
Management Board meeting #3

Introductory notes

Centre development

Our collaboration:

- Recent CRUK decisions have changed the paradigm for funding of radiotherapy-related research in the UK;
- OIRO affected by CRUK decisions. In parallel OIRO is searching for a new Director;
- This uncertainty initially caused OIRO to indicate its intention to withdraw from the CCAP collaboration;
- However, discussions with Frank van den Heuvel resulted in an agreement to wait until the new OIRO Director is appointed so that he/she could be involved in the discussion of future relationship with CCAP:
 - These discussions indicate importance of a ‘collaboration agreement’;
 - The Business Plan is part of this.
- OIRO is represented by B. Vojnovic and M. Hills on the MB. I have asked FvdH to join our meetings, at least until the discussion with the new Director has taken place;
- **Important corollary:**
 - CRUK expected to release a call for proposals for radiotherapy-related research with a deadline of the end of 2018;
 - I believe this is an opportunity for us, particularly as we have constructed a ‘golden-triangle consortium’;
 - Should we pursue this? Should CRCE take the lead?

Notes on development:

- Supported by I. McNeish (HoD Surgery and Cancer) strong and enthusiastic engagement of staff from Charing Cross Hospital. New Head of Medical Physics, Claire Hardiman, already engaging directly in our activities;
- Strong support for development of interdisciplinary activity from I. McNeish and M. Dougherty (HoD Physics). They are working together to make the case for the parallel recruitment of Lecturers in biophysics and radiation medicine. They are also taking a strategic approach to the search for charitable resources to seed this recruitment;
- Joint support for Centre Manager post agreed in principle, details now being worked out;
- ICR (U. Oelfke, J. Yarnold) interested to explore high-dose/microbeam electron radiobiology. Strong potential resonance here with interest and opportunity of CXH;
- Graduate student, H.T. Lau, now in residence at MedAustron. Has contributed to carbon-ion treatment beam-line commissioning (work forms basis of his first-year/early-stage-assessment report). Next steps to be decided in September 2018.
- Andrei Seryi stepped down as Director of the JAI. Phil Burrows is now acting Director. PB has been invited, but could not make this meeting.

Towards a Centre ‘routine’:

- CCAP seminar series started (S. Gruber, MedUni Wien), 27Jun18. Next M. Vretenar (CERN), 21Nov or 12Dec 2018. K. Kirkby (Manchester) agreed to give seminar. Can this be in October at ICR?

- Second plenary meeting held on Monday 16Jul18. Attendance OK given time of year. Propose to set dates for plenary and MB meetings next term by end July or beginning of October. Should not all be in the Blackett Laboratory.

Funding

Record of applications:

| Title | Directory | Funder | Lead | Value (£k) | Submission Date | Interview Date | Decision Date | Allocation | | | |
|--|---------------------------|-----------------|----------------|-----------------|-----------------|----------------|---------------|--------------|--------------|-----------|-----------|
| | | | | | | | | (£k) | Start | End | |
| STFC IAA | 2018-06-29-STFC-IAA | STFC/IAA | AK | 20.00 | 29-Jun-18 | N/A | | | | | |
| STFC quota studentship via IC.HEP | STFC | KL | | 70.00 | Nov-17 | N/A | Y | Dec-18 | 70.00 | 01-Oct-18 | Jun-22 |
| Laser-driven ion beams for radiobiology and treatment | 2018-01-CRUK-MDPA | CRUK | KL, MW | 498.35 | 24-Jan-18 | N/A | X | 25-Apr-18 | | | |
| Building a European Network for the development of novel techniques for radiobiology and particle therapy | 2018-01-23-EU-Prttns-Trvl | Imperial | VB | 5.00 | 23-Jan-18 | N/A | Y | 22-Feb-18 | 5.00 | 01-Mar-18 | 29-Feb-20 |
| Laser-driven ion beams for radiobiology | 2017-11-Rosetrees-Trust | RoseTrees Trust | KL, MW | 251.46 | 01-Dec-17 | N/A | X | | | | |
| Ultra-fast prompt photon imaging for proton beam therapy | 2017-11-24-EFFR | Imperial | KL, AK, DC, DG | 250.00 | 24-Nov-17 | 21-Feb-18 | X | | | | |
| Opportunity: recruitment of PhD student to carry out research in accelerator-based radiobiology in collaboration with MedAustron | 2017-10-30-PhD | Imperial | KL | 70.00 | 21-Nov-17 | N/A | | | | | |
| Development of a programme for the measurement of the radio-biological effectiveness of charged particle beams | 2017-03-CRUK-Ctr-PG-bid | CRUK IC | KL/MW | 70.00 | 19-Mar-16 | N/A | X | | | | |
| Development of a programme to investigate the biological foundations of charged-particle therapy | 2017-03-31-CRCE-30k | CRCE | KL/MW | 29.83 | 31-Mar-17 | N/A | X | 05-May-17 | | | |
| | | | Total | 1,264.64 | | | | Total | 75.00 | | |

Rethink: more strategic approach:

- Raise priority of Business Plan (agenda item);
- Commit to do ERC Advanced Grant application:
 - **Radiobiology facility 'Phase I'**;
 - Present planning (lifted from form 'B1'):
 - * Principal Investigator and Project Leader: Professor Kenneth Long (Imperial)
 - * End-to-end simulation and performance validation: Professor David Colling (Imperial)
 - * Laser-driven particle source: Professor Zulfikar Najmudin (Imperial)
 - * Particle capture: Doctor Juergen Pozimski (Imperial)
 - * Beam transport and delivery: Doctor Jaroslaw Pasternak (Imperial)
 - * End-station for radiobiological research: Doctor Sylvia Gruber (Medizinische Universität Wien)
 - * System integration, diagnostics, and control: Doctor Ajit Kurup (Imperial)
 - Deadlines:
 - * Deadline for draft sections: Monday 30Jul18
 - * Deadline for assembled draft: Friday 03Aug18
 - * Draft ready for start of internal review: Friday 10Aug18
 - * Imperial internal deadline: 23Aug18
 - * ERC deadline: 30Aug18
 - Secondary gain (a costed project plan) as important as potential primary gain;
- Also, plan to reformat MdPA for EPSRC Healthcare Call, and other opportunistic submissions.

Politics; building the case

UK-wide business case for interdisciplinary non-clinical radiobiological/systems-based radiotherapy research:

- UKRI well placed, and on the record as willing, to foster interdisciplinary research;
 - New Executive Chair of STFC (Mark Thomson) willing to champion a business plan for cross council support in our area within UKRI;
 - Departments of Physics and Surgery and Cancer at Imperial ready to back the creation of a short (two-page) business plan;
 - Champions:
 - Department of Physics: KL;
 - Department of Surgery and Cancer: Iain McNiesh
 - First steps in this activity will be taken this week; all input very welcome!
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Business plan

Agenda item; but comments on timetable:

- Seek to complete Business Plan in Autumn term 2018;
 - Propose to use completion of Business Plan to trigger establishment and first meetings/activity of:
 - Governing Board;
 - International Advisory Board.
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Opportunity: business case for broad interdisciplinary UK programme in radiobiology

Proton and Ion Medical Machine Study 2 (sic!) CERN initiative:



- Take forward a collaboration to evaluate/design ion-beam treatment and research facility;
- Potential site in Balkan states;
- Develop international collaboration to take it forward Initiative completely aligned with ours! We should be involved.

Development of medical-linac based X-ray treatment facility for challenging environments: STFC initiative:

CERN-ICEC-STFC Burying the Complexity: Re-Engineering for the Next Generation of Medical Linear Accelerators for Use in Challenging Environments

21-23 March 2018
Park Royal Hotel
Europe/London/imezone

Search... 

- The STFC has initiated a collaboration with the ‘International Cancer Expert Corps’ (ICEC) and CERN to develop a robust linac-based X-ray treatment facility.
 - The vision is that a bid for around 10M will be prepared to be submitted against the Global Challenge Research Fund GCRF).
 - Opportunity! I have made contact with Mengxing Tang to see if we can forge collaboration with Imperial Engineering Departments and others to:
 - Contribute to the accelerator design and the design and implementation of diagnostics and associated electronics including the necessary fast feedback and control;
 - Collaborate with the those engaged in machine learning and image processing research;
 - Contribute to the engineering of the system, including the production engineering, systems-approach to design, redundancy, failure analysis and remediation etc.
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