**Centre for Advanced Imaging (CAI)**

**Radiochemistry, Molecular Imaging, and Small Animal Imaging**

**Project Application Form**

***Please complete after consultation with the relevant Facility Manager*** *and return to the Facility Manager:*

|  |  |
| --- | --- |
| **Radiochemistry** | A/Prof. Brett Paterson ([brett.paterson@uq.edu.au](mailto:brett.paterson@uq.edu.au)) |
| Damion Stimson ([damion.stimson@cai.uq.edu.au](mailto:damion.stimson@cai.uq.edu.au)) |
| **Molecular Imaging PET/CT; SPECT/CT; microCT** | Dr Karine Mardon ([k.mardon@uq.edu.au](mailto:k.mardon@uq.edu.au)) |
| **Molecular Imaging Bruker PET/MR** | Dr Gary Cowin ([g.cowin@uq.edu.au](mailto:g.cowin@uq.edu.au)) |
| **Small Animal MRI** | Dr Nyoman Kurniawan ([n.kurniawan@uq.edu.au](mailto:n.kurniawan@uq.edu.au)) |
| **Optical Imaging** | Mary-anne Migotto ([m.migotto@uq.edu.au](mailto:m.migotto@uq.edu.au)) |
| **Radiobiology** | Dr Nick Fletcher ([n.fletcher1@uq.edu.au](mailto:n.fletcher1@uq.edu.au)) |

***1. RESEARCH PROJECT DETAILS***

**Instrument(s) to be used**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Radiochemistry | Bruker 7T  PET/MR | Bruker Si78  PET/CT | Biodistribution & Autoradiography | HPLC for Metabolites |
| CT/MicroCT | Optical  IVIS, MSOT | Molecubes  SPECT/CT | Albira Si  SPECT/CT | Animal MRI 9.4T |
| MRI 16.4T | Hyperpolariser | Cell Sorting/ Flow Cytometry | Radiobiology Cell Culture & Imaging | Haematology Analysis or Endotoxin Reader |

**Project title**

Click here to enter text.

**Anticipated start date of the project**

Click here to enter text.

**Anticipated end date and duration of the project (Maximum of 3 years)**

**This date should match your Ethics Certificate.**

Click here to enter text.

**Principal Investigator** *(to be invoiced for this project)*

|  |  |
| --- | --- |
| Full name |  |
| School/Centre |  |
| Faculty/ Institute |  |
| Email |  |
| Tel |  |

**Project Applicant/s**

|  |  |  |
| --- | --- | --- |
| Full name/s |  |  |
| Unit / Department |  |  |
| University/Organisation |  |  |
| Email |  |  |
| Tel |  |  |

**Name of CAI collaborator if relevant:**

Click here to enter text.

**Is this a renewal of existing project?**

Yes  No

*If yes, please enter the existing project name and briefly describe progress*

Click here to enter text.

**Have you used CAI instrument/s for other projects?**

Yes  No

*Please list the most recent or relevant projects here*

|  |  |  |  |
| --- | --- | --- | --- |
| **Project name** | **Start date**  (mm/yy) | **Status**  (in progress, completed, or unsuccessful) | **Publications**  (Yes/No) |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

**Project aims** *Brief abstract of approx. 150 words summarising the background and aims of the study*

Click here to enter text.

**Project methodology** *Specify: a) number and type of samples (eg. animals live or ex vivo; material or chemicals; including controls or mutant or treatment groups); b) experimental design (e.g. for longitudinal study or multiple ages of development); c) Imaging sequences to be used; d) any ancillary equipment to be used.*

*If you require support in the experimental design or implementation, please specify here (it is expected that any support of this kind will be recognised as an academic collaboration)*

Click here to enter text.

**2. RADIOTRACER PRODUCTION**

**Which radioisotope(s) are required for the study?**

Fluorine-18  Carbon-11  Copper-64  Gallium-68  Zirconium-89  Lutetium-124

Other  *please specify:*

Click here to enter text.

**Will you require CAI radiochemistry facility staff to perform radiolabelling studies?**

Yes  No

If no, please provide details of the nominated user and a copy of their ‘QLD Radiation Health user licence’?

Click here to enter text.

**Which radiolabelled compound(s) are required for the study?**

Click here to enter text.

**Are radiolabelling methods known for these compounds?**

Please provide details (references) if known.

Click here to enter text.

**Please identify any specific requirements for the radiolabelled compound(s) (e.g. radiochemical purity, chemical purity, formulation etc)**

Click here to enter text.

**Which CAI instruments are required for the radiochemistry?**

Hot Cell  Radiosynthesis Module  Fumehood  HPLC   radioTLC

Other  *please specify:*

Click here to enter text.

**Cyclotron run time and radioisotope production**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Cyclotron** | | **Radiochemistry** | | |
| Number of cyclotron runs | Radioisotope and quantity required (GBq) | Hot cell/ fume hood time per run | Purification requirements | Purification time per run |
|  |  |  |  |  |
|  |  |  |  |  |

**3. IMAGING EXPERIMENTS**

**Does this project involve**  **Live,**  **Ex-vivo or**  **Material imaging?**

**If this application is for live imaging, please list the CAI accredited operator here:**

Click here to enter text.

**Number of scan sessions and duration of each scan session requested**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Modality** | **SCAN INFORMATION** | | **SESSION REQUIRED** | | |
|  | Number of Scans  (eg animals/samples) | Duration of Scans per animal/sample (hours) | Daytime (hours) | Overnights | Weekends |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

Click here to enter text.

**Number of animals required?**

Click here to enter text.

**4. BIODISTRIBUTION EXPERIMENTS**

**Number of animals required?**

Click here to enter text.

**Time points required?**

Click here to enter text.

**5. OH&S AND OTHER RELEVANT DETAILS**

**Have you undertaken any risk assessment for this project?**

No  Yes. Please provide the numbers and titles of the risk assessments

Click here to enter text.

**Project funding details:** please specify any grant or research contract funding this project

Click here to enter text.

**Splits:** *Please nominate the splits across faculties for the usage of the system*

|  |  |
| --- | --- |
| **Faculty/Institute** | **Contribution (%)** |
| **CAI** |  |
|  |  |
| **Total** |  |

***Please note – A completed UQ RISQ form signed by the authorised financial delegate submitted to the CAI Facility manager is required prior to the commencement of the project of UQ projects.***

**Is Ethics approval required?**

No  Yes. Please provide Ethics number:

Click here to enter text.

**For live animal scans, please email a copy of your Ethics application highlighting the relevant procedures, as well as the approval certificate.**

*Note: applicants listed on this form and the relevant CAI staff involved need to be listed as participant in the ethics application*

**For ex-vivo animal imaging, the chief investigator declares to have obtained ethics approval for collecting and examining the animal samples.**

No  Yes

Please list the relevant Ethics Approval Number here.

Click here to enter text.

**Is Biosafety approval required?**

No  Yes. Please provide NLRD/IBC number:

Click here to enter text.

**If yes, please discuss the implications with your Facility Manager who may refer your project to CAI OHS Committee.**

**Does this project use human samples?**

No  Yes

**If yes, please email a copy of your Ethics application highlighting the relevant procedures, as well as the approval certificate.**

*Note: the project CI and the CAI staff involved need to be listed as participant(s) in the ethics application.*

I agree with the Conditions of Use of CAI facilities.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Principal Investigator’s Signature Date:

***Please note that you will be sent an email when your project is ready to start.***

**Safety**

All personnel using the facilities must adhere to all safety and operational guidelines. Each instrument has an assigned safety officer, who has the responsibility to ensure that safety guidelines are met, and the authority of the Director of CAI to enforce those guidelines.

If a user wishes to operate the instrument, then they must satisfy the Director of CAI (or nominee), that they are competent to do so, and aware of all safety considerations.

Training in magnet safety will be provided by CAI staff. All users of the instruments must undergo the appropriate level of safety training before operating the instrument or entering the laboratories unsupervised. Security access will only be provided once the induction process has been completed and signed off by CAI staff.

All users working in the radiochemistry facilities must complete an induction with the Radiation Laboratory Facility Manager and have all the necessary radiation licences and provide copies to the CAI Radiation Safety Officer

**User fees**

User fees cover the data acquisition only. Any additional requirements, such as sample tubes, solvents, contrast agents, rotors or other consumables are at the users’ cost.

There will be no charge for a session when there is a technical failure of the instrument. If a session is booked and subsequently cancelled at shorter than 24 hours notice or not used at all without reasonable cause, the user will be charged for the session.

CAI can provide quotes for prospective users. Please note CAI reserves the right to adjust the charges detailed in these Conditions of Use from time to time in its absolute discretion

**Acknowledgement of NIF, QNN and Qld State Govt, CAI & AIBN**

Use of the Bruker PET-MR, Si78, Albira and Molecubes SPECT are subject to appropriate acknowledgement of the National Imaging Facility (NIF) in all publications, conference presentations and media articles arising from data acquired with these facilities.

Use of the 900, 700 (16.4T microimaging system) and 600 LC-NMR spectrometers is subject to appropriate acknowledgement of the Qld NMR Network and the financial support of the Queensland State Government in all publications, conference presentations and media articles arising from data acquired with these facilities.

For all other work, the authors acknowledge the facilities and scientific and technical assistance of the Centre for Advanced Imaging at the Australian Institute of Bioengineering and Nanotechnology, University of Queensland.

**Recognition of CAI**

It is expected that any intellectual contribution to the research be reflected in co-authorship of all collaborators directly involved in the research, in accordance with the NHMRC *Australian Code for the Responsible Conduct of Research*, 2007. This will be jointly agreed before the project commences.

**Research Outcome Reporting**

It is a condition of use that you submit Annual & Final Reports. The Molecular Imaging Scientific Committee has the option to request a presentation of the project. It is expected that users will present their results at CAI at the end of the study.

**Ethics**

Ethics or Biosafety approvals (for your institution / UQ as applicable) are the responsibility of the user. A copy of the application and the approval must be provided to this Centre. In the event that the user does not need approval from The University of Queensland, the user must provide CAI with his/her ethics application and approval from his/her institution. A copy of these documents will be forwarded by CAI to the relevant University of Queensland Ethics Committee, to ensure that UQ staff are appropriately indemnified. If the user is operating the spectrometer, then the ethics must clearly state that this is the case, and that CAI staff are not involved.

**Pilot Studies**

To allow researchers to test the feasibility of their proposed project, pilot studies on the instruments are permitted at a discounted rate. The number of scans are to be negotiated with the Facility Manager. These scans are not intended to be used to generate experimental data but for testing of experimental procedures. After a pilot study has been undertaken, a researcher applying for a grant should include a budgetary item for the appropriate user charges to fund future access required for the project.

**Data Analysis and archiving**

Data analysis and post-processing is the responsibility of the user unless a collaborative agreement has been made with CAI. There is no charge for access to off-line processing workstations. If data analysis and interpretation by CAI staff is required on a fee-for-service basis, this arrangement must be organised under the terms of a consultancy or research contract.

Users are responsible for backing up their own data. Data will be retained on spectrometers for a maximum of 2 months. Regular backup of data to central archiving is performed but users should not rely on this for long term data retrieval.

**Recording of usage: university funding**

All usage of CAI instruments will be recorded against the relevant UQ Faculty or Institute noted on this form. This recording is integral to the university’s funding mechanism in which the UQ Faculties and Institutes contribute annually to CAI’s service function, based on the usage of the Centre’s instruments.

**CAI OFFICE USE ONLY**

**Facility Manager**

The risk assessments relevant to the project (if any) have been discussed with CAI OHS Officer.

Ancillary equipment is available

The Short Title is:

Ethics have been received and sent to [ethics@cai.uq.edu.au](mailto:ethics@cai.uq.edu.au) for archiving