Create a new GM Dealing Application in InfoEd

IMPORTANT!

- A Co-Investigator or Student can create, complete and submit new GM Dealing Applications in InfoEd on behalf of the Chief Investigator (CI). The Hazardous Materials Office will not receive the Application until after the Chief Investigator has reviewed and signed off on the Application in InfoEd.

- A Student who is also a Curtin University Staff Member must be listed as a student investigator if they are applying for approval for their (student) project. They must select their Student personnel profile when adding themselves as an investigator on the Application form in InfoEd. The Student’s Supervisor must be added and selected as the CI of the Application.

1. Create a new record

Log in to InfoEd => https://infoed.curtin.edu.au

On the left hand column of the homepage, hover your cursor over ‘Hazardous Materials’ and click on ‘Create New Record’.

![InfoEd homepage with Hazardous Materials section highlighted](image.png)
A separate window will appear on your screen. Select ‘New GM Dealing’. Click ‘Continue’.

A separate window will appear on your screen. You can choose to start with a new blank application form, or you can copy an existing application and then edit it. If you are adding new work to an existing NLRD then start with that existing NLRD. In this first example we want to start with a blank application. Click ‘Continue’.

A “Protocol Creation” window will appear on your screen. Type or copy/paste your project title in the text box, and click ‘Continue’.
A “Select CI” window will appear on your screen. Please note that the Chief Investigator (CI) must be a Curtin University staff member. Click ‘Continue’ if you are the CI.

![Select CI window](image)

Otherwise, delete your name and start typing in the last name of the CI. A list should appear once you start typing, hence select the correct CI name and then click ‘Continue’.

![Select CI window](image)

You have now created a new application and you will be presented with the ‘Initial Application’ window. You can see the title and CI that you entered. The application has been given a temporary ‘Record Number’ in the top left corner, which will be replaced by an IBC number once assessed.
If you are the CI, you can feel free to close this application at any time and you can find it again in the ‘My Items’ tab on your homepage.

If you are not the CI then you will need to add yourself to the application form as an investigator or you will not be able to re-access the form once you close it. Then search for your CI’s name in the ‘Quick Find’ box on the home screen to find the application again.

To open up the application, hover over the Record Number, hover over ‘Edit’ and click ‘Master Record’.
2. Fill in the Application Form

Click on the ‘GM Dealing Application’ link.

The Application Form opens in a new window. You can ‘Save’ and ‘Close’ it at any point, and open it back up to continue working on it.

Read and follow the instructions on the form to help you to fill it in, and where there are boxes with question marks in them, hovering over them gives you an example of how to answer that question.

Below is an example of how a well filled-in application form should look.
GM Dealing Application

1. INTRODUCTION

Use this form to apply to the Curtin University Institutional Biosafety Committee (IBC) for permission to carry out a Dealing with a genetically modified organism (GMO) at a Curtin University campus.

If you want to perform GM Dealings at other locations, you will need to apply to the IBC for those locations. Please then send a copy of your internal approval to the IBC at Curtin University (IBC).

If you need assistance filling in the form, please contact the Biosafety Advisor on 9266387 or GMO@curtin.edu.au.

Recent type

* Does your Dealing need to be covered by Confidential Commercial Information (CC)?
  
  Yes [X]

2. INVESTIGATORS

Completing the Investigators section:

- To add an investigator, click the Add Investigator button.
- Search for co-investigators by clicking on the first letter of their surname in the alphabet list that appears at the top of the search page. Type the co-investigators' last name in the search box to narrow your search results. Click the down-arrow next to the 'Select' button to display the results.
- Assign them a role and describe their previous experience.
- The Certifications tab shows if they have completed the GM Dealing training course.

Please email biosafety@curtin.edu.au if you cannot find an investigator in the system.

IMPORTANT NOTE FOR STUDENTS AND CO-INVESTIGATORS: Please add yourself in the investigator section before you close the form. You will NOT have access to the form if you are not listed on the application.

Personnel: Review

Name: Bradley, Bernadette
Role: Chief Investigator

Certifications: [Blank]

* Summary of previous experience performing GM Dealings and working in OHSB Certified facilities.

Eight years experience working with QMOs in a Certified facility. One year of experience Supervising an Honours Student working with OMOs.

Name: Bennett, Amy
Role: Deputy Chief Investigator

Certifications: [Blank]

* Summary of previous experience performing GM Dealings and working in OHSB Certified facilities.

Amy is a PhD Student who has one year of experience working with QMOS in a Certified facility.

Name: Connolly, Matt
Role: Undergraduate Student

Certifications: [Blank]

* Summary of previous experience performing GM Dealings and working in OHSB Certified facilities.

Matt is an Undergraduate Student with no experience.
3. GENERAL INFORMATION

Identify all the GENES of people who will be performing this Dealing. The BSC has the ability to give approval for classes of people, which would allow you to add or subtract people of that class (e.g. HDR, Postgraduate Student) over time without having to reapply to the BSC for permission.

- Research Staff
- Higher Degree by Research Student
- Postgraduate by Coursework Student
- Undergraduate Student
- Faculty Support Staff

* Description of the Dealing:
Please provide enough information about the experimental work that you want to do involving GMVs that the BSC can envision the processes. Provide a key summary of your project.

- We will PCR up DNA from various cell surface receptors from humans, clone them into pGEM-T, bulk up the plasmids in E.coli, and extract the plasmids for sequencing. This is Amy’s PhD project.

- Desired start date (DD-MMM-YY):
01-Feb-2018

- Estimated end date (DD-MMM-YY):
15-Dec-2020

Source of GMO

- Identify the source of the GMO.
- Constructed during the Dealing: *

Give details of any supplier or donor:

pGEM-T comes from Promega and the E.coli will come from Invitrogen.

* Will the GMO be imported under an Import Permit?
No *

4. GMO DETAILS

In this section you will describe the GMOs you are applying for.

You will need to describe each of your GMOs using the following:

1. the species of host cell (e.g. donor or parent organism).
2. the genetic modification that will be done or has been done (either DNA obtained from a donor organism or DNA originally in the host genome and now deleted from that host), and
3. the vector DNA and methods used to make the modification.

You may apply to use several different kinds of GMOs in this application, and we need to collect information about them. Firstly you will need to summarise the different kinds of GMOs that you want to use. Then you will need to describe in detail each host modification, and vector that you want to use. This process is represented in the diagram below.

Step 1: Summary of your GMOs
Use the GM Dealing Type tool to classify the types of GM Dealings that you wish to do. Use the output from the tool to fill out the GMO Details table for each type of GMO you want to use. Add more sections of table as needed to describe all your GM Dealing types. Remember to include all the GMOs you wish to get to your final GMO, such as E. coli, yeast or Agrobacterium.

GM Dealing Type: Incomplete

Add:

- GM Dealing type: Ecoli
- Host organism(s) of this GM Dealing type: Ecoli
- List of the DNA/RNA that will remain in the GMO(s) after the modification: pGEM-T vector plus human cell surface receptors.
- List all the vector(s) to be used in this GM Dealing type: pGEM-T

Add.
### Step 2: Detail your host organisms

Consider all the living host (parent) organisms that will be the CMOs. Fill in the information below for each host organism, by replicating the table. You will need the Risk Group (RG) of your microorganisms and you can find help with that here.

<table>
<thead>
<tr>
<th><strong>Common and scientific name of a host organism</strong></th>
<th>E. coli</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Risk Group of the host organism</strong></td>
<td>Risk Group 1</td>
</tr>
<tr>
<td><strong>This organism has been shown to be pathogenic towards:</strong></td>
<td>Yes</td>
</tr>
<tr>
<td>(a) No other organisms</td>
<td>Yes</td>
</tr>
<tr>
<td>(b) Humans</td>
<td>No</td>
</tr>
<tr>
<td>(c) Animals</td>
<td>No</td>
</tr>
<tr>
<td>(d) Plants</td>
<td>No</td>
</tr>
<tr>
<td>(e) Fungi</td>
<td>No</td>
</tr>
<tr>
<td>(f) Bacteria</td>
<td>No</td>
</tr>
<tr>
<td>(g) Other organisms</td>
<td>No</td>
</tr>
<tr>
<td>If this organism produces spores then provide the spore size and normal method of transmission</td>
<td>N/A</td>
</tr>
<tr>
<td>Will this organism be placed onto or into another organism, and if so, name that organism?</td>
<td>N/A</td>
</tr>
<tr>
<td>If this organism produces pollen then provide the pollen size and normal method of transmission</td>
<td>N/A</td>
</tr>
</tbody>
</table>

### Step 3: Detail the genetic modification

Consider all the types of genetic modification that the GMO will have. All the DNA, RNA, genes and gene segments that will be stably modified, inserted, or deleted in the organism. Fill in the information below for each modification, by replicating the table. For inserted DNA, the donor organism is the one that the inserted DNA originated from.

<table>
<thead>
<tr>
<th><strong>DNA/RNA name</strong></th>
<th>cell surface receptors from humans</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Was this DNA/RNA be inserted or deleted in the host?</strong></td>
<td>Inserted</td>
</tr>
<tr>
<td><strong>What donor organism does the DNA/RNA originate from?</strong></td>
<td>Humans</td>
</tr>
<tr>
<td><strong>Risk Group of the donor organism</strong></td>
<td>N/A</td>
</tr>
<tr>
<td><strong>This organism has been shown to be pathogenic towards:</strong></td>
<td>Yes</td>
</tr>
<tr>
<td>(a) No other organisms</td>
<td>Yes</td>
</tr>
<tr>
<td>(b) Humans</td>
<td>No</td>
</tr>
<tr>
<td>(c) Animals</td>
<td>No</td>
</tr>
<tr>
<td>(d) Plants</td>
<td>No</td>
</tr>
<tr>
<td>(e) Fungi</td>
<td>No</td>
</tr>
<tr>
<td>(f) Bacteria</td>
<td>No</td>
</tr>
<tr>
<td>(g) Other organisms</td>
<td>No</td>
</tr>
<tr>
<td><strong>Primary function of DNA?</strong></td>
<td>Protein-coding</td>
</tr>
<tr>
<td><strong>Primary function of RNA?</strong></td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Hazard potential</strong></td>
<td>Not hazardous</td>
</tr>
</tbody>
</table>
**5. RISK ASSESSMENT AND MANAGEMENT**

**a.** Does the GMO, or the vector used to make the GMO, pose a threat to the health and safety of the people handling the GMO? What are the possible hazards from the proposed genetic modifications, and the likelihood and consequence of the hazards occurring? Note: GMOs and vectors that are made from organisms that are pathogenic to humans may be hazardous.

The E.coli is a lab strain that is not pathogenic to humans and the vector cannot penetrate skin.

**b.** If unintentionally released from containment, does the GMO, or the vector used to make the GMO, pose a threat to the health of plants, animals and other organisms in the environment, or their position in the ecosystem? Note: GMOs and vectors that are made from organisms that are pathogenic to humans may be hazardous.

The E.coli is a lab strain that is not pathogenic to humans and the vector cannot penetrate skin. Both would be expected to degrade in the environment.

**c.** If intentionally released into the environment, does the GMO, or the vector used to make the GMO, pose a threat to the health of plants, animals and other organisms in the environment, or their position in the ecosystem? Note: GMOs and vectors that are made from organisms that are pathogenic to humans may be hazardous.

The E.coli is weakened compared to wild-type and would not be expected to survive in the environment to out-compete the wild type E.coli population.

**d.** Does and allows the precautions that are outlined in the pgMRI Protocol? (3b.1, 3b.2) are there any other actions and precautions you will take to minimize risks posed by the proposed activities?

No.

**e.** In the event of an unintentional release of GMOs from containment, you must notify the Manager of the certified facility that housed the GMO, plus the Biosecurity Advisor, Dr. Bemadine Daly (as soon as possible, by phone on +61 100 090 and by email bemadine.daly@curtin.edu.au). What (if any) additional steps will you take in the event of an unintentional release of the GMO(s)?

None.
6. GMO STORAGE AND DISPOSAL

Facility Information
Identify which OGTR-Certified facility or facilities you will perform the dealing in. Note that use of a facility is at the discretion of the Facility Manager:

- E300 Rm 140-144 (PC2 lab) Facility Manager is Dr Rob Stewart
- E305 L2 East Wing (PC2 lab) Facility Manager is Dr Bob Stewart
- E306 L2 West Wing (PC2 lab) Facility Manager is Dr Rob Stewart
- E300 animal facility (PC2 animal facility Facility Manager is Dr Beng Chua)
- E300 Rm 111-123 (PC2 lab) Facility Manager is Dr Beng Chua
- E300 PC3 lab (PC2 lab) Facility Manager is Dr Beng Chua
- E1260 Glasshouse (PC2 plant facility Facility Manager is Mr John Jackson)
- E1260 Conviron (PC2 lab plant) Facility Manager is Mr John Jackson
- E304 Lab 1 (PC2 lab) Facility Manager is Dr Peta Beech
- E304 Lab 2 (PC2 lab) Facility Manager is Dr Peta Beech
- E304 Lab 1 (PC2 lab) Facility Manager is Dr Peta Beech
- E304 Lab 2 (PC2 lab) Facility Manager is Dr Peta Beech
- E304 Lab 3 (PC2 lab) Facility Manager is Dr Peta Beech
- E304 Conviron 1 (PC2 plant facility Facility Manager is Dr Peta Beech)
- E304 Conviron 2 (PC2 plant facility Facility Manager is Dr Peta Beech)
- E304 Conviron 3 (PC2 plant facility Facility Manager is Dr Peta Beech)
- E311 Rm 113 (PC2 lab) Facility Manager is Dr Peta Beech

* Do you wish to perform the dealing in any other facilities at Curtin?
  - Yes
  - No

If you want to perform GM Dealings at other locations, you will need to apply to the IBC that cares for those locations. Please then just send a copy of your external approval to the Curtin University IBC.

Storage
* Will you store the GMO’s outside a Curtin-Certified facility?
  - Yes
  - No

Disposal of the GMO
* Which chemical disinfectant(s) will be used to decontaminate surfaces that the GMO is handled over?
  (Chemical disinfectants can be found in Appendix E of the Australian / New Zealand Standard 2991.3.3-2012)

  70% ethanol.

* Describe the procedure to decontaminate a spill of your GMO.

Wipe up the media with paper towels and dispose of by autoclaving. Swab the surface with 70% ethanol on paper towel.
Once you have completed your application form, tick the ‘Complete’ box in the top right hand corner. The system then checks the form for completeness and tells you if you have missed any ‘Mandatory Questions’ that you still need to address. Clicking on the ‘Mandatory Question’ will take you to the correct place in the form that needs attention and highlights that section in a red box.

Close your completed form and click ‘Submit’. If you are the CI then the application will be sent to the Biosafety Office for processing. If you are not the CI then the application will be sent to the CI for sign-off before coming to the Biosafety Office for processing.

If you need to make changes to your application after you have submitted it, please contact the Biosafety Advisor biosafety@curtin.edu.au who can unlock the submission for you to add to.