Agenda for the 9th meeting of the Biosafety Committee of the University of Hong Kong. (A sub-committee of the Safety Health and Environment Committee).

To be held on **Thursday, 11th October, 10.00 a.m., Room 412 at Professorial Block, Queen Mary Hospital**

1. A warm welcome to Professor Frederick K.S. Leung from the Faculty of Education who has agreed to take over the role of Professor Bacon-Shone as an independent committee member.

2. Minutes of the 8th meeting of the Biosafety Committee (Feb 9th 2012)
To confirm the minutes of the 8th meeting which are included as Appendix A.

3. Matters arising from the minutes of the 8th meeting.
The points for action (italicized) and steps taken are indicated.

(A). Administration (discussed under point 1)
i) Secretary to arrange for the final version of the minutes of the May 2011 meeting to be posted on the Safety Office website. See http://www.safety.hku.hk/homepage/BCom.html for the Biosafety Committee information page and links to committee agenda and meeting minutes including May 2011.

(B). Monitoring biosafety (discussed under point 2)
i) The Safety Office will contact research services and confirm the types of grants that currently require safety approval. The feasibility of reviewing various safety concerns will be piloted by scanning CD's of all grant proposals for biological safety issues.
ii) Safety Office to review chemical and biosafety tick-box forms that accompany RGC grant approval forms.

(C). Risk assessment (discussed under point 3)
A small group meeting to discuss the requirements for risk assessment and who carries them out was proposed. Dr Hau, Dr Mackett, Dr El-Nezami and Professor Tsao met on 25th April 2012. Following discussion it was agreed that a document on risk assessment with examples be produced to assist those needing to produce a risk assessment. The first iteration of this document is tabled for discussion under agenda point 4 and is included as Appendix B.

(D). Biosafety Committee terms of reference and composition (discussed under point 4)
i) The secretary will draft a slightly modified terms of reference for the committee (once the issues surrounding risk assessment have been discussed and a course of action determined). When the revised terms of reference have been drafted and agreed the secretary will seek approval of SHEC. These slightly modified terms of reference await the risk assessments discussions.
ii) The secretary will seek approval of SHEC to include a representative of the Faculty of Dentistry on the Biosafety Committee. SHEC approved the appointment of a representative of the Faculty of Dentistry at its meeting of May 8th 2012.

(E). Biosafety training induction course (discussed under point 5)
i) Chairman to inform Deans of Faculties and Heads of Departments that a half day Biosafety training course will be available twice a year starting in September 2012. The letter also to explain that the committee believes all those exposed to hazardous biological materials should attend (including RA's and technical staff). The letter referred to was sent out in April 2012 and is included as Appendix C - for information.
ii) The secretary will develop the course and investigate how such a course might be delivered. The committee felt that it would be most effective if done in person rather than as an online course. The first course was run on September 7th 2012 for 55 people and the slides used have been uploaded to the Safety Office Biosafety webpages under the tag "Introductory Biosafety Course" at:- http://www.safety.hku.hk/homepage/bio.html. The second course, for the department of Biochemistry, will run on the 10th October 2012 with just under 60 participants.

(F). Review and update of Biosafety policy (discussed under point 6)
i) Secretary to update the sections of the policy that require factual additions such as section 2 where new laws have been enacted since the policy was developed. An updated policy document is included as Agenda point 5 and Appendix D
ii) Secretary to generate a frequently asked questions section to go with the policy. A few "frequently asked questions" with responses have been generated and included as part of the updated policy. Assistance on devising further appropriate questions would be appreciated.
iii) Head of Safety (Dr Hau) to consult with SHEC on areas of the policy that is out of step with current practice in the University. To be discussed at a future SHEC meeting.
iv) Chairman to write a letter to the heads of Department highlighting the need to keep an inventory of biological agents at a departmental level. The letter written to introduce the new biosafety course also referred to keeping an inventory - see Appendix C.
v) The secretary to prepare a guidance note on what to include in a laboratory code of practice/standard operating procedure and generate an example to help departments think through Biosafety level 2 requirements. This item has been rescheduled for discussion at our next meeting in February.

4. Risk assessment.
At our last meeting we carried out a review of Biosafety and one conclusion we came to was that risk assessment in the university was "at best inconsistent". We agreed to set up a small group to discuss risk assessment and recommend to the committee how this inconsistency might be remedied. The secretary met with Dr Hau, Dr El-Nezami, and Professor Tsao on 25th April 2012. We agreed that a pamphlet describing risk assessment with worked examples would provide a resource that might be used as a standard. Appendix B is presented to the committee as an early version of the document. It is essentially still a work in progress and the authors would value the committees input. The document is clearly too long but the nature of some assessments require detail and it will be difficult to shorten and still be thorough. To make the document more accessible a one page index and many highlighted boxes have been used to emphasize the important points. We have given one particular example (adenovirus vectors) in two different

formats to illustrate that assessments can be flexible in their approach and underline the fact that no one way has been adopted internationally as a standard.

We would appreciate comments on the examples used (the bacterial example has not been finished). The thinking behind the first few examples is to make the methodology clear with simple examples where the risks are widely appreciated.

A new document to be discussed under agenda point 6 "Guidance on the Use of Cell lines in Research" (Appendix E) includes an example of risk assessment on using cell lines. The example is probably best with the guidance but could be appended to the risk assessment document if members felt that was appropriate.

Any further thoughts would be appreciated including whether the proposed section on task analysis along with an example is appropriate.

5. A review of the Universities Biosafety Policy

An updated Biosafety Policy document is included in the meeting papers as Appendix D and includes a redraft of some sections e.g. the one on Hong Kong legislation and attempts at various points to move information to other sources hopefully making the policy document less cluttered and more accessible. This is also the function of the section called "frequently asked questions" although to be fair we have never actually been asked any of the questions listed!

Appendix C contains an index of the main sections of the Biosafety Policy with comments below some of the sections. Do members agree with the comments? Do members have further suggestions? Should any of the policies be adapted, changed or discarded? As indicated in the overview of Biosafety three areas were of some concern (Risk assessment, Biosafety Induction training and Standard operating procedures/Safety manuals) and might be addressed in the policy. How could this best be done?

Are the requirements for risk assessment and who carries them out appropriate (section 3.5). At what level should requirements for risk assessment be monitored, implemented and enforced? i.e.Is this best dealt with by departments without input from SHEC or the Biosafety committee?

It is acknowledged that the document in rather long and detailed. How might it be improved and made more accessible? What could be deleted or separated out into ancillary guidance documents? Should anything else be included e.g. a section on laboratory acquired infections or some sort of departmental inventory requirement?

How could awareness of the policy and its provisions be improved within the University?

6. Guidance on the use of cell lines in research

The brief document entitled "Guidance on the use of cell lines in research" is included as Appendix E. The committee is invited to review, comment and if felt appropriate approve its contents. The document includes an example of the bulk culture of EBV positive cell

lines using the 5 steps to risk assessment explained in the risk assessment document. Would extra paragraphs on xenotransplantation experiments, stem cells, iPSC's and cells modified by lentiviruses be helpful/appropriate? A modified document could be circulated by e-mail for approval if the committee wished.

7. Updated Guidance on Clinical Waste.
The committee is asked to review, comment and if felt appropriate approve the updated guidance on Clinical Waste (Appendix F). Once the committee is happy with the document it will be submitted to SHEC, probably at its November meeting, for approval on the committee's recommendation.

8. Dual Use Research – follow up - for information.
On the agenda for the last committee meeting was a reminder that part of the remit of the Biosafety committee is to "promote, collect and disseminate information and guidance" on Biosecurity issues and this includes "dual use" biological experiments. As explained then the US based National Science Advisory Board for Biosecurity (NSABB) defines dual use research of concern as "research that, based on current understanding, can be reasonably anticipated to provide knowledge, products, or technologies that could be directly misapplied by others to pose a threat to public health and safety, agricultural crops and other plants, animals, the environment or material."

Of particular relevance to HKU, considering the widespread influenza work carried out by its staff, was two papers that were under consideration at Science and Nature which were reported to describe the creation of a highly pathogenic H5N1 influenza virus that is capable of airborne transmission in ferrets. The NSABB was asked to review the papers and, in a highly unusual move, recommended that the 'experimental details and mutation data that would enable replication of the experiments' be removed, although they said the general conclusions of the manuscripts could be published. Subsequently following further discussion they reversed this decision and both of the controversial papers have been published. See Herfst *et al* Airborne Transmission of Influenza A/H5N1 Virus Between Ferrets, Science 22 June 2012: Vol. 336 no. 6088 pp. 1534-1541; Imai *et al* Experimental adaptation of an influenza H5 HA confers respiratory droplet transmission to a reassortant H5 HA/H1N1 virus in ferrets Nature 486,420–428 (21 June 2012).

Should the University be giving more guidance to students on this type of dual use research? If so who should be targeted and how might this be achieved?

9. Any other business.
To consider any business not otherwise on the agenda.

10. Dates of next meetings.
The dates of the next Biosafety Committee meetings have been set for 7th February 2013 and 10th October 2013. In order to spread out the meetings more evenly it might be appropriate to meet at the end of March rather than early February. SHEC met this year on May 8th so this would still give time for a report to be submitted to them after our meeting.