Research Excellence Framework – Briefing Document
Faculty of Medicine

1. Overview

The most recent Research Assessment Exercise (RAE) was 2008, the results of which will be announced on 18 December 2008 and will inform HEFCE research funding from 2009-10. The Government have announced that RAE 2008 will be the last such exercise; the main reason for this is that the RAE is perceived by some as a burden on the sector.

The replacement system for the RAE is currently being developed and has been named the Research Excellence Framework (REF). Imperial has been selected as one of 22 institutions (see Appendix 1 for other HEIs involved) to be part of a pilot being led by HEFCE. The pilot aims to test the feasibility and implications of REF as a new system to measure and assess research quality, and inform decisions about REF's make-up. The first full REF exercise will take place in 2010 and will begin to inform HEFCE research funding from 2011-12.

Further information about REF is available on the HEFCE website:
http://www.hefce.ac.uk/research/

And on the Planning Division pages of the Imperial College website:
http://www3.imperial.ac.uk/planning/about/whatwedo/researchassessment/ref

2. What are the characteristics of REF? How is it different from the RAE?

- REF proposes to make greater use of quantitative indicators, i.e. metrics.
- For science subjects, bibliometrics will be the main quality measure used to produce an overall quality profile, supported by other metrics (for example research income, student numbers perhaps) and input by expert panels (for example to determine the weightings of each metric).
- Bibliometrics are a method of measuring patterns of authorship, publication and the use of literature.
- Citations will be the bibliometric indicator used (not journal impact factors) on the premise that:
    - **i.** New research builds on previous research, and researchers acknowledge this by citing earlier papers
    - **ii.** The extent to which research is cited provides some indication of the impact or influences it has on subsequent research
    - **iii.** Patterns of citation can be measured and used to produce proxy indicators of research quality
- Research output information for the College will be taken from academics' Symplectic pages which draw together all their publication information.
- Citations associated with each journal article will be produced by contractors appointed by HEFCE, normalised by the worldwide field average for that type/field of output and year of output.
- The REF pilot will consider a number of different models including the inclusion vs. exclusion of self-citations, the allocation of research outputs to HEIs based on publication address (i.e. employment at time of publication) vs. census date snapshot (i.e. research outputs follow the academic to their new HEI), whether to allow selectivity (of staff and/or outputs) vs. submitting all information, and how to account for co-author contribution.
- The pilot is using the 2008 RAE publication period of 01 January 2001-31 December 2007.
- The outcomes of the REF pilot exercise will help to inform the sector on the feasibility of the proposed biblometric model and approach.

3. Stages of the REF Pilot

Stage of REF Pilot	**Indicative Timescale**
REF pilot commenced	July 2008
HEIs provided estimate of REF pilot feasibility to HEFCE and agreed format for data submission	25 July 2008
Initial databases of staff and research outputs submitted to HEFCE : Table 1: data on research staff Table 2: currently available publication lists Table 3: Links between staff and outputs	August 2008
Contractors (Evidence Ltd and Symplectic) carry out data validation and follow up with institutions as necessary.	August to October 2008
Contractors and HEFCE carry out citation analysis (counts established and normalised)	November 2008 to March 2009
Outcomes and learnings of the REF pilot analysis disseminated	Late Spring 2009

4. Faculty of Medicine figures explained

The following data has been submitted to the REF pilot for the Faculty of Medicine and is currently being validated. “Research Output” is used to mean any form of assessable output that meets the RAE definition of research and was brought into the public domain during the RAE publication period (01 January 2001 to 31 December 2007). The table shows the volume of output for the Medical Divisions for different types of output. It is worth noting that these are not all “unique” outputs because there is the possibility that co-authored outputs are registered more than once due to multiple contributing authors.

Division	Authored Book	Chapter in Book	Journal Article	Conference Contribution	Patent / published patent application	Software	Internet Publication	Research Report for External Body	Grand Total
Clinical Sciences	15	66	1640	79	13	2	5	0	1820
EPHPC	18	84	3107	155	0	1	3	4	3372
Investigative Science	29	127	4873	95	16	0	5	0	5145
Medicine	22	133	5184	82	20	0	11	22	5474
Neurosciences and Mental Health	18	82	2681	94	0	0	3	4	2882
Paediatrics, Obstetrics and Gynaecology	0	0	4	0	0	0	0	0	4
SORA	58	305	6418	593	58	6	13	9	7460
Medicine Centre	0	5	72	1	4	0	0	0	82
Kennedy Institute of Rheumatology	1	62	1130	16	46	0	0	0	1255
NHLI	60	320	11176	285	39	0	24	0	11904
Grand Total for Faculty of Medicine	**221**	**1184**	**36285**	**1400**	**196**	**9**	**64**	**39**	**39398**

In the following table the data for the Medical Divisions is arranged to show the outputs for each Division, as above, but this time categorised by staff type.

- Category A staff are academics who were in post at Imperial on the RAE census date of 31 October 2007
- Category B staff are academics who were in post at some point during the RAE period (01 January 2001 to 31 October 2007) but left before the RAE census date of 31 October 2007
- Category C staff are Honoraries in associated with the College on the RAE census date of 31 October 2007
- Category D staff are Honoraries who were associated with the College during the RAE period (01 January 2001 to 31 October 2007) but were no longer associated with the College on RAE census date of 31 October 2007)

For the 2008 RAE, staff who met the RAE eligibility criteria were assessed internally and a process of selection took place whereby only staff demonstrating the highest quality of research were submitted to the RAE at the College's discretion. The "returned to REF" column below demonstrates that under the pilot REF system, all staff have been submitted. This is to enable HEFCE to receive as much data as possible to establish the extent of data coverage. So for example, 8898 Imperial College staff were submitted to REF for the purpose of the pilot. For the same time period, 1899 were eligible for the RAE, and 1462 members of staff were selected for submission.

Category of Staff	**Category A**			**Category B**			**Category C**			**Category D**			**Total**
Organisation Unit	**Returned to REF**	**Eligible for RAE**	**Returned to RAE**	**Returned to REF**	**Eligible for RAE**	**Returned to RAE**	**Returned to REF**	**Eligible for RAE**	**Returned to RAE**	**Returned to REF**	**Eligible for RAE**	**Returned to RAE**	
Biomedical Sciences				66						5			71
Clinical Sciences	52	16	16	18			78	9	9	26			174
EPHPC	131	57	40	105			123			83			442
Investigative Science	216	82	79	220			182	11	11	56			674
Medicine	225	92	89	305	3		187	9	9	90			807
Neuro. & Mental Health	111	49	41	133	6		217	3	3	59			520
Paediatrics, Obstetrics and Gynaecology				95			11			37			143
SORA	263	97	94	181	12	2	270	12	12	131			845
Medicine Centre	3	1	1	5	4		1						9
Kennedy Institute of Rheumatology	83	27	25	63			8			4			158
National Heart and Lung Institute	319	122	113	248	4	4	249	24	23	119			935
Faculty of Medicine Total	**1403**	**543**	**498**	**1439**	**29**	**6**	**1326**	**68**	**67**	**610**			**4778**

5. Questions, issues and potential problems

The College made a number of specific comments in its consultation response earlier in 2008, as follows:

- That the desire to reduce the administrative burden of the RAE should not be the main determinant of the new system.
- That high citations may not indicate the highest quality research.
- That the new system must capture and assess the full range of research and distinguish sufficiently between research which is good and that which is the very best.
- Our response also pointed out a number of behavioural implications with using citations, for example:
    - preference to publish in particular journals
    - impact on research which produces outcomes which are not able to be assessed under the new system
    - over concentration on journal outputs might remove the incentive to produce applied, translational policy related and practice based research
    - there may be difficulties in establishing new and emerging fields
    - there may be reduction in publication volume – desire to publish a few highly cited articles
    - there may be a decrease in collaborative research – desire to publish single author publications

HEFCE, with the help of the contractors are using the REF pilot exercise to look into a number of issues raised during the consultation.

- The pilot will help to inform views on:
    - how to allocate outputs to HEIs
    - how to treat co-authors
    - whether selection (of staff and/or outputs) should be part of the process.

Alongside the REF pilot, HEFCE are also looking into other aspects of the REF, beyond the collection and analysis of citation information.

- HEFCE are also looking at:
    - other indicators
    - the role of expert panels
    - how to handle work that straddles subject boundaries
- Other measures which are not currently specified as indicators in REF are important to take into account, for example:
    - other output indicators (patents, spin out companies, tech transfer, expert witness reports)
    - measures of esteem and external recognition (external prestigious fellowships, significant honours and awards, plenary and keynote addresses, memberships of committees, recruitment patterns and trends)
    - sustainability and vitality measures (research student registrations and progression, key investments in research, number of PhDs awarded, research income from external grants)
    - Future plans and research strategy

A further consultation will take place in 2009.

Appendix 1 – Institutions involved in REF pilot

Bangor University
University of Bath
University of Birmingham
Bournemouth University
University of Cambridge
University of Durham
University of East Anglia
University of Glasgow
Imperial College London
Institute of Cancer Research
University of Leeds
London School of Hygiene and Tropical Medicine
University of Nottingham
University of Plymouth
University of Portsmouth
Queens University, Belfast
Robert Gordon University
Royal Veterinary College
University of Southampton
University of Stirling
University of Sussex
University College London