**Animal work in National University of Singapore (NUS) : Helpful pointers !**

For PIs and researchers who work with live vertebrate and cephalopods, please ensure the following:

**A. IACUC approval (compulsory)**

**B. ORMC approval (compulsory)**

**C. IRB approval/ e-Declaration if human samples/commercial cell lines of human origin are involved (where applicable)**

**D. MOH approval if restricted Human Biomedical Research (rHBRs) regulated under Human Biomedical Research Act (**[**HBRA) Fourth Schedule**](https://sso.agc.gov.sg/Act/HBRA2015#Sc4-)**) are conducted\*\* (where applicable)**

Applications to the above 3 institutional offices can be submitted and processed in parallel but IACUC’s approval will be issued only after ORMC’s and IRB’s (if needed) approval. Please refer to [the online FAQ](https://nus.edu.sg/research/iacuc/faqs) and [IACUC SOP, Policy and Guidelines](https://inetapps.nus.edu.sg/iacuc/policies.html) for information on application criteria, documents and process. As applications for Ministry of Health (MOH) approval can only be submitted after approvals by IRB and IACUC, it is therefore advisable that rHBRs be submitted as a stand-alone protocol to IACUC, IRB and MOH in order to expedite approval. For information on the regulation ([Human Biomedical Research Act)](https://sso.agc.gov.sg/Act/HBRA2015#legis) and submission of an application to MOH, please contact [the Academic and Research Compliance and Integrity Office (ARCIO).](https://nus.edu.sg/research/arcio)

**\*\* IMPORTANT NOTE: (1) NUS IACUC MUST BE NOTIFIED** when NUS PIs conduct animal work in other institutions using grant/funds managed by NUS. (2) Prohibited Human Biomedical Research under the HBRA [Third Schedule](https://sso.agc.gov.sg/Act/HBRA2015#Sc3-) is **NOT ALLOWED**

**A.** [**Institutional Animal Care and Use Committee (IACUC)**](http://nus.edu.sg/research/iacuc) **approval**

1. [Submit IACUC application via online iORC system](https://wws.nus.edu.sg/iorc/login.aspx).

* ORMC forms should be submitted together with the IACUC forms under the same application reference number.
* All questions in the IACUC forms serve a purpose. Providing the requested information will reduce unnecessary to and fro exchange. Please refer to the [IACUC protocol sample](http://www.nus.edu.sg/research/docs/librariesprovider4/animal-work-101/r17-0362-sample-v1.pdf) for reference.
* [Application submission and IACUC review schedule](http://nus.edu.sg/research/iacuc/meeting-schedule) is on the [IACUC website](http://www.nus.edu.sg/iacuc/)
* Procedure rooms need to be IACUC approved and AVS licensed if live animals are transported out of the centrally managed vivarium/ aquarium. Procedure room inspections will be arranged by IACUC office after IACUC has reviewed and accepted the reasons and justification for the transportation of animals.

2. Researchers working with live animals need the following requisites. This can be done in parallel to an IACUC form submission, but final IACUC approval is subject to the following requirements being met.

* **[Occupational Health (OH) programme](https://inetapps.nus.edu.sg/osh/portal/NUS-Community/oh/intro.html)**

Submit the completed [health questionnaires](http://www.nus.edu.sg/research/docs/librariesprovider4/animal-work-101/nus-animal-work-health-questionnaire.pdf) to [Ms Goh Sha Wee](mailto:uhcv64@nus.edu.sg) at the [OH clinic](http://nus.edu.sg/osh/oh/home.html) for review by the OH Physician. An OH serial number will be issued after review, certifying researchers fit to work with animals. Staff submitting the questionnaire need not pay upfront. They will, however, need to obtain the approval & signature from Dept/PI & submit the [authorization form](http://www.nus.edu.sg/research/docs/librariesprovider4/animal-work-101/authorisation-form-(uhc)-for-oh-medical-services.pdf) to OH clinic for billing.

* [**RCULA/ RCUF**](http://nus.edu.sg/research/iacuc/training)

Complete the [RCULA registration form](https://forms.office.com/Pages/ResponsePage.aspx?id=Xu-lWwkxd06Fvc_rDTR-gv6Ps7VhDk9JuSDW5zcjFVhUQ0dLWDBJVDUwUDBZRlkxTDhUMkJPNkFPTC4u). Completion of the online AALAS module is mandatory for all. Completion of Hands-on training is required for personnel handling live animals. Please contact [RCULA](mailto:lacbox4) for more information if needed. Trained, qualified individuals, based on relevant credentials, qualifications, documented training and prior experience may apply for exemption from hands-on training by submitting the “[IACUC hands-on exemption form](https://nus.edu.sg/research/docs/librariesprovider4/animal-work-101/2021-exemption.doc)” to [IACUC General Enquiries](mailto:dprbox33@nus.edu.sg). Exemption is on a case-by-case basis and will not be considered if it has been more than 10 years since similar animal work was carried out.

3. An NUS userID is needed for all researchers working with live animals in NUS to be included in the protocol. This can be obtained as follow:

* **NUS visitor account**

Visitors/researchers to be included in the protocol need to apply for an NUS visitor account which will take some time to process and approve.  Please approach your department for assistance.

**B.** [**Office of Risk Management and Compliance (Safety and Health Unit)**](https://inetapps.nus.edu.sg/osh/portal/biosafety/biosafety.html) **approval**

1. [Submit ORMC application via online iORC system together with the IACUC forms](https://wws.nus.edu.sg/iorc/login.aspx).

* Approach ORMC representative, [Dr Lawrence Sie](mailto:lsek01@nus.edu.sg), for more information
* Head of Department (HoD) support is needed for all ORMC online forms submission.
* ORMC will guide PI on the necessary Ministry of Health (MOH), Animal & Veterinary Service (AVS) or other necessary permits, if required, during the application review.

**C.** [**Institutional Review Board (IRB)**](http://nus.edu.sg/research/irb) **approval.**

1. Submit [IRB online application for use of human sample or cell lines](https://nus.edu.sg/research/research-management/irims/irims-ethics) for processing. Full IRB review is required if the animal work falls under rHBRs. Please approach [IRB](http://nus.edu.sg/research/irb/about-us/contact-us) for more information.

Once IACUC approval is obtained, personnel listed in the IACUC protocols can approach CM’s [Ms Ong Jie Min](mailto:lacojmj@nus.edu.sg) for access to [CM online website](https://cm.nus.edu.sg/login.php). Information on vivarium orientation, animal order processing and drugs order is on the website. Please take the time to familiarize yourself with [some of the essentials required during the course of your animal work](http://www.nus.edu.sg/research/docs/librariesprovider4/animal-work-101/things-to-note-for-animal-work-v2.docx).

Amendments should likewise be submitted via iORC, and be reviewed and approved by IACUC before changes are made to your approved animal work. Information on [common amendments](https://nus.edu.sg/research/docs/librariesprovider4/animal-work-101/iacuc-forms-and-amendments-ll3oct.docx) and [amendment submission instructions via iORC](http://www.nus.edu.sg/research/docs/librariesprovider4/animal-work-101/iorc-amendment-instruction.docx) are available too.