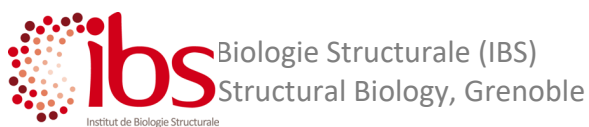


# General conditions and Operating instructions

SPR/BLI Platform



## EQUIPEMENT

The ISBG SPR/BLI platform provides users with 2 measuring instruments by SPR (Surface Plasmon Resonance) or BLI (BioLayer Interferometry) for the characterization of biomolecular interactions on the surface, in real time and without labelling:

- SPR: Biacore T200 from GE Healthcare LifeSciences
- BLI: OctetRED96e from Molecular Devices/FortéBio

## ACCESS, LOCATION, RESERVATION, RATES AND CONTACTS

### Access

The SPR/BLI platform is open to:

- Academic users according to modalities to be defined (collaboration, self-service/autonomous access)
- Industrial customers in the form of a service or research service.

### Location

- The platform is located on the EPN campus (Grenoble), in the IBS building (Institut de Biologie Structurale), room 515: <http://www.isbg.fr/contact/article/access>
- Users outside IBS must request permission to access the EPN campus (contact platform staff before the visit).

### Opening hours

- The technical platform is accessible during the opening days and hours of the IBS building (Monday to Friday, from 8am to 8pm),
- The technical platform is closed during IBS closing days (Saturdays, Sundays and French holidays), during instrument maintenance and certain periods of the year at the discretion of the platform staff.

## Use and reservation of instruments

### New users

Each new user must contact the platform staff before any new use of an instrument and booking.

A preliminary meeting must be organized for:

- Define the terms and conditions of use of the technical platform (collaboration, provision),
- Define the strategy and experimental conditions for conducting the experiments,
- Define a training date for the use of the technical platform and the instrument.

### Referenced users

Trained and registered users can book one of the 2 instruments directly. They must check the availability of the chosen instrument on the platform's web pages and the calendars made available (<http://www.isbg.fr/biophysics-characterisation/spr/> or <http://www.isbg.fr/biophysics-characterisation/bli/>)

### Reservations

The reservation of the chosen instrument is made by the users using the form provided on the platform's web pages, then validated by the platform staff.

Reservations are made for a minimum of one day and a maximum of 5 days.  
In the event of an impediment or cancellation, the user must inform the platform staff as soon as possible.

## Tariffs

The rates are exclusive of tax (excluding VAT) and per day of use. They can be reviewed once a year.

The prices include access to one of the 2 instruments of the platform and to the equipment and consumables described in the paragraph "The platform provides:" They do not include the specific consumables that will be provided either by the user or by the platform (Sensorchips for T200, biosensors for OctetRED96e, kits and other consumables), described in the paragraph "The users provide".

Any additional consumables provided by the platform and used will be charged in addition to the price of access to the instrument.

On request, a quotation can be provided.

## Contacts

### *Address*

SPR/BLI Platform  
Institut de Biologie Structurale - UMR 5075 (CNRS-CEA-UJF)  
71 Avenue des Martyrs  
CS 10090  
38044 Grenoble cedex 9  
FRANCE

### *Web pages*

<http://www.isbg.fr/biophysics-characterisation/spr/>

<http://www.isbg.fr/biophysics-characterisation/bli/>

### *Scientific Responsible/ Administrative and technical assistant*

Jean-Baptiste REISER

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Phone #: +33 (0)4 57 42 85 49

Darren Hart & Linda Ponnet

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Phone #: +33 (0)4 76 20 94 48

## USERS PROVIDE:

- The analysis buffer(s) in sufficient quantity
  - For Biacore T200: Running buffer(s) in 1L glass bottle,
  - For OctetRed96e: Analysis buffer(s),
- Their samples at the highest concentration,
- The regeneration buffer(s) if known,
- Single and multichannel pipettes and tips (if possible calibrated and checked),
- The necessary plastic consumables (Eppendorf, Falcon type tubes),
- Any data and protocols relevant,
- The sensors specific to their analysis:
  - For Biacore T200: Serie-S Sensorchips obtained from GE Healthcare LifeSciences. Any other sensorchip will not be accepted. All types of chemistry are accepted,
  - For OctetRED96e: For OctetRED96e: Biosensors obtained from Molecular Devices/Fortébio. Any other biosensor will not be accepted. All types of chemistry are accepted. The platform provides chemical biosensors such as amine coupling or Streptavidin (Biosensor / Amine Reactive Second Generation AR2G or SA) within the limits of available stocks. Any biosensor used will be invoiced in addition to the access price to the instrument.

## THE PLATFORM PROVIDES:

- One of the 2 instruments and its control computer,
- A 4°C refrigerator and a -20°C freezer for storing samples,
- A vortex and a benchtop centrifuge,
- P20/Tween-20 at 10% (added to the analysis buffers before each experiment),
- BSA at 10%w/v (added to the analysis buffers before each experiment),
- Immobilization, pH Scouting and Regeneration scouting kits,
- Plastic consumables specific to the instruments:
  - For Biacore T200: tubes and caps,
  - For OctetRED96e: 96-wells microplates and plate covers,
- External users who cannot provide their benchtop equipment can borrow it from the platform,
- Bi-distilled and filtered water and weekly maintenance kits.

## SAMPLE AND BUFFERS

Samples and buffers must not present any biological, radiological or toxicological risk and must be compatible with the device.

Samples prepared by users must comply with the following conditions:

### Ligand

Ligand samples must be prepared according to the recommendations of the instrument manufacturer and sensorchips (T200) or biosensors (OctetRED96e). In particular, users will have ensured the compatibility of their samples with the sensorchips (T200) or biosensors

(OctetRED96e) used (type of coupling chemistry, biotinylation, presence of specific label...), in particular:

- Ligand samples must be homogeneous and stable over the time required and at the temperature of the analysis. High biochemical purity (>95%) is recommended for direct immobilization/capture. Partially purified samples or clarified extracts may be used in the case of secondary capture. They must be prepared in a buffer compatible with the capture chemistry,
- The concentration and quantity of ligand samples required depends on the strategy used. 200  $\mu$ L at 2-50  $\mu$ g/ml per immobilization is generally necessary. A higher concentration may be required depending on the method used,
- Ligand samples must be filtered (0.22  $\mu$ m) or clarified by centrifugation (16 kg, 5-10 min) before each experiment.

### Analyte

Analyte samples must be prepared according to the recommendations of the instrument manufacturer and sensorchips (T200) or biosensors (OctetRED96e), in particular:

- Analyte samples must be homogeneous and stable over the time required and at the temperature of the analysis. A high biochemical purity (>95%) is recommended,
- The analyte sample must be prepared in the race or analytical buffer (same composition and/or batch). Dialysis or buffer exchange chromatography is recommended,
- Accurate measurement of the concentration of analyte samples is mandatory,
- The quantity and volume of analyte sample required depends on the type of analysis, the analytical conditions and the characteristics of the interactions. A minimum volume cannot be recommended,
- Ligand samples must be filtered (0.22  $\mu$ m) or clarified by centrifugation (16 kg, 5-10 min) before each experiment.

### Buffers

Any type of buffers and reagents compatible with the instrument can be used, in particular:

- The addition of Tween-20 and/or BSA (supplied) to all stroke or analysis buffers is required,
- DMSO can be used up to a concentration of 10% for Biacore T200,
- Glycerol and DTT are not recommended for the Biacore T200,
- The running or analysis buffer(s) must be provided in sufficient quantity,
  - For Biacore T200: running buffer(s) – 1 to 2L,
  - For OctetRed96e: analysis buffer(s) – 150 to 250 mL,
- Commercial buffers can be purchased from Biacore/GE Healthcare Life Sciences (HBS-P+, HBS-EP+, PBS-P+...) or Molecular Devices/Fortébio (Sample diluent),
- The buffers must be filtered (0.22  $\mu$ m) and contained in 1L or 2L glass bottles.

## INSTRUMENT MAINTENANCE – ANOMALIES

The platform ensures the proper functioning of the instruments and the monitoring of preventive and corrective maintenance provided for in any contracts signed with manufacturers.

Users are required to carry out, over their reservation time, the "end of use" or weekly maintenance procedures described in the shutdown protocol and available on the platform.

In the event of a detected instrumental anomaly, the user must follow the problem-solving protocols available on the platform and/or inform the platform staff as soon as possible.

## DOCUMENTATIONS

The manuals for instruments and software for data monitoring and analysis are available in paper or electronic format (online help).

Start-up, shutdown and problem resolution protocols are displayed for each instrument.

A "Getting Starting Guide" describing the basic technique and procedures is provided to all new users and is available on site.

A logbook for monitoring the use of the instruments available on site must be completed by each user after each use.

## COMPUTING

### Equipment

The platform provides computers dedicated to the control of each instrument, the implementation of experiments, data acquisition and recording and data analysis.

The platform provides an additional computer with free access for data analysis and processing.

All computers are equipped with regularly updated software necessary for data monitoring and analysis.

All computers are connected to the internal network and the Internet.

A printer is available via the internal network.

### Connection

IBS users must use their internal network account ID and password (LDAP IDs),

External users can use local account IDs and passwords that are provided by platform staff.

### Data saving, confidentiality, backup and archiving

Each user can save the collected data on storage space available on each computer dedicated to control the instruments. This storage space is either confidential and only accessible by the user (C:/users/<login>/Documents), or shared between all users (C:/Biausers ou C:/Octet users).

In the case of saving on shared spaces, the platform cannot guarantee the confidentiality of the saved data.

IBS users with a computer account on the IBS internal network are encouraged to backup and archive their data on the storage disks of the IBS internal network infrastructure.

External users are encouraged to backup and archive their data on storage space accessible via internet and which is own by their institute and infrastructure. A procedure for backing up and archiving external user data can be studied on a case-by-case basis with platform staff and users.

The platform does not guarantee the backup, archiving or recovery of data in the event of loss due to a computer problem.

All USB data storage devices (thumb drive, external hard disk) are prohibited for data transfer, backup or archiving.

## ACKNOWLEDGEMENTS – PUBLICATIONS

### Collaborations

Collaborative projects require that platform staff co-author publications in peer-reviewed journals and other communications in which SPR or BLI data appear and in accordance with the terms previously discussed.

### Self-Service – autonomous access

Users undertake to mention the platform and its staff in all publications or communications in which SPR or BLI data appear by mentioning the following sentence: "This work used the platforms of the Grenoble Instruct-ERIC Center (ISBG: UMS 3518 CNRS-CEA-UGA-EMBL) with support from FRISBI (ANR-10-INBS-05-02) and GRAL (ANR-10-LABX-49-01) within the Grenoble Partnership for Structural Biology (PSB). Authors acknowledge the SPR/BLI platform scientific responsible, Jean-Baptiste REISER Ph.D., for its help and assistance."

## ENGAGEMENT

The user undertakes to follow the general conditions and instructions for use of the SPR-BLI platform and the recommendations of the platform staff.

In the event of a serious breach, the platform staff reserves the right to prohibit access to the instruments.

**NAME, FIRST NAME:**

**Date :**

**Signature :**