

**University College Cork
National University of Ireland, Cork**

Quality Improvement/Quality Assurance

Peer Review Group Report

Department of Microbiology

Academic Year 2003/04

6th April 2004

Members of the Peer Review Group:

| | <u>Name</u> | <u>Affiliation</u> | <u>Role</u> |
|----|----------------------------|---------------------------|-------------|
| 1. | Professor Ken T. Higgs | University College Cork | Chairman |
| 2. | Professor Edward J. Johns | University College Cork | Rapporteur |
| 3. | Professor Emer Colleran | University College Galway | Extern |
| 4. | Professor James I. Prosser | University of Aberdeen | Extern |

Timetable of the site visit

See Appendix A for the detailed timetable.

The timetable provided adequate time for interviews with representatives of academic, secretarial, technical and postdoctoral staff and undergraduate and postgraduate students within the Department and with a wide range of central administrative staff relevant to Departmental activities. The timetable also offered an opportunity to visit and assess Departmental teaching and research facilities and to meet staff informally. Sufficient time was provided for planning of the exit presentation and preparation of the first draft of the report.

Peer Review

The Chairman led the questioning and discussion. The external reviewers were involved in the detailed examination of the Microbiology teaching and research activities. The Rapporteur took detailed notes which were used in formulating the report.

The site visit was facilitated by provision of a room in which all interviews and meetings with Departmental staff were held. This avoided travel by the PRG to individual offices. The Department made available, within this room, laboratory practical manuals, undergraduate research project theses, MD, M.Sc. and Ph.D. theses and examples of recent peer-reviewed publications by Department academic staff. They also organised a presentation of posters reflecting the breadth of research activities within the Department. This impressive display demonstrated a serious attempt to highlight the Department's

strengths and pride in their achievements. The PRG felt this was an important contribution to the smooth operation of the visit, on which the Department is to be congratulated. Those interviewed arrived punctually and Departmental staff were well-briefed regarding the purpose of the exercise. Administrative staff were generally well-prepared and provided any required additional information promptly following interviews. Organisation and timetabling were excellent and any requests for additional facilities were dealt with quickly and efficiently.

The timetable for the visit, including that for preparation of the report, was discussed on the first evening, prior to a meeting with staff who had coordinated production of the self-assessment document. Further discussion of more specific points regarding the self assessment document, recommendations and other aspects of the PRG report were discussed during the working lunch and dinner on day 2. The major findings were discussed and collated when preparing the exit presentation and during the working dinner on day 3. A full draft report was then prepared and circulated to the PRG for revision, prior to submission of the final report.

Overall Analysis

Self-Assessment Report

The Department coordinating committee, its chairman and the Head of Department are to be congratulated for an excellent report and for being most helpful, forthcoming and honest with the Peer Review Group. The PRG was very impressed with the Department's delivery of the self-assessment report documentation, which highlighted the quality and eminence of the Department within this area of expertise in Ireland, both in teaching and research. The benchmarking exercise carried out using the Division of Microbiology/Virology within the Department of Biological Sciences, University of Warwick was thorough and critical. The PRG felt that the self-assessment review was both detailed and comprehensive in its content, although the profile of technical staff could have been greater. A number of minor omissions were addressed by presentation of documentation during the site visit.

SWOT Analysis

The PRG is broadly in agreement with the Department's overall analysis of strengths, weaknesses, opportunities and threats. The comments below provide amplification of this analysis and extend it in a number of areas. Each weakness, opportunity and threat is addressed by specific recommendations, as indicated by superscripts, which are listed at the end of this document.

Strengths

- Senior members of the university and university administrative staff confirmed the high regard with which the Department's research and teaching are regarded. The Department was consistently described by senior University Officials as the best or one of the top two Departments in the University. Departmental staff were considered to be highly productive, cooperative, efficient, interactive and responsive.
- All of those interviewed also confirmed the commitment of staff to providing the best and highest quality in every aspect of their work. Staff showed loyalty to the Department, had pride in the Department and all, justifiably, felt that they were a part of its success.
- Microbiology teaching programmes are strong, cross-disciplinary and the Department is innovative, proactive and initiates and contributes strongly and actively to joint programmes.
- The Department is to be congratulated on its perceptive and successful recruitment and appointment of staff leading to a unit in which every member of staff is active in research.
- The Department fosters and achieves good team spirit, staff work for each other and there are no apparent divisions or cliques. This is an important characteristic which has contributed to the success of the Department. It must be protected as the Department develops. The integrity and identity of the Department should be maintained if its current success is to be used as a platform for taking research and teaching excellence to a new, higher level.

- High national and international research profiles are evidenced by significant external funding for research, national and international collaborative links and strong publication records in applied areas and, increasingly, in fundamental research.
- The PRG agrees that the Department should consider the implications of increased size and that management structures need to be established to address this issue.
- The PRG congratulates the Department on its proven ability in attracting significant external funding for research, both in terms of grants for specific research projects and in larger scale, collaborative programme grants. In addition to the intellectual qualities required for achieving high levels of funding, staff have demonstrated entrepreneurship in identifying opportunities for funding of large collaborative programmes and the commitment, courage and confidence to aim high. These characteristics are a major strength in the Department and equip it well for the next stage in its evolution.

Weaknesses

- Lack of investment in technical support represents a real danger to the Department in its teaching function and research activities.^{9,14}
- The increased administrative load is hindering the HOD and other staff members and support is required for them to perform effectively. Administration is seriously limiting their time to carry out their primary activities in teaching and research and will hinder potential for substantial future development.^{5,6,7,12}
- The Department has highlighted stresses in communication between different levels of staff including technical and research staff. This is due in part to increased size and more dispersed location and reduced effectiveness of informal communication mechanisms and this is being addressed by establishment of a consultative committee.^{2,3,4}
- Major policy and strategic decisions currently only involve academic staff but historically all staff have considered themselves to be included and involved through informal communication. Increased Departmental size has led to concerns that all staff are no longer sufficiently included in policy and decision making within the Department. This issue is being addressed by the proposed establishment of a

Departmental Management Board, with representation from different groups of staff, including technical and research staff, which will increase involvement and broaden participation.²

- The PRG accepts that there are limitations in the infrastructure and would strongly support the Department's seeking funding for refurbishment of the teaching laboratories through the Faculty.^{16,17}
- Communication between research groups appears to be excellent, with sharing of equipment and expertise. However, recent location of groups in different buildings has the potential for fragmentation which must be avoided.^{2,3,12}
- There is no formal mechanism for identification of training needs or staff development opportunities.¹⁰
- Lack of investment in technical support reduces continuity in expertise required for both teaching and research.^{9,13,14}
- Contributions to other degree programmes increase pressure on teaching resources and reduces focus on core activities. It does, however, provide significant opportunities for future collaborative research developments.^{5,7,9}
- There is no regular formal system for obtaining feedback on undergraduate courses, involvement of course staff and students in considering feedback, responding to comments and communicating responses to students.⁴

Opportunities

- Recruitment of students to basic biological science degrees is increasingly difficult internationally but the successful employment statistics for graduates and involvement of successful former graduates provide opportunities for marketing the Department's teaching programmes. The proposed Departmental Administrator/Manager post should also provide an opportunity for more focused marketing and promotion of the Department outside the traditional catchment area within Ireland, in the UK and internationally. The Department's success in attracting EU students should be fully exploited. Upgrading of the teaching laboratory accommodation, combined with the new bioinformatics suite, also provide opportunities for harder selling of undergraduate teaching.^{11,12,16,17}

- Greater promotion of the Department's research activities and increasing international profile should maintain and increase the quality of postgraduate student applications, while the increased breadth of undergraduate degree programmes will fuel new research initiatives.^{1,9,11,13}
- Departmental research is historically strong in applied areas but is based on a solid foundation of basic science. While maintenance of the applied research is important, opportunities for funding and developing basic research should be fully explored and exploited through funding mechanisms and new appointments. This will support and enhance applied research but, importantly, should also provide increased opportunities for publications in high profile journals and an even greater research profile.^{1,9,13}
- The Department has played a central role in the establishment of new research institutes and remains proactive in seeking and developing further initiatives and imaginative funding mechanisms to enhance research infrastructure. The new research institutes, while presenting challenges for management and maintenance of Departmental identity, exemplify this strategy and should be fully exploited in enhancing development of research programmes.^{1,9,13}
- The links with clinical microbiologists and others in the Faculty of Medicine & Health will be strongly increased by the appointment of the new Chair in Medical Microbiology. This appointment should allow the Department to develop more extensive collaborations with medical microbiologists.^{1,9}

Threats

- The Department has a very good record of attracting high quality undergraduate students to its degree programmes. However, national and international trends are indicating that in the future student recruitment in the sciences may become increasingly difficult. This is likely to lead to a decrease in average quality in attempts to maintain student numbers. Any requirement to teach larger numbers of students of lower quality will reduce the learning experience for higher quality students, increase teaching loads and reduce the relevance of research activity in undergraduate teaching. Continued recruitment of high quality undergraduate students is therefore important. In addition, the innovative teaching methods for

larger numbers of students developed by the Department should be further expanded.^{1,6,7,8,11,12}

- Long-term security of research funding is a continual threat and the Department must sustain its ability to identify new sources of funding at an early stage and to develop new collaborative research areas. Involvement of younger staff in furthering these initiatives is important in their career development and in ensuring long-term sustainability of the Department's research.^{1,10,13}
- In assessing the Department's research activity and profile it is clear that it has developed into a major international research centre in Microbiology. However, based on the Department's own recommendations in the Self-Assessment Report, the PRG considers the Department's ambitions and aspirations for the future are too modest for a department with their potential. Its academic staff have obtained substantial external funding for research but failure to increase investment by central government will limit their capacity to increase their research activity and achieve the Department's true potential.^{1,9,17}
- Future employment prospects of graduates in traditional industries are outside the control of the Department but emphasis on teaching fundamental skills and identification of transferable skills should reduce the associated risk.⁸
- Increasing bureaucracy is a major potential problem which will be exacerbated in a Department such as Microbiology. Staff are cooperative and responsive and will often carry out additional bureaucratic tasks without complaining because of a general positive attitude and a culture of cooperation. It is therefore essential that the Department be protected from bureaucratic burdens, thus enabling focus on core activities. Appointment of a Departmental Administrator will partly address this issue but other mechanisms for reducing administrative load should be explored, both by the Department and by the UCC central administration.^{2,5,12}
- Competition from other institutions for undergraduate students is likely to increase but the Department is well-placed to recruit outside traditional areas given adequate support for promotional activities.^{11,12}
- Maintenance of high levels of teaching quality and teaching staff morale require higher quality facilities than those currently available. The poor quality and small

relative size of practical laboratories raise health and safety concerns and are identified by both staff and students as a major problem. Other teaching facilities also require modernisation, for example better provision of IT infrastructure. Research laboratories are crowded with the BSI providing only temporary respite as the Department continues to grow. The library facilities are grossly inadequate for both teaching and research and must be improved drastically and quickly.^{15,16,17}

- Growth and split-site location are placing pressure on communication, coordination and management. The potential loss of identity, loyalty and pride in the Department present a major threat of which the Department is aware. Historical informal communication and management are no longer adequate. More formal systems are required but must not increase bureaucratic burden or detract from core activities in teaching and research.^{1,2,3,4,12}
- The informality of existing mentoring procedures may limit awareness of training and career development opportunities for academic and other staff.^{9,10}

Benchmarking Exercise

It is difficult to identify a Microbiology Department with a similar profile to that in UCC but the teaching and research activities of the Bacteriology and Virology sections within the Biological Sciences Department, University of Warwick are similar and the Warwick department has a consistent record of high teaching and research quality.

Different degree structures, most notably the 3- rather than 4-year programme, made detailed and direct comparison difficult. However, no substantive gaps or omissions were identified in the UCC curriculum and teaching at 4th year level was not shown to be excessive. In addition, the range of teaching modalities used at UCC compared favourably with the University of Warwick. The PRG noted that the Department of Microbiology has established a Curriculum Review Committee that has been charged with carrying out a review of the 3rd and 4th year modules. Such a review is timely given the involvement of the Department in a number of long-standing and new B.Sc. programmes.

The Department of Microbiology does not appear to have considered, explicitly and overtly, teaching of generic skills. Analysis of individual courses and modules indicates that generic skills are being taught, although they are often (correctly) embedded in modules, rather than constituting separate courses, and are not highlighted as such. It would be useful to identify these components and increase awareness of them among staff, to ensure that efforts are not duplicated unnecessarily, and among students, who may thereby recognise and appreciate skills of use when seeking future employment. In this respect, there was evidence that students lacked some basic IT skills.

Departmental analysis indicated that research activity in the two departments was comparable, providing further evidence for the high quality of Microbiology research at UCC. While this is not disputed, there were a number of aspects in which comparison was confounded, such as differing bibliographic metrics, competition for funding, the balance between applied and fundamental research and the regard with which different sources of funding differ between Ireland and the UK.

Findings of the Peer Review Group

Department Details

The Department is highly active in teaching and research with a clear identity and direction. Staff are loyal and, rightly, proud of the Department's successes to which they have all contributed. The Department's success and identity have arisen through excellent informal management which fosters cooperation and integration in teaching provision and allows freedom and independence in development of research activity. Success is also derived from excellent recruitment policies such that all staff are active in research. Research facilities, equipment and expertise are at the cutting edge for microbiological research. Throughout the Department, staff are enthusiastic, motivated and committed and seen by those outside as highly responsive, cooperative and capable of delivering. Departmental staff have been instrumental in developing initiatives to extend facilities and infrastructure but the increasing demands of teaching and the pressures associated with maintaining cutting edge research make this process ongoing. A major challenge facing the Department is to maintain momentum and expand further, in terms of staff numbers and physical location, while maintaining Departmental identity and loyalty. This must be achieved without increasing

administrative and bureaucratic loads which will detract from core activities and limit and reverse the current momentum.

Department Organisation & Planning

The PRG welcomes the review of management structures and the planned establishment of a Departmental Management Board. This will involve participation of representatives of all staff groups within the Department in regular meetings discussing strategy, policy and implementation. It will therefore address concerns regarding inclusivity and reduced communication as the Department expands.

The proposal to appoint a Departmental manager is strongly supported by the PRG. Although the precise job description for this post has yet to be defined, the aim, as stated by the Department, will be to reduce the administrative load on the Head of Department and academic staff. It is therefore anticipated that the post will be at a relatively high grade, and will involve responsibilities for financial monitoring of departmental funds and research grants, interactions with students, liaison with central administration, public relations and promotion of the Department and implementation of decisions. The proposal to establish undergraduate student-staff committees for better communication and fostering of identity with the Department is also strongly supported.

The increasing size of the Department and the location of some research laboratories in buildings occupied by other Departments, is inevitably affecting communication, which can no longer rely solely on informal mechanisms. The potential for developing collaborative research offered by HEA and SFI research funding is welcomed but the proposed Departmental Staff Council, newsletter, email communication, Departmental away-days and common room are required to maintain and improve communication within the Department and to maintain identity. These mechanisms should be kept under review and views of all staff should be taken when assessing communication.

Development of a new strategic plan is welcomed and the quality performance review provides a timely opportunity to initiate the formulation and implementation of this plan.

This should take fully into account the potential of the Department and its ambitions and aspirations should reflect the high quality and dynamism of the staff.

We believe that teaching loads are too high for research active staff and will seriously impact on international competitiveness of research and on teaching quality if they persist. This will be exacerbated by contributions to proposed new undergraduate programmes. Possible solutions are:

- a. Involvement of postdoctoral researchers in provision of a limited number of lectures and tutorials. This has the added benefit of enhancing training and career aspirations of postdoctoral staff who would be encouraged to attend formal teaching courses where appropriate. Postdoctoral staff would also be involved in assessment but with mentoring and monitoring by academic staff.
- b. Review of the curriculum (currently in progress) to rationalise duplication and overlap of teaching and reduction in the number of modules.
- c. 'External funding' of teaching through buy-out of academic time and employment of additional teaching assistant(s) with teaching expertise and capable of development and Department-wide introduction of innovative teaching methods. This will lead to a reduction in average contact hours of research active staff, reduced involvement in teaching administration and improvement in teaching quality.

Teaching & Learning

Staff are dedicated and committed to provision of high quality teaching and learning and practical instruction in microbiology. They have been successful in attracting good students and in producing graduates that are well trained and satisfy the requirements of employers. The bioinformatics suite is impressive and will be invaluable in future training of microbiology and genetics students. Following discussion with undergraduates and prospective employers, we would recommend that basic IT skills be introduced at an early stage in the degree course, and that students be given greater practical training in molecular techniques.

The present departmental feedback system from the undergraduate courses is not proving to be entirely effective as the students were unaware of how the feedback information was utilised and whether and how comments were taken into account in future operation of courses. It would be useful, therefore, to formalise feedback procedures for undergraduate courses at all levels with meetings of student representatives, teaching staff and technical staff to consider anonymous feedback comments from individual modules and to discuss solutions to problems raised. A mechanism for implementing changes resulting from feedback should also be introduced, demonstrating that the 'loop is closed'. It may not be feasible or acceptable to have meetings for each module, given the current high number of modules, but annual or biannual meetings for each year would be practicable and would increase students' and technicians' contributions to courses and to teaching quality. It was noted that exam scripts were not double-marked and that model answers were not prepared. While these may be time consuming, further increasing teaching loads, it would be useful to assess the value of these procedures, which increase quality assurance in assessment of teaching and have been commented on by external examiners.

Research & Scholarly Activity

The Department has established a high national and international profile in research through recruitment of high quality academic staff, all of whom are active in research with substantial research funding, excellent publication records and international reputations. In turn, they are able to attract high quality postgraduate research students and postdoctoral staff. Further academic appointments are required to maintain momentum and vibrancy, keep abreast of modern developments and increase critical mass, thereby further enhancing the quality of teaching provision. Quality of research should be increased by efforts to publish in higher impact journals and greater international exposure. Research activity will be enhanced by identification of career development needs (e.g. sabbatical leave), employment of technical staff through external funding and encouragement of international visitor programmes and organisation of conferences. Opportunities in medical microbiology, through appointment of the Chair in Medical Microbiology, and other initiatives should be fully exploited. It was pointed out by both Departmental staff and university authorities that opportunities for sabbatical leave have not been taken up by this Department. The PRG would recommend exploration of ways in which sabbatical leave would be best employed.

Much of the research into environment and health is coordinated through the BIOMERIT Research Centre of Excellence. This externally funded centre has established an international reputation for its research programmes in functional genomics, environmental biotechnology and immunogenetics and pathogenesis. The Centre therefore links work on environmental biotechnology and biomedicine and facilitates science strategy, management of resources and postgraduate training. It has been extensively successful in achieving high and sustained levels of funding, establishment of national and international collaborations and a world class citation publication record.

The success and expansion of the Department could not have been achieved without the dedicated contribution of the technical staff, who are highly valued by the Department. It is recommended that new technical staff are urgently appointed to improve practical teaching and to ensure maintenance, operation and full utilisation of sophisticated and specialist equipment and facilities. Academic staff should also exploit all opportunities for external funding of research technicians.

Staff Development

The fundamental resource within a Department is its administrative, technical and academic staff. It is very clear that the Microbiology staff are deeply committed and loyal and the PRG was very impressed with their dedication and pride in the Department. It is essential that departmental integrity, team spirit and willingness to contribute unselfishly to departmental activities be maintained as the Department grows. This atmosphere has developed through informal communication and we believe that micromanagement and bureaucratic appraisal systems would be restrictive. Nevertheless, in terms of staff and career development, we believe it would be beneficial for the Head of Department to introduce an annual review of job satisfaction and needs for career development for all staff.

External Relations

The Department plays an important role in College affairs through membership of committees and development of collaborative programmes. Research activity involves

considerable national and international interactions and participation on a number of funding and advisory committees and on editorial boards. Efforts should be made to increase representation on these committees and boards, to increase profile, to determine and communicate future opportunities at an early stage and to inform and influence policy decisions.

Support Services

Both teaching and research activities are severely limited by lack of provision of textbooks and journals. Library provision is likely to improve in the near future through SFI funding and other sources. Laboratory facilities for undergraduate teaching, including honours research projects, are poor and we would recommend refurbishment of teaching laboratories at the earliest opportunity. In addition, laboratories are overcrowded and alternative teaching approaches should be explored.

Recommendations for Improvement

We wish to make the following recommendations which are based on the Self-Assessment Report, the site visit and meetings with Departmental and other University staff. These recommendations also incorporate and extend those suggested by the Department.

Recommendations for Improvement – to the Department

1. Development of an inclusive and realistic strategic plan, whose ambition and aspirations reflect the quality and dynamism of the staff.
2. Completion of a review of management structures and establishment of a Departmental Management Board, with participation of representatives of all staff groups within the Department in regular meetings to discuss strategy, policy and implementation.
3. Establishment of Departmental Staff Council and other mechanisms to increase communication and maintain Departmental identity.
4. Establishment of undergraduate student-staff committees and formal course feedback mechanisms to improve communication, foster identity with the Department and improve teaching quality.
5. Reduction in teaching loads through:
 - a. Involvement of postdoctoral researchers in provision of a limited number of lectures and tutorials;
 - b. Rationalisation of duplication and overlap in undergraduate teaching;
 - c. Exploration of ‘external funding’ of teaching through buy-out of academic time and employment of additional teaching assistant(s).
6. Exploration of alternative teaching approaches, particularly for large classes.
7. Urgent implementation of the report of the Departmental Curriculum Review Committee (due shortly) in order to streamline existing modules, avoid duplication and reduce formal teaching loads.
8. Provision of instruction of basic IT skills, highlighting of training in transferable skills and greater practical training in molecular techniques.

9. Further enhancement of international research quality and profile through:
 - a. Increased publication in high impact generalist scientific journals (e.g. Nature, Science, PNAS);
 - b. identification of career development needs, including sabbatical leave;
 - c. employment of research technical staff;
 - d. expansion of international visitor programmes;
 - e. organisation of more conferences;
 - f. increased participation in Learned Society committees, funding bodies and editorial boards;
 - g. development of new research initiatives (including Medical Microbiology).
10. Introduction of an annual review of job satisfaction and training needs for career development for all staff.
11. Promotion and marketing of undergraduate courses and research activities of the Department.

Recommendations for Improvement - to the University

12. Appointment of a Departmental manager with responsibilities for financial monitoring of departmental funds and research grants, interactions with students, liaison with central administration, public relations and promotion and implementation of decisions.
13. Appointment of two – three academic staff to maintain momentum and vibrancy.
14. Appointment of two technical staff to improve undergraduate practical teaching for and maintenance, operation and full utilisation of sophisticated and specialist equipment and facilities.
15. Urgent and drastic improvement in the Library provision of textbooks and journals, in particular on-line journals.
16. Urgent refurbishment of teaching laboratories.
17. On-going assessment and upgrading of infrastructure for teaching and research activities, equipment and facilities.

Timetable for conduct of Peer Review Visit

Department of Microbiology

Monday 16th February 2004

- 18.00 Meeting of members of the Peer Review Group
Briefing by Director of Quality Promotion Unit, Dr. N. Ryan.
Group agrees final work schedule and assignment of tasks for the following 2 days.
Views are exchanged and areas to be clarified or explored are identified.
- 20.00 Dinner for members of the Peer Review Group and members of the Departmental Co-ordinating Committee

Tuesday 17th February 2004

- 08.30 Convening of Peer Review Group
Consideration of Self-Assessment Report
- 09.00 Professor Gerald Fitzgerald, Head of Department
- 09.45 Meeting with all staff of Department
- 10.30 Tea / coffee for PRG + all staff
Meetings with individual members of staff
- 11.00 Ms. Áine Murphy (Senior Executive Assistant)
- 11.15 Dr. Alan Dobson (Senior Lecturer)
- 11.30 Dr. Julian Marchesi (College Lecturer)
- 11.45 Dr. Paul O'Toole (College Lecturer)
- 12.00 Dr. John Morrissey (College Lecturer)
- 12.15 Mr. Maurice O'Donoghue (Technician)
- 12.30 Professor Colin Hill (Associate Professor)
- 13.00 Working private lunch for members of Peer Review Group
- 14.00 Professor Aidan Moran, Registrar & Vice-President for Academic Affairs
- 14.30 Visit to core facilities of Department. PRG escorted by Professors G. Fitzgerald and C. Hill
Meetings with representative selections of students and researchers
- 15.30 Undergraduate Students
Richard Kirwan, 2nd Year Microbiology
Ruadhán Creed-Myles, 3rd Year Microbiology
Saranna Fanning, 4th Year Microbiology
Susan McLernon, 4th Year Microbiology
Jonathan O'Regan, 3rd Year Food Science
Blaise Nic Phairais, 4th Year Food Microbiology
Jillian Ormond, 3rd Year Genetics
Ray Hickey, 4th Year Genetics
3rd Year class representative, Biomedical Sciences

- 4th Year class representative, Biomedical Sciences
- 16.00 Postgraduate Students
 Barry Collins (1st yr)
 Brendan Palmer (2nd yr)
 Sheila Ryan (3rd yr)
 John Kenny (4th yr)
 Kaye Burgess (4th yr)
- 16.30 Researchers
 Dr. Max Dow
 Dr. Laura MacConaill
 Dr. Roy Sleator
 Dr. Claire Adams
 Dr. John O'Callaghan
- 18.00 Representatives of recent graduates, employers and other stakeholders
 Dr. Tom Beresford, DPRC, Teagasc, Moorepark
 Ms. Mary McCarthy-Buckley, Food Industry Training Unit, Faculty of Food Science & Technology
 Dr. Colman Casey, Managing Director, Schering Plough
 Dr. Aidan Coffey, Department of Biological Sciences, Cork Institute of Technology
 Dr. Ruth Davis, Research Office, UCC
 Michael Dolan, Packaging Manager, Beamish and Crawford
 Dr. Colum Dunne, Cork Cancer Research Centre, 5th Floor, Biosciences Institute, UCC
 Michael Herlihy, Quality Assurance Manager, Showerings Ltd.
 Mark Hurley, Chr. Hansens Ireland
 Dr. Paul Ross, DPRC, Teagasc, Moorepark
- 19.00 Meeting of Peer Review Group to identify remaining aspects to be clarified and to finalise tasks for the following day, followed by a working private dinner for members for the Peer Review Group.

Wednesday 18th February 2004

- 08.30 Convening of Peer Review Group
- 09.00 Professor Yrjo Roos, Dean, Faculty of Food Science & Technology
- 09.30 Mr. Richard Bradfield, Subject Librarian
- 10.00 Professor Pat Fitzpatrick, Vice-Dean, Science Faculty
- 10.15 Professor Pat Fitzpatrick, Chair, Research Committee of Academic Council
 Dr. Ruth Davis, Head, Research Office
- 10.30 Professor Fergal O'Gara, Professor of Microbiology, Director BIOMERIT
 and Director Genetics programme
- 11.00 Tea/Coffee
- 11.15 Mr. Michael O'Sullivan, Vice-President for Planning, Communications & Development
- 11.45 Ms. Carmel Cotter, Finance Office
- 12.00 Professor Fergus Shanahan, Director, BioSciences Institute, UCC
- 12.30 Professor Gerald Fitzgerald, Head of Department

- 13.00 Working private lunch for members of Peer Review Group
- 14.00 Preparation of first draft of final report
- 17.00 Exit presentation made to all staff of the Department by the Chair of the Peer Review Group summarising the principal findings of the Peer Review Group.
- 19.00 Working private dinner for members of the Peer Review Group to complete drafting of report and finalisation of arrangements for speedy completion and submission of final report.

Thursday 19th February 2004

Externs depart