Rates

Structure Biology Core is dedicated to providing research laboratories with highest quality of services in biochemistry and structure biology.

Molecular Biology/Cloning

Services	Bridge Institute	USC Collaboration	Non-profit org/ Collaboration	Industry/ Collaboration
Single mutation	$50	$55*	$85*	$105*
Cloning into pFastBac	$55	$65*	$90*	$110*
Bacmid Preparation	$40	$55	$65	$90

* : In case of mutagen and cloning, some extra cost that is associated with the outsourced services, like ordered primers and sequencing will be applied.

Bacterial Protein Expression

Services	Bridge Institute	USC Collaboration	Non-profit org/ Collaboration	Industry/ Collaboration
Expression and Solubility test (small scale)	$30/Clone	$40/Clone	$40 /Clone	$50/Clone
Protein expression	$1000 / 10-20g of cells	$1300 / 10-20g of cells	$1750 / 10-20g of cells	$2450 / 10-20g of cells
N15 labelled protein expression	$1000 / 5-10g of cells	$1300 / 5-10g of cells	$1750 / 5-10g of cells	$2450 / 5-10g of cells

Our bacterial expression will provide 10-20 grams (equal to 2-6L of cell culture) of dry cell paste to be processed for protein purification.
Please inquire for special cases, like B834 cell for Selenomethionine labelling, shuffle cells, and other expression varieties that are not listed here. We will most likely be able to help you with any cell expression varieties.

Protein Purification

Services	Bridge Institute	USC Collaboration	Non-profit org/ Collaboration	Industry/ Collaboration
Establishing a protocol	$1600	$2000	$2250	$2700
Protein Purification	$700	$900	$1125	$1350
Partial Purification	$400	$500	$600	$800
Partial Purification From cells	$500	$500	$600	$800

Establishing a purification protocol: We will use variety of methods and protocols to establish an effective and repeatable protocol with highest possible purity and yield.

Protein Purification: A three-step purification (Affinity, Ion Exchange and Size Exclusion) will be applied, and the purified protein will be handed over our collaborator.

Partial purification: One step purification (Ni-NTA, IEX, SEC) of your protein starting from partially purified protein.

Partial purification from cells: Ni-NTA purification, starting from cell paste

We can purify your protein from Bacteria, Insect, Mammalian and Yeast cells.
SBC cannot not guaranty the protein yield, since it can be due to low expression, insolubility and other issues within the cells.

Protein Refolding

Services	Bridge Institute	USC Collaboration	Non-profit org/ Collaboration	Industry/ Collaboration
Protein refolding	$800	$1000	$1250	$1500

Many proteins can form inclusion bodies, which are not soluble. The pellet containing the insoluble protein will be denatured using a strong agent like Urea or Guanidine-HCl to break up the inclusion bodies. During the refolding process the denatured protein will slowly fold back to its correct fold. We try two of the most common and effective methods available.

Thermal Shift Assay for protein stability

Services	Bridge Institute	USC Collaboration	Non-profit org/ Collaboration	Industry/ Collaboration
Thermal Shift Assay	$80	$100/run	$120/run	$200/run

User provides us the protein and the stabilizing agent/s like, Ligand, inhibitors, substrates, buffer, etc…., in the format we instruct them. We will run the experiment, analyze the data and providing users with result and an expert opinion of the result.

Lipid Cubic Phase (LCP) Crystallization:

Services	Bridge Institute	USC Users/Collaboration	Non-profit org/ Collaboration	Industry/ Collaboration
LCP crystallization	$65	$80/plate	$100/plate	Upon request

The protein sample will be mixed with a proper lipid and a 96 well crystallization plate will be prepared using a crystallization robot.

Vapor Diffusion Crystallization:

Services	Bridge Institute	USC Collaboration	Non-profit org/ Collaboration	Industry/ Collaboration
VD crystallization	$35	$45/plate	$55/plate	$75/plate

A 96-well crystallization plate including three “protein: precipitant” ratios will be prepared using a crystallization robot. A plate will contain 96 different crystallization conditions against three different protein ratios that will make a total of 386 drops per plate.
40 uL of protein sample is required for each plate.

Crystal Optimization:

Services	Bridge Institute	USC Collaboration	Non-profit org/ Collaboration	Industry/ Collaboration
Vapor diffusion	60/plate	$70/plate	$80/plate	$100/plate
Lipid Cubic Phase	$70/plate	$85/plate	$110/plate	$140/plate

The initial crystals are normally not good enough for diffraction; therefore, we must optimize the initial hit/s to produce well-diffracting crystals. We will employ variety of matrixes and methods including micro seeding and streak seeding to improve the crystallization condition/s to produce better crystals.

Crystal Harvesting

Services	Bridge Institute	USC Users/Collaboration	Non-profit org/ Collaboration	Industry/ Collaboration
Full service provided	$165	$220/50 crystals	$275/50 crystals	Upon request

Variety of cryo-conditions will be used to optimize the freezing condition/s for each crystal.
Crystals will be kept in liquid nitrogen for transport to X-Ray/X-FEL source by dry shipper.

Data Collection

Services	Bridge Institute	USC Collaboration	Non-profit org/ Collaboration	Industry/ Collaboration
Onsite data collection	Upon request	Upon request	Upon request	Upon request
Remote data collection	$550	$690	$830	Upon request

This service covers screening and data collection of 50 crystals within 5 hours.

Structure Determination and Refinement

Structure determination		Bridge Institute	USC Users/Collaboration	Non-profit org/ Collaboration	Industry/ Collaboration
X-Ray	**Structure determination[1]**	$1100	$1400	$1740	Upon request
	Refinement and Validation	$1800	$2200	$2750	Upon request

[1]The X-ray data will be processed, and the structure of the target protein will be determined using Molecular Replacement (MR)or any other methods.

Structure determination		Bridge Institute	USC Users/Collaboration	Non-profit org/ Collaboration	Industry/ Collaboration
Cryo-EM	**Structure determination[2] Refinement and Validation**	$2800	$3500	$4650	Upon request

[2]Cryo-EM structure determination and refinement will be carried out using well-processed data provided by the client.

Structure determination will provide you a correct model while refinement will take care of all the details in the structure and produces a finely refined structure. We will provide the final 3D structure, a table of refinement statistics, and a draft of the Materials and Methods section for publication.
The rates may vary based on the number of residues of the molecule, number of the molecules in the asymmetric unit and of course the resolution.

Research student training

Services	USC Collaboration	Non-profit org/ Collaboration	Industry/ Collaboration
Student residency/Full time	$1650/month	$2200/month	$3300/month
Student residency/part time	$850/month	$1100/month	$1650/month

Learn from the experts in the field, if you are interested in construct design, cloning, bacmid prep, protein expression and purification, biochemical assays, crystallization and crystal harvesting.

•Structural Biology Core at the Bridge Institute provides you with advanced instruments and highly trained experts to assist you with any of the requested biochemistry assays or 3D-structure determination of soluble and membrane proteins.

•We have extensive experience and knowledge in cloning, mutagenesis, protein expression, variety of in-vitro assays, protein purification, crystallization of soluble and membrane proteins, sample preparation for Cryo-EM and NMR, and 3D-structure determination, refinement and validation using X-ray or Cryo-EM methods**.**