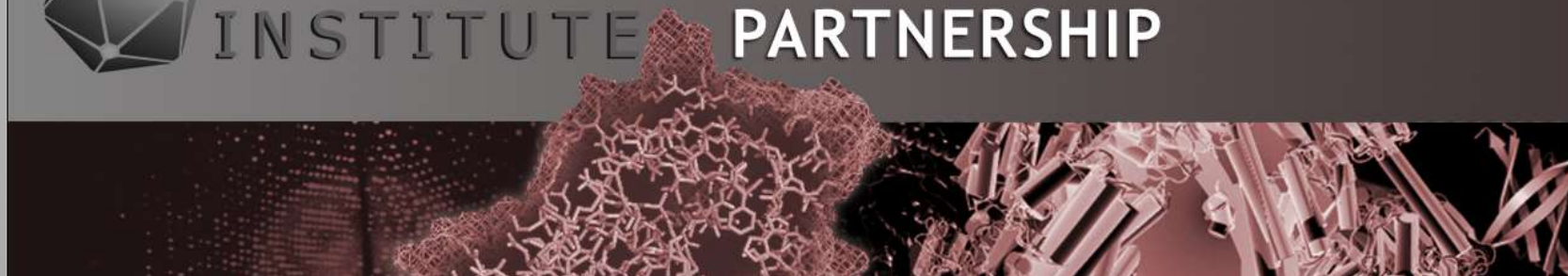


UCLA-DOE
INSTITUTE

GENE to STRUCTURE
PARTNERSHIP



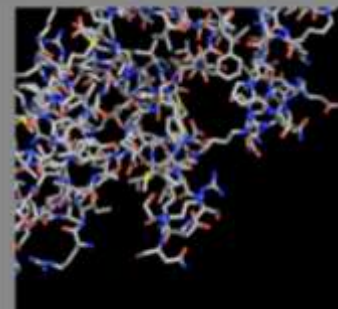
Introduction to UCLA-DOE Core Technology Centers
Usage and Requirements

EXPRESSION

PURIFICATION

CRYSTALLIZATION

DETERMINATION



Contacts



Mark Arbing

Expression/Purification

marbing@mbi.ucla.edu

Office: (310) 206-2871



Mike Collazo

Crystallization

mcollazo@mbi.ucla.edu

Office: (310) 882-2585

Text: (805) 982-0606



DUILIO Cascio

X-ray Crystallography

cascio@mbi.ucla.edu

Office: (310) 825-1551

Contact Mike Collazo for general inquiries



PROTEIN EXPRESSION TECHNOLOGY CENTER AT UCLA



- Cloning and construct design
- Bacterial and yeast expression
- Protein expression screening
- Large scale fermentation and cell lysis
- Protein purification



CONTACT

Mark Arbing

Office:

(310) 206-2871

Email:

marbing@mbi.ucla.edu

Usage of Expression Core

- **What you will need**

Recharge ID or P.O.

Contact Mark Arbing

marbing@mbi.ucla.edu

- **Sample preparation requirements**

Sequence or plasmid



- Consultation and technical assistance available to researchers prior to and following experiments
- Evaluation of sample via Dynamic Light Scattering
- Automated setup of crystallization conditions at 4° and 20° C
- Storage of plates at 4° and 20° C
- UV/Vis identification of organic and inorganic crystals
- Optimization of crystallization conditions



Mike Collazo

Text:

(805) 982-0606

Office:

(310) 882-2585

Email:

mcollazo@mbi.ucla.edu

About the Crystallization Core

- **Annually**

~4,000 tray setups performed annually
(~1,000,000 conditions)

80-100 structure deposits by user base

- **Approach**

Guided approach combined with high-throughput technology

Discriminates against false positives and low quality crystals

Usage of Crystallization Core

- **What you will need**

Recharge ID or P.O.

Contact Mike Collazo

mcollazo@mbi.ucla.edu

Text: (805) 982-0606

Office: (310) 882-2585



- **Sample preparation requirements**

Concentrated and pure sample

40 uL sample per setup (288 conditions)



X-RAY CRYSTALLOGRAPHY CORE FACILITY AT UCLA

- Experimental and computational facilities
- Acquisition of X-ray diffraction data in-house
- Synchrotron access
- Data processing and manipulation
- Assistance with model building and refinement
- Guidance interpreting resulting structures
- Web-based services/tutorials and software
- Workshops and informal classes



CONTACT

Duilio Cascio

Office:
(310) 825-1551

Email:
cascio@mbi.ucla.edu

Usage of X-ray Core

- **What you will need**

Recharge ID or P.O.

Contact Duilio Cascio or Mike Collazo

cascio@mbi.ucla.edu

mcollazo@mbi.ucla.edu

- **Sample preparation requirements**

Crystals or fibers