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| http://intranet.ill.eu/fileadmin/user_upload/ILL_logo.png | **INSTITUT LAUE - LANGEVIN**  **The Deuteration Laboratory** [**dlab-proposals@ill.fr**](mailto:dlab-proposals@ill.fr)  71 av des Martyrs, CS 20156, 38042 Grenoble Cedex 9, France |  |

**PROPOSAL FOR USE OF THE**

**ILL DEUTERATION FACILITY (D-LAB)**

*Please read the attached guidelines before submitting the completed proposal form to the above address.*

*Use Tab key ⭾ to move to next item*

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| **Experiment title** (140 chars max): | *Proposal number*  *(to be completed by ILL)*  ***DL-*** |
| **Proposer** *(to whom correspondence will be addressed)*  Full name and address: | Phone:  Email:  New neutron user?  Yes  No  New ILL user?  Yes  No |
| **Co-proposers*****mark with an asterisk*** *the main proposer in each laboratory)*  Full name and address *(if different from above)*: | Phone/email: |

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| **D-Lab Local contact(s):**  (to be filled in by ILL D-Lab): |

**This proposal is:**

New

Continuation n°*:*

*an application for further samples must be supported by a report on the use of the previous samples*

Resubmission of n°*:* *(please give previous proposal number)*

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| Estimated time required  (to be filled in by the D-Lab): | *Requested starting time:*  1. Jan/Feb  2. Mar/Apr  3. May/Jun  4. Jul/Aug  5. Sep/Oct  6. Nov/Dec |

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| **Applicants should note that the contribution of the D-LAB is expected to be acknowledged through co-authorship of the relevant local contact(s)/collaborators for any publications arising from the use of the samples produced by the laboratory. Non-compliance may result in the rejection of future D-LAB proposals.**  I certify that the details on the proposal form are complete and correct.  Date:       Signature of proposer: |

***It*** ***is*** ***essential*** ***to*** ***complete*** ***this*** ***page***. ***Missing*** ***information*** ***can*** ***delay*** ***the safety assessment and result in a rejection of the proposal.***

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| **Deuteration process**  *(if there is insufficient space, please include details in main text of the proposal)*  Molecule to be deuterated:  *(Please add primary sequence of the protein or nucleic acid):*  Origin of the molecule (e.g. human, *Bacillus subtilis*, …): |
| Deuteration method: Bacterial system\*  Detail, including strain  Yeast system  Detail, including strain  Other  \*(*Please note that ampicillin (or carbenicillin) selection can NOT be used for E.coli high cell-density cultures in D2O medium and that kanamycin selection is required for bacterial growth in deuterated media)*  For cloned material:  Has sufficient expression been obtained for the non-deuterated material?  Yes  No  (*please show expression level before and after induction on PAGE)*  Has the macromolecule been purified in its non-deuterated form?  Yes  No  Has a host system (bacterial, yeast etc…) been adapted to growth in D2O medium?  Yes  No  Has deuterated material already been expressed / purified even on a pilot scale?  Yes  No  Is there a need to purify the deuterated material in the deuteration lab?  Yes  No  *If yes, please clearly justify the need in the text.* |
| **Safety aspects**  In which containment level are you currently working and producing your sample?  containment level:  L1  L2 (L3 and L4 not allowed)  Is the sample an active virus?  Yes  No  Is the sample a toxin?  Yes  No  Does the sample present any risk to human health and/or environment?  Yes  No  Uncertain  If ‘Yes’ or ‘Uncertain’, please give more details of the associated risks:  **Important**: if you are coming from a **French institute** and you are sending a genetically modified organism (GMO) or vector, please provide your DUO license number and the date at which it was validated. |
| **Deuteration regime**  Perdeuteration  Matchout deuteration\*  Specific labelling  No labelling / hydrogenated *(only accepted if related to a proposal for deuteration and after discussion)*  *\*Deuterated molecules are invisible in 100% D2O* |
| Resources required (to be completed by the D-Lab team after initial discussion) Deuterated carbon source (specify)       amount (grams)       .  D2O       amount (litres)  Equipment:  Fermentor:  Yes  No  Protein purification system:  Yes  No |

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| **Abstract** *(~ 100 words):* |
| **Scientific background and detailed description of the proposed experiment**; see guidelines on the last page *(Please respect the available space – 2 pages including Figures)* |
| **Figures** *(insert photos, figures if relevant)* |
| **Your publication record** *(up to five papers published in the last five years):* |

**Guidelines for the submission of a Proposal to the ILL Deuteration laboRatory for Biomolecules (D-LAB)**

#### General information on the D-lab

* The aim of the ILL D-LAB is to provide the expertise and infrastructural support necessary to help users with the deuteration of their biological material.
* Proposers from ***non-member countries*** have to seek collaboration with scientists from member countries or from local ILL staff members.
* Access to the service provided by the D-Lab is free of charge for authors of accepted proposals. Scientists affiliated with ILL member countries will be assisted with a limited contribution of D*2*O and deuterated carbon sources.
* **N.B. Acceptance of a proposal to use the deuteration lab facility does not imply automatic allocation of neutron beamtime although the beamtime committee will be informed of the outcome of the deuteration proposal.**

#### Instructions for applications

* **Proposals can be submitted all over the year**.
* Potential users should contact the D-Lab team (Martine Moulin, Valérie Laux, Juliette Devos and Frank Gabel) at [dlab‑proposals@ill.eu](mailto:dlab-proposals@ill.eu) before submitting a proposal.
* The latest D-LAB proposal form may be downloaded from the ILL web-site: <https://www.ill.eu/users/support-labs-infrastructure/deuteration-laboratory/>
* Once completed and discussed with the D-lab team, proposals should be returned as an **electronic attachment**, to the ILL User Office ([user-office@ill.eu)](mailto:user-office@ill.eu)).
* Paper proposals are not accepted.

***Writing a proposal***

*Proposals must be* ***written in English*** *and respect the word format of the template. They should include:*

* A description of the scientific case for using the laboratory, and why deuteration is required
* *A quick overview of the experiments that will be carried out with these samples*
* *Figures (such as expression gels, protein crystals, etc… ) which should be inserted in the dedicated page*

***Information on the review process***

* Access to the D-Lab is via peer-reviewed proposals. The scientific case will be assessed by external experts and this review process may take 4-6 weeks.
* Specific recommendations from the reviewers may be taken into account by the D-Lab team for the project.
* Acceptance of the D-Lab proposal will be communicated by the ILL user office and is compulsory before starting the project at the D-Lab.

***User feed-back after experiments***

* Within one year after receiving the deuterated biological material, a feedback from the proposers would be appreciated.
* A template can be found on the ILL D-Lab webpage and this report would help the D-Lab team to provide the best possible service to the ILL community.

***Publication policy***

* Applicants should note that the contribution of the D-LAB is expected to be acknowledged through co‑authorship of the relevant local contact(s)/collaborators for any publications arising from the use of the samples produced by the laboratory. Non-compliance may result in the rejection of future D-LAB proposals.

***User Office***

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