Rates

- **Full Service provided:** It includes the consumables, instrument time and the time of the scientist involved. Rates are calculated based on the time of operation (hours and minutes of usage).

- Rates for individual services or as packages are outlined here below. The rates are subject to change without prior notice.

- Your collaboration with us entitles you for discounted rates. Please contact us at sbc-bridge-l@usc.edu

Package 1: Lipid Cubic Phase Crystallization

Broad crystallization screen	USC Users/Collaboration	Non profit org/ Collaboration	Industry/ Collaboration
Full service provided	$320/10 plates	$550/10 plates	$1035/10 plates

It includes crystallization screening of your target membrane protein against 10 selected screens using Lipid Cubic Phase crystallization method. Plates will be stored at 20 °C and automatically imaged on 0, 1, 3, 7, 14, 21 and 31 day after setup. SONICC will be used to identify the protein crystals. Experts will monitor images and the results will be discussed with the collaborators for further experiments. User should provide at least 25 µL of protein at 10 mg/mL or higher concentration.

Package 2: Vapor Diffusion Crystallization

Broad crystallization screen	USC Users/Collaboration	Non profit org/ Collaboration	Industry/ Collaboration
Full service provided	$640/20 plates	$800/20 plates	$2370/20 plates

It includes crystallization screening of your target protein against 10 selected 96-well screens (3 drops per well; 2880 drops) both at 20 °C and 4 °C. Plates will be imaged on 0, 1, 3, 7, 14, 21 and 31 day after setup. Experts will monitor images and the results will be discussed with the collaborators for further experiments.
User should provide at least 40 µL of protein/plate at 10 mg/mL or higher concentration.

Package 3: Crystal Optimization- Data Collection:

Crystal optimization /Data collection	USC Users/Collaboration	Non profit org/ Collaboration	Industry/ Collaboration
Full service provided (vapor diffusion)	$2040	$2600	$5070
Full service provided (LCP)	$2040	$2600	$5070

If any crystal is observed, the scientist will take on the optimization of the crystal/s for quality diffraction (Cryo conditions will also be screened and optimized for soluble protein). We will coordinate a data collection time for your project at a synchrotron facility. Samples will be harvested and shipped to synchrotron for data collection. The collected data at the obtained resolution will be delivered to the customer. It includes all the consumables, materials, preparation of cryo solutions, pins, cassettes / pucks and scientist time

Package 4: Structure Determination and refinement

Structure determination	USC Users/Collaboration	Non profit org/ Collaboration	Industry/ Collaboration
Structure determination	$1200	$1400	$2500
Structure Refinement	$1800	$2300	$ 3200

The collected data will be processed and the structure of the target protein will be determined using Molecular replacement or any other methods possible (MAD, SAD, SIR, SIRAS, etc.). 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. It assumes 10-40hrs of a scientist for structure production of a 200aa protein.

The refinement rates may vary based on the number of residues in in the molecule, number of the molecules in the asymmetric unit and of course the resolution. It will provide you publication ready structure, crystallography tables and a draft for material and method for publication to be inserted in the publication.

LCP-FRAP pre-Crystallization Assay

Services	USC Users/Collaboration	Non profit org/ Collaboration	Industry/ Collaboration
Full service provided	$35/plate	$190/plate	$285/plate

It includes the lipid preparation, setting the drops by NT8, running the FRAP and analyzing the data.
The protein sample will be mixed with lipid in a syringe in preparation for setting up drops using NT8 robot. FRAP will be utilized to monitor the diffusion rate of your protein in lipid at variety of conditions. The result will be analyzed and a report will be provided

LCP Crystallization: NT8-Robot

Services	USC Users/Collaboration	Non profit org/ Collaboration	Industry/ Collaboration
Full service provided	$30/plate	$55/plate	$105/plate

It includes the lipid preparation and setting up the drops by NT8.

VD Crystallization: Mosquito Robot

Services	USC Collaboration	Non profit org/ Collaboration	Industry/ Collaboration
Setting up /plate	$10/plate	$10/plate	$15/plate
Full service provided	$35/plate	$40/plate	$75/plate

Setting up: User provides protein and the material and we just set up the drops.
Full service: It will include all the consumables, screen solutions, UV transparent cover and sitting up drops by Mosquito robot

Crystal Optimization

Services	USC Collaboration	Non profit org/ Collaboration	Industry/ Collaboration
Full service provided (vapor diffusion)	$60/plate	$80/plate	$185/plate
Full service provided (LCP)	$60/plate	$100/plate	$205/plate

It includes all the chemicals, plates, covers, coverslips, and scientist time to plan a systematic and efficient optimization screen and also executes it. This may include micro, macro and streak seeding if needed.

Crystal Harvesting

Services	USC Collaboration	Non profit org/ Collaboration	Industry/ Collaboration
Full service provided	$160/50 crystals	$250/50 crystals	$600/50 crystals

It includes all the consumables, materials, preparation of cryo solutions, pins, cassettes / pucks and scientist time.
Quality crystals will be harvested for data collection. Cryo condition optimization and crystal seeding will be conducted for crystals in vapor diffusion conditions. Crystals will be kept in liquid nitrogen for transport to X-Ray/X-FEL source.

Crystal Imager

Services	USC Collaboration	Non profit org/ Collaboration	Industry/ Collaboration
Storage and imaging	$5/plate/Month	$16/plate/Month	$24/plate/Month

It includes the scientist time for making the screen templates and barcodes for each plate.

Data Collection

Services	USC Collaboration	Non profit org/ Collaboration	Industry/ Collaboration
Onsite data collection	$1300	$1700	$2800
Remote data collection	$500	$750	$2000

This service includes screening and data collection of 50 crystals within 5 hours. shipping of the dewar, scientists time and travel expenses (for onsite visit), and screening/data collection of 50 crystals within 5 hours.

We will collect diffraction images from your crystals to be processed further for structural determination.

We can coordinate data collection time for your project at a synchrotron facility.
Non-academic clients can contact the synchrotron of interest to purchase beam time for data collection, or we can help them to purchase it through us based on the synchrotron's regulations.

We have frequent access to three of the major national synchrotron facilities, namely APS, SSRL and LCLS for Use of X-ray or X-FEL (X-Ray Free Electron Laser) for data collection. We also have access to in-house X-ray beam at USC.
APS: https://www1.aps.anl.gov/
SSRL: http://www-ssrl.slac.stanford.edu/
LCLS: https://portal.slac.stanford.edu/sites/lcls_public/Pages/Default.aspx

Dragonfly

Services	USC Collaboration	Non profit org/ Collaboration	Industry/ Collaboration
Full service provided	$25/plate	$50/plate	$125/plate

It will prepare you a personalized optimization plate for your crystal hit. It includes plate, sealing sheet, chemicals, dragon fly consumables and scientist's time

Thermal Shift Assay

Cary Eclipse Fluorescence Spectrophotometer or Rotor-Gene Q

Services	USC Collaboration	Non profit org/ Collaboration	Industry/ Collaboration
Full Service provided	$80/run	$120/run	$280/run

User provides us the protein and the stabilizing agent/s in the format we instruct them. We do the full service including, running the experiment, analyzing the data and providing the user with result and an input from our experts for the next step.

We will test the stability of your protein in presence of what potentially stabilize your protein (pH, Ligand, inhibitors, substrates, buffer, etc.). The stabilizing agent will lead us for a successful crystallization of your target.

GPCR/Membrane protein radiolabelled ligand assay/Ligand screening

Services	USC Collaboration	Non profit org/ Collaboration	Industry/ Collaboration
GPCR Radioligand Binding Assays	$30/plate	$50/plate	$70/plate
GPCR Radioligand Dose Response	$60/plate*	$90/plate*	$150/plate*

GPCR Radioligand Binding high-throughput screen (HTS) detects compound interaction with high accuracy. A single 96well plate can measure binding for 23 test compounds and one control compound in quadruplicate. The positive hits from HTS can be used for dose response measurement, which provides K_D and K_i.
The dose response curves are done in triplicate and can test 8 compounds/plate (3 plates total for n=3).
Ligands can be screened in a high throughput manner in a short period of time.
* Cost for Dose response assay may vary depending on the ligand we use for any specific project.
Please consult us for more specific pricing.

Protein Expression

Services	USC Collaboration	Non profit org/ Collaboration	Industry/ Collaboration
Expression and Solubility test (Bacteria)	$25/Clone	$35/Clone	$50/Clone
Bacteria	$1200/6L	$1600/6L	$2200/6L
Insect (SF9)	$300/L	$400/L	$500/L

Mammalian (HEK293F)	$300/L	$400/L	$500/L

We have the capability of expressing your target protein in various expression systems
Minimum expression for bacteria is 6Liter or 15 grams of dry cell paste.

Services	USC Collaboration	Non profit org/ Collaboration	Industry/ Collaboration
Cell growth (HEK)			
4 well dish	$30-90	$35-110	$45-135
6 well dish	$30-90	$35-110	$45-135
8 well dish	$40-100	$50-115	$60-150
12 well dish	$30-90	$35-110	$45-135
24 well dish	$30-90	$35-110	$45-135
35 mm dish	25-85	30-110	50-140
10 cm dish	$20-80	$25-100	$30-120
T25	$75-100	$85-120	$110-150
T75	$85-110	$100-125	$120-160
T182	$90-130	$110-145	$130-190
>T182	$120-180	$140-220	$180-270
Maintenance HEK Cell (T25)	$190/month	$230/month	$270/month

Cell Harvesting (T25 & T75)	$30	$40	$45
Cell harvesting (T182 & larger)	$40	$50	$50

Cell growth (Ins1e)			
4 well dish	$30-90	$35-110	$45-135
6 well dish	$30-90	$35-110	$45-135
8 well dish	$40-100	$50-115	$60-150
12 well dish	$30-90	$35-110	$45-135
24 well dish	$30-90	$35-110	$45-135
35 mm dish	25-85	30-110	50-140
10 cm dish	$20-80	$25-100	$30-120
T25	$75-100	$85-120	$110-150
T75	$85-110	$100-125	$120-160
T182	$90-130	$110-145	$130-190
1 stack	$225-275	$275-325	$300-380
5 stack	$425-525	$475-575	$530-650

Maintenance Ins1e Cell (T25)	$260/month	$320/month	$390/month
Cell Harvesting (T25 & T75)	$30	$40	$45
Cell harvesting (T182 & larger)	$40	$50	$60

Cell growth: We can culture a variety of cells in different conditions and plates. Our most common cells, conditions and plates are listed above. Cells are closely monitored for growth, viability, and doubling time. They are also tested for mycoplasma routinely.

Please inquire for special cases, as we can likely accommodate your needs.

Cell maintenance: We can maintain flasks with weekly maintenance to feed into any further requests necessary for your research.
Cell bank generation: We can generate cell banks from freshly purchased cells. Again, our listed vial and cell number can be adjusted to your research needs. Please contact us.

Cell storage in LN2: Any cell banks generated by the Bridge Cell Culture Core can be stored in our LN2 Dewar as long as you need them.

Protein Purification

Services	USC Collaboration	Non profit org/ Collaboration	Industry/ Collaboration
Establishing a protocol	$1700	$2200	$2600
Protein Purification	$800	$1000	$1200

Establishing a purification protocol: Collaborators provide us 10-20gr of cell paste from a solubly expressed clone. We will apply several purification methods to establish the best protocol for purifying high quality material for crystallization.

Protein purification: Collaborators provide us 10-20gr of cell paste from a solubly expressed clone. A three-step purification (Affinity, Ion Exchange and Size Exclusion) will be applied and the purified protein will be handed to the customer either on ice or frozen.

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

Molecular Biology/Cloning

Services	USC Collaboration	Non profit org/ Collaboration	Industry/ Collaboration
Gene synthesis (Codon Optimized)	$0.3/bp*	$0.3/bp*	$0.3/bp*
Single mutation	$50	$75	$95

Cloning into pFastBac	$60*	$80*	$100*
Bacmid Preparation	$40	$60	$80

We help you to design the best construct for expression of your target protein. For codon optimization we employ companies that have worked with us for many years and can provide high quality products at a lower price with faster delivery.

* The price may slightly vary depending on the length of the gene of interest. The choice of plasmid and its design (affinity tag, fusion, link, cleavage site etc) would also affect the pricing for codon optimization.

Mutation would include deletion, insertion or modification. We can also trim your gene sequence into the desired gene length.
For expression of your protein in insect cells, you need to transfer the gene into a shuttle vector (pFastBac) for preparation of a bacmid, which enables the transfection of the cells by the virus.

Virus production and expression test

Services	USC Collaboration	Non profit org/ Collaboration	Industry/ Collaboration
Large scale virus production and titer (250 ml)	$200	$300	$400
Transfection and small scale expression test (40ml)	$100/Clone	$140/Clone	$180/Clone

Transfection and small-scale expression would include transfection, generation of P_1Virus (40ml or 250 ml) and titer.

An expression test of new clones is necessary to select the best expressing construct for further large-scale production.
In case of GPCR and membrane proteins we can also measure the density of the expressed protein in the membrane, an important measure for correct localization of your protein before going ahead for large scale purification.

Research student training

Services	USC Collaboration	Non profit org/ Collaboration	Industry/ Collaboration
Student residency/Full time	$1500/month	$2000/month	$3000/month
Student residency/part time	$750/month	$1000/month	$1500/month