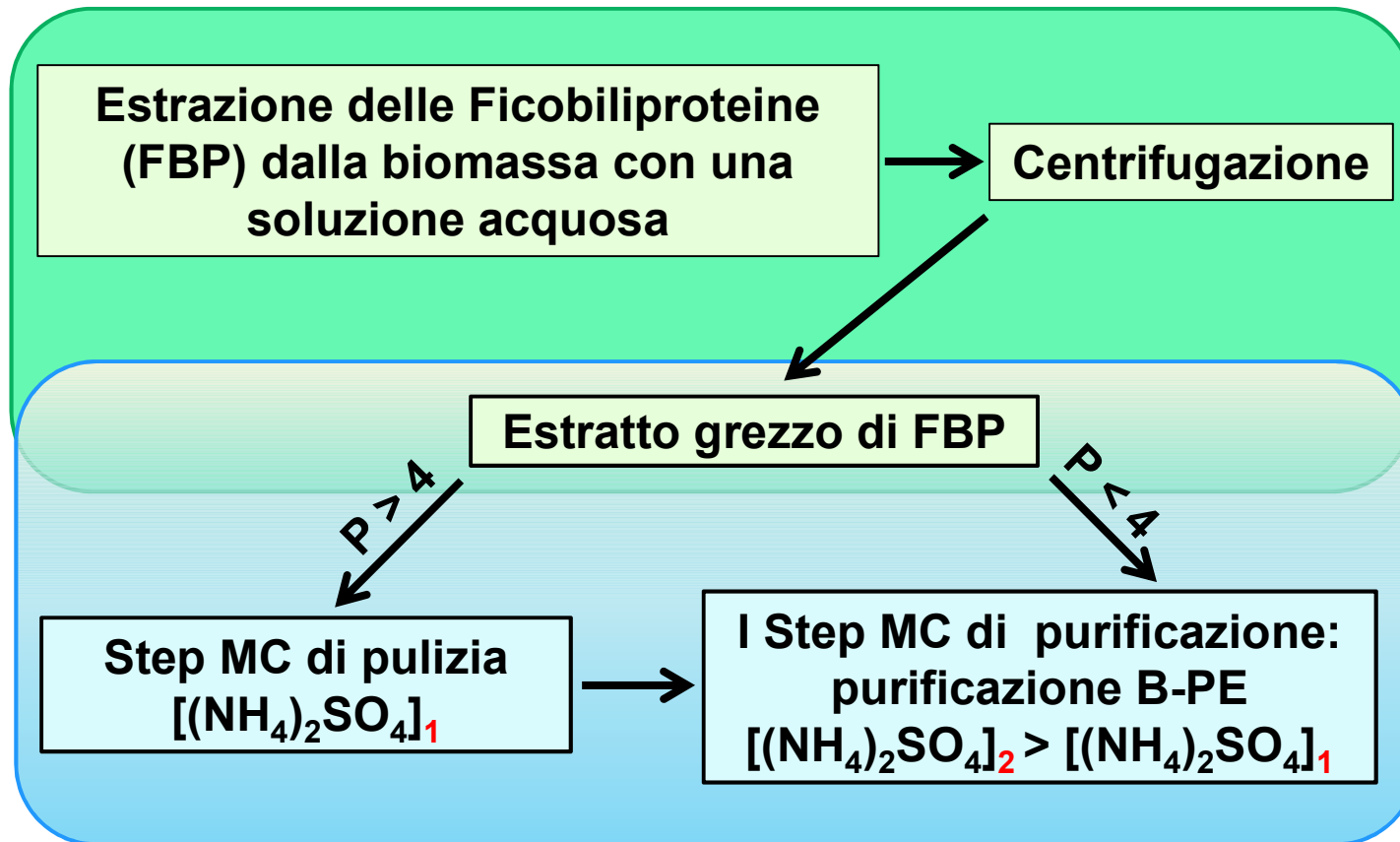
R. Lauceri, G. Chini Zittelli, B. Maserti, G. Torzillo, *Algal Res.*, <https://doi.org/10.1016/j.algal.2018.09.003>

R. Lauceri G. Chini Zittelli, G. Torzillo, *Algal Res.*, <https://doi.org/10.1016/j.algal.2019.101685>

R. Lauceri, G. Chini Zittelli, G. Torzillo, International Patent, publication n. WO 2019/234614

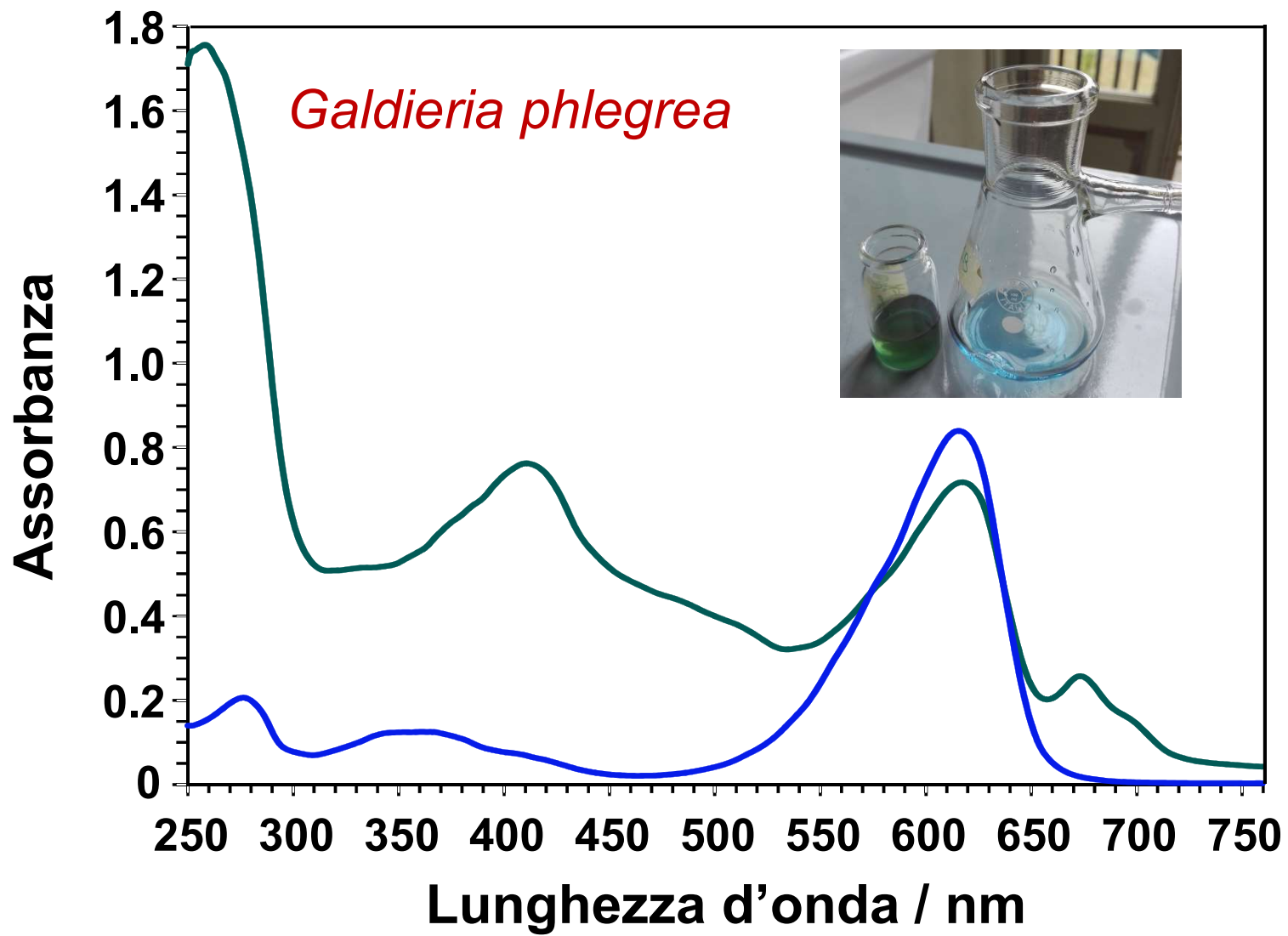


## B-Ficoeritrina estratta da *P. cruentum*



R. Lauceri G. Chini Zittelli, G. Torzillo, *Algal Res.*, <https://doi.org/10.1016/j.algal.2019.101685>

R. Lauceri, G. Chini Zittelli, G. Torzillo, International Patent, pubblicazione n. WO 2019/234614



## Prospettive future

- **Produzione sostenibile su larga scala di ficocianina estratta da Spirulina**
- **Nuovi metodi di estrazione delle ficobiliproteine**
- **Fonti alternative di ficocianina: *Galdieria phlegrea***
- **Stabilizzazione delle ficobiliproteine**



**Graziella Chini Zittelli**



**Giuseppe Torzillo**



**Simona Carfagna**



**Giovanna Salbitani**