



Strategies for Securing Sustainable Funding for Postgraduate Training

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The NCBES at NUI Galway

- An Interdisciplinary Biomedical Research Institute established in 1999
- Focus on translation of research into clinical and commercial application
- Start-up funding of €34 million from Higher Education Authority of Ireland (PRTLTI)

Mission

to develop innovative diagnostic and therapeutic solutions to current medical challenges through interdisciplinary research



NCBES Members

- >80 Academic Investigators from 3 Colleges
 - Science, Engineering, Medicine
 - Clinical collaborators (Galway University Hospitals)
- > 300 researchers and support staff
 - 20 Senior Researchers
 - >100 post-doctoral scientists
 - >180 post-graduate students
 - >30 Technical support staff



- Regenerative Medicine Institute (REMEDI)
- Centre for BioAnalytical Sciences (CBAS)
- Galway Cancer Initiative (GCI)
- Institute for Biomedical Informatics (IBI)
- National Diagnostics Centre (NDC)



Major Research Themes

- Biomedical Engineering
- Cancer Biology
- Infectious Disease Diagnostics
- Neurosciences
- Regenerative Medicine
- Glycosciences



- >150 research M.Sc. and Ph.D. post-graduate student graduates (2002 – 2007)
- Full-time 1 year Taught Masters programme in Biomedical Science
 - 12-20 students per year
- Part-time Distance-learning Masters in Biomedical Science launched in September '06
 - 20-25 students enrolled
- Accel BestNET - Industry Training programme
 - 19 partner companies
- SFI UREKA Site for undergraduate summer students (16 per year - 2005-2007)



Post-graduate Fellowships and Funding:

Current state of play



Individual Student Fellowships e.g.

- University and Local Authority Fellowships
- Research Grant-funded Fellowships
- IRCSET and IRCHSS Post-graduate Fellowships



Research Programme-based Fellowships

e.g.

- HEA PRTLTI-funded programme Fellowships
- SFI-funded programmes e.g. CSETs
- IDA/Industry partnership programmes



Development of structured Graduate Education Programmes (GREPs)

- HRB
- IRCSET and IRCHSS



Graduate Education: Current funding position

- All Fellowships include Stipend and fees
- Stipends vary in level (€7K - €16K pa)
- IRCSET and IRCHSS Fellowships provide a small additional allowance (for e.g. Travel)
- Programme-based Fellowships also cover laboratory costs
- Fellowships funded for 3 years (4 years for GREPs)



The Way Forward ...

- National Graduate School model
- Institutional Graduate Schools
- Consistent agreed standards of education and training nationally
- Participation by all graduate students in Schools
- Specific Graduate Education Programmes (GREPs) in focused research areas



- National standards for education and training
- Institutional oversight and School management - Dean of Graduate Studies
- Institutional coordination of graduate admissions, course delivery, and student evaluation
- Manage Inter-institutional academic interactions and course coordination



Individual research and training excellence translated into collective excellence

- **Seed for broader research excellence**
 - Stimulate student interest
 - Promote research excellence
 - Develop competitiveness in student cohort
 - Create pressure to achieve
 - Raise the Bar for research achievement
 - Deliver higher research outputs
 - Support and mentoring for early stage Faculty

Output = Higher quality research and Training



- Quality of Principal Investigators / Educators
- National programme, Thematic focus of Strategic national relevance
- Internationally competitive research, education and training programme
- Professional / vocational training
- Industrial relevance and linkages
- Qualitative and quantitative performance metrics



- Scale of programme, and quality of students
- Sufficient academic staff for educational programme delivery
- Programme management and administrative support
- International research and training experience dimension
- Appropriate and adequate Physical Infrastructure, equipment and facilities



- Student Fellows project costs supported
 - Stipends and Fees funded over a 4 year period
 - Appropriate Bench Fees
 - Costs of international exchange including bench fees
 - Travel
 - Essential small equipment (e.g. PCs/Laptops)
- Funding of full costs of programme
 - Management and administration
 - Course delivery
- Physical Infrastructure and Capital equipment
 - Specialist research infrastructure and facilities
 - Appropriate desk space and IT support



- Need for an integrated approach to GREP funding programmes across funding agencies
- Coordination of timing and content of funding calls
 - GREP Programmes and associated recurrent costs
 - Infrastructure
 - Fellowships
- Need for long-term funding strategy
 - 6 years (3 student cycles) with renewal based on performance



Complementary role for funding agencies

- **HEA (PRTL I) – Lead funding Agency**
 - Academic and administrative staff appointments
 - Physical Infrastructure
 - Graduate Education Programmes and Fellowships
- Department of Education and Science (SIF)
 - Manage Inter-institutional initiatives
- SFI
 - Stokes and Engineering Chairs, Lectureships
 - Individual PI and programme-based Fellowships
- IRCSET, IRCHSS and Other agencies
 - Graduate Education Programmes and Fellowships



Industries, industry-associations, and Tech Transfer Offices play a key role in GREPs

- Industrial involvement in research training and vocational education
- Financial contributions to GREP activities
- Industrial Research placements and experience
- Training in innovation, commercialisation, and entrepreneurship



- Full-time Taught masters programmes
 - 1 year programmes with significant research component
- Part-time taught programmes
 - Aimed at industry personnel
 - Education and Skills upgrades
 - Distance-learning delivery
 - Options for post-graduate certificate, diploma and Masters
 - Flexible timeframes for completion



Research experience in a high quality research environment

- Generate interest in post-graduate research training
- Summer Schools for undergraduates
 - SFI UREKA
 - HRB
 - Institutional ?
- National Undergraduate training Schools ?



- Structured (Institutional) Graduate Schools
- GREPs in specific focused research areas
- Sustainability linked to research quality, focus, and industry relevant education and training
- Adequate financial support for Schools and GREPs is essential
- Integrated approach to funding needed across agencies and with Industry partnerships
- Taught programmes and undergraduate research training key in development of Graduate Schools
- Need to fully implement Graduate Schools and GREPs





Thank You!

