HSE
Health & Safety Executive

The Genetically Modified Organisms (Contained Use) Regulations 2000

Notification of intention to conduct individual contained use activities

- The public register sections MUST be understandable without reference to the risk assessment or other supporting documents.
- Please return your completed form to the Health and Safety Executive at the address given in Notes for Guidance.
- Please do not feel constrained by the box sizes – expand them or continue on separate sheets if necessary.
- Important – please refer to Notes for Guidance where identified.

FOR HSE USE ONLY									
GM centre reference: GM			Date notification acknowledged: / /20			Date activity ceased: / /20			
Dates on which additional information submitted									
Date on which accident notification submitted									
Consent granted (Class 3 / 4) *please tick box*									

1. Name of organisation (Note 1) University of Dundee

Address
Main Campus,
University of Dundee,
Perth Road,
Dundee,
DD1 4HN

Telephone number 01382 344000

Fax number 01382 201604

e:mail university@dundee.ac.uk

2. Date of premises notification (Note 2) 7/7/79

HSE centre number GM6

3. Please tick if notifying a connected programme of work (Note 3) ✓

4. Class(es) of activity – tick all relevant boxes (Note 4)

Class 2 ✓

Class 3

Class 4

Activity involving notifiable non-micro-organisms

5. Please give a short descriptive title of the activity (or activities)

Life sciences research involving Class 2 genetically modified micro-organisms.

6. Purpose of the contained use (Note 5)

To investigate at a molecular level cellular processes that may be of clinical relevance.

7. Characteristics of the GMO(s) including the evaluation of foreseeable effects (Note 6)

Recipient or parental organism

Hazard Group 2 micro-organisms listed in The Approved List of Biological Agents, and Hazard Group 1 and 2 micro-organisms as categorised by ACDP guidelines.

Replication defective viruses and associated well characterised packaging cell lines as detailed in Section 2.6 to 2.12 SACGM Compendium of Guidance that can be categorised as ACDP Hazard Group 1 or 2.

Well characterised tissue culture cell lines.

Primary cells.

Host / vector system

Well characterised systems with a history of safe use will be used, for example: commercially available viral vector systems, non-mobilisible plasmid vectors and bacteriophage vectors.

Origins and intended functions of the genetic material involved

Wild type and mutant forms of genes and genetic material isolated from prokaryotic and eukaryotic organisms or chemically synthesised such as receptors, signalling molecules, transcription factors, enzymes, growth factors, cytokines, non-coding regulatory elements, anti-sense constructs and si RNA, reporter genes and selectable markers.

Evaluation of foreseeable effects

The genetically modified micro-organisms are likely to cause similar effects on human health and the environment as the wild type parent. Therefore, the containment measures for the parental micro-organisms (ie Containment Level 2 and additional measures required by licensing authorities) will be required to reduce the risks to research and support staff and to the broader environment to an acceptable level.

It is extremely unlikely that the genetic modification will alter significantly the fundamental properties of the parental micro-organism such as pathogenicity, infectivity, virulence, survivability, host range and/or response to prophylaxis/treatment. Therefore, additional Containment Level 3 control measures such as sealability for fumigation, HEPA filters on extract air and autoclave within laboratory suite are not merited for the level of risk ie not reasonably practicable.

8. Containment and control measures for GMOs that are not micro-organisms (e.g. GM animals and plants) (Note 7)

9. Maximum culture volumes per experiment – <u>for GMMs only</u> (Note 8)

(i) Class 2 activities, state approximate culture volume

Up to 5 litres.

(ii) for Class 3 or Class 4 activities, specify the culture volume

10. For GMMs only, indicate the level of containment that will be applied (please tick the appropriate box(es)). **(Note 9)**

	Level 2	Level 3	Level 4
Laboratory activities	✓		
Glasshouses			
Growthrooms			
Animal units	✓		
Large scale activities (i.e. activities to which Table 2, Schedule 8 containment is appropriate)			
Human clinical applications			

11. For GMMs only – application for any derogation from full containment for the Class of activity. (Measures and justification) **(Note 10)**

12. Describe the waste management measures which you will apply to the activity (including the type and form, treatment, degree of kill, proposed process testing / monitoring measures, ultimate form and fate). **(Note 11)**

Waste Disposal

Solid waste is collected in a lined, biohazard labelled, autoclavable bin. After work the liner is loosely sealed and the lidded bin transported directly to the autoclave facility, on a trolley, for immediate autoclaving. After autoclaving solid waste is disposed of as controlled waste.

Liquid waste is collected in robust, autoclavable, sealable containers. After work the sealed container is transported, in a plastic tub, on a trolley, directly to the autoclave facility for immediate autoclaving. After autoclaving liquid waste is disposed of to drains with copious amounts of cold water.

Sharps waste is collected in a small, autoclavable sharpsafe. After work the sharpsafe's temporary closure is engaged and it is transported in a plastic tub, on a trolley, directly to the autoclave facility for immediate autoclaving. After autoclaving sharpsafes fully sealed then disposed of as clinical waste and collected by a specialist contractor.

Monitoring

Disinfection: Virkon is used to treat spills and wipe down surfaces and equipment after work. Virkon is used in strict accordance with the manufacturer's guidelines and efficacy data.

Autoclaving: During the first four years after installation an annual 12-point validation test, employing independent thermocouples, is used to demonstrate that the autoclave holds the specified temperature and pressure for the required period of time. Thereafter, autoclaves are serviced every 6 months by a reputable service provider and calibrated annually to ensure the validation criteria are met. During normal, daily operation indicator tape and, in the case of liquid waste, a temperature probe placed at the centre of the load, are used to ensure the required conditions are achieved. Servicing and testing is arranged and test reports are kept by the CLS Health & Safety Coordinator.

Inspections: Safety Inspections are carried out regularly to ensure Local Rules are adhered to and that risk assessments and training records are in order. Inspection reports are kept by the Health & Safety Information Officer.

13. Is an emergency plan required according to regulation 20? Yes ☐ No ☑

If Yes, please tick to confirm that it is attached to this form ☐

14. Please tick to confirm that you have attached a risk assessment to this form (Note 12) ☑

Tick if you are claiming exemption from disclosure for sections of the risk assessment ☐

15. Please enter comments of the genetic modification safety committee on the risk assessment. (Note 13)

This is a broad connected programme of work supported by five risk assessments. The Committee agreed that the work covered by four of the risk assessments is clearly Class 2, and that facilities and SOP's are appropriate for the level of risk.

However, the Committee discussed at greater length the risk assessment for work with a gram negative bacteria. This work involves studying the immune responses *in vitro* and *in vivo* of a gram negative bacteria that has been modified to express an altered LPS- a major virulence factor.

It is uncertain whether this modification will increase or decrease the virulence of this Hazard Group 2 pathogen-though in some other gram negative bacteria this modification has been shown to increase virulence. See Mol Microbiol. 1999 Aug;33(4):679-92 and J. Exp. Med., Volume 187, Number 5, March 2, 1998 743-752.

However, it is very unlikely that the modification will alter how these bacteria are transmitted ie (ingestion or injection) or their susceptibility to disinfectants/ heat and antibiotics. The normal route of transmission is by ingestion so wild type strains can be handled on the bench.

For mutant version Containment Level 3 measures (ie room fumigation, HEPA extract air, sealable) are not required, nor does the laboratory need to be under negative pressure (not airborne spread) ie implementation of these measures are not reasonably practicable since they will not significantly reduce the major risk of spread of infection by ingestion or injection.

The key control measure is to prevent spread by ingestion. Therefore, the work can be done on an open bench, but there must be rigorous adherence to the SOP. In vivo work will be done in a dedicated lab, IVC will be used, and a Class 2 change station or a Class 2 Microbiological Safety cabinet will be used. Again a rigorous SOP must be implemented.

PERSONAL INFORMATION

16. Name of person responsible for supervision and safety of GM activities at the premises.

Professor C.P. Downes OBE, FRSE (Head of College of Life Sciences)

Training and qualifications

PhD in Biochemistry, Institute of Biology Membership Exams (2,1), HNC in Applied Biology

CONFIDENTIAL INFORMATION

17. Enter in this section any information required in sections 1 – 15 for which you are claiming confidentiality, together with full justification for that claim. (Note 14)

18. Declaration

I am notifying an intention to carry out an activity involving contained use of genetically modified organisms with the authority and approval of the person (organisation or individual) named in section 1 of this form.

Name	Lisa Grayson		
Position in organisation	College of Life Sciences Health & Safety Information Officer		
Signed **(Note 15)**		Date	

THE GENETICALLY MODIFIED ORGANISMS (CONTAINED USE) REGULATIONS 2000
NOTIFICATION OF INTENTION TO CONDUCT INDIVIDUAL CONTAINED USE ACTIVITIES

Notes for Guidance

Data Protection Act 1998

This Act requires the Health and Safety Executive (HSE) to inform you that this form may include information about you (This is called "personal data" in the Act) and that we are a "data controller" for the purposes of the Act. HSE will process the data for health, safety and environmental purposes. HSE may disclose these data to any person or organisation for the purposes for which it was collected or where the Act allows disclosure. As data subject, you have the right to ask for a copy of the data and to ask for any inaccurate data to be corrected.

All the information given in sections 1 – 15 of this form will be placed on HSE's public register of notifications within 14 days of receipt. You may consider that there is information relevant to these sections whose disclosure would harm your organisation's competitive position or which you wish to keep confidential on other grounds referred in regulation 22(2); please see paragraph 126 of the Guide to the Regulations. If so, you should enter such information in section 17 with a full justification for its exemption from disclosure.

Subject to the following paragraph, there are some sections for which you must provide at least some information for disclosure. This is because the Regulations specify certain categories of information for which exemption from disclosure cannot be claimed on any grounds other than, exceptionally, harm to intellectual property rights. It should always be possible to provide information in these categories without risk of harm to competitive position or any of the other grounds referred to in regulation 22(2). If there are particular details, necessary for the evaluation of the notification, for which you wish to claim confidentiality, these should be entered in section 17 with the necessary justification.

You may request exemption from disclosure for any information if you can demonstrate that it is necessary to protect your intellectual property rights. Such information should be entered in section 17 with a full justification for its exemption from disclosure.

Personal information will not be disclosed unless the individual concerned has given his or her explicit written permission.

Compliance with other legislation

It is important to note that compliance with the provisions of the Contained Use Regulations does not constitute compliance with other relevant legislation. For example, you may also need to apply separately for licences or permits under legislation controlling plant health, animal health, animal scientific procedures, or the introduction of non-indigenous species. For clinical trials involving gene therapy, you will need approval from the Gene Therapy Advisory Committee.

Even if you have fulfilled the requirements of the Contained Use Regulations, and have any necessary consents or approvals under that legislation, you cannot begin the activity unless you also have the relevant licences / permits under any other applicable legislation.

Note 1

This will normally be the University, Institution, Company or Organisation. Only rarely will it be necessary to include an individual's name.

Note 2

If you have previously notified your premises, indicate the date of the notification and the HSE reference number assigned (e.g. GM111). If you have not notified your premises, you will not have a reference – so leave blank. Note that if not previously notified, you will also have to complete a premises notification – using the form provided if you wish – and submit it at the same time as this activity notification. The fee payable in such cases will only be that related to the activity notification.

Note 3

It is permissible to notify a connected programme of work using this form. However you must include details of all of the component activities in sections 4-15. The fee payable in relation to connected programmes is the fee for the highest Class of activity involved. (Notifiable activities involving GM animals and plants are equivalent to Class 2 for this purpose).

Note 4

Please tick all applicable boxes. Confidentiality in relation to the Class of activities involving GMMs may not be claimed – unless disclosure would harm intellectual property rights. Any information claimed as confidential should be entered in section 17 together with justification.

Note 5

Any information claimed as confidential should be entered in section 17 together with justification.

Note 6

For activities involving GMMs, this section cannot be left blank unless you have a justified claim in respect of protection of intellectual property rights (IPR). If you are not making a claim in respect of IPR, you must at least include general characteristics of the GMMs involved in the intended activity. Where there are no justifiable claims for confidentiality, you must include precise details. An evaluation of the foreseeable effects must also be included, in as precise detail as possible. The evaluation of foreseeable effects should include the identity and characteristics of the GMMs indicated by the risk assessment. Include information on hazards to human health and the environment with particular reference to those arising from the modification as opposed to being inherent properties of the host micro-organism. (A fuller account of these details will be included in the risk assessment).

For activities involving GMOs which are not micro-organisms (eg GM animals and plants), it is permissible to claim confidentiality for any of the required information, but the second section should still be completed in as precise detail as possible without endangering confidentiality. The evaluation of foreseeable effects is required to consider only human health and safety aspects. Any information claimed as confidential should be entered in section 17 together with justification.

Note 7

For activities involving GMOs which are not micro-organisms (eg GM animals and plants), describe the containment and control measures which you will apply to the activity. These should be justified by reference to the risk assessment. Any information claimed as confidential should be entered in section 17 together with justification.

Note 8

Any information claimed as confidential should be entered in section 17 together with justification.

Note 9

You must not leave this section blank. For activities with GMMs, confidentiality may only be claimed if disclosure would harm your intellectual property rights.

Note 10

For activities involving GMMs, you will normally need to apply all the measures specified as requirements for the relevant containment level. If, however, your risk assessment indicates that any of those measures are unnecessary, you may ask for permission to omit them. Indicate any such measures with a brief justification that includes reference to the relevant parts of the risk assessment. You cannot claim confidentiality for the actual containment measures (unless your intellectual property rights might be affected) BUT the justification may be claimed as confidential. If any claim is made for confidentiality, the confidential information must be included in section 17 together with justification.

Note 11

Waste management measures which will be applied to the activity must be described. You should take into consideration only the waste consisting of or containing viable GM material. You must specify the type and form of waste(s) generated, their treatment, ultimate form and fate and degree of kill. Include an indication of the numbers of viable GMOs remaining after treatment (if any), and proposals for testing / monitoring the inactivation process. For activities involving GMMs, this section cannot be left blank unless you are claiming protection for reasons of intellectual property rights. Even if this is not the case, it is permissible not to give precise details if claims for confidentiality can be justified. For instance you could say that inactivation is by heat treatment to give100% kill, but the precise detail of how this is achieved may be commercially confidential information. If any claim is made for confidentiality, the confidential information must be included in section 17 together with justification.

Note 12

You must attach the risk assessment of the activity to this form. The risk assessment will not at present be placed on the public register, but will be open to disclosure to members of the public on request (subject to confidentiality provisions). If, as hoped, an electronic public register is set up in the future, this may allow for inclusion of the risk assessment on the register.

If you wish to claim exemption from disclosure for any sections of the risk assessment, please indicate those sections clearly on

the risk assessment and set out a full justification for exemption. If your justification is accepted, the risk assessment will be disclosed with the exempt sections removed. You are advised to submit a second version of the risk assessment from which those sections have already been removed. Such a version of the risk assessment should indicate precisely where information has been removed.

Note 13

NB: remember that, as well as consulting the genetic modification safety committee on the risk assessment, you must also comply with the Safety Representatives and Safety Committees Regulations 1977 and, where any employees are not in groups covered by trade union safety representatives, you must consult such employees according to the Health and Safety (Consultation with Employees) Regulations 1996. If any claim is made for confidentiality, the confidential information must be included in section 17 together with justification.

Note 14

Please enter in this section any information, required in sections 1-15, which you wish to be exempt from public disclosure on grounds that

a) disclosure would harm your organisation's competitive position;

b) disclosure would compromise your intellectual property rights; or

c) the information falls into one of the other categories for exemption in regulation 22(2) - state which.

For each piece of information entered you must:

d) state clearly which of the grounds applies. In particular, state which category of exemption allowed by the Environmental Information Regulations 1992, as amended in 1998, applies, namely:

- international relations, national defence, public security, legal proceedings, confidentiality of deliberation, commercial / industrial confidentiality, intellectual property;

e) indicate the section of the form to which it is relevant; and

f) provide a full justification, explaining why the stated ground for exemption applies.

You do not need to enter any personal information as this will automatically be treated as confidential.

Note 15

Send the completed form to:

Notifications Officer
Health and Safety Executive
Rm 443, TD6
Magdalen House
Stanley Precinct Bootle
Merseyside, L20 3QZ
Tel: 015 1951 4772 Fax: 015 1951 3474