Why ROK, Why UK?

• Particular issue concerning zinc deficiency in East Asia (ROK)

• Expertise and facilities for molecular studies on zinc nutrition (UK)
Collaboration 2000-2011

Scotland

Republic of Korea

Rowett Institute
University of Aberdeen

Korea Food Research Institute

Andong National University

UK
<table>
<thead>
<tr>
<th>Year</th>
<th>Funding Details</th>
</tr>
</thead>
</table>
| 2000 | Chevening Scholarship (Prof. Kwun → RINH)  
KOSEF-SEERAD Co-study funding: Profs. Kwun and Beattie |
| 2001 | Korean MOST Co-Study: Profs. Kwun and Beattie |
ASEM-DUO Fellowship: Profs. Kwun → RINH |
| 2003 | Korean Ministry of Science and Technology: Profs. Kwun and Beattie  
KOSEF-SEERAD collaborative grant: Profs. Kwun and Beattie |
| 2004 | KOSEF-SEERAD collaborative grant: Profs. Kwun and Beattie |
| 2005 |  |
| 2006 | KOSEF-SEERAD collaborative grant: Profs. Kwun and Beattie |
| 2007 |  |
| 2008 | Korea Food Research Institute, 4-year collaborative grant (€100k): Dr. Ha |
| 2009 | National Research Foundation of Korea – University of Aberdeen,  
3-year Global Research Network Program Grant (€380k + €100k) |
| 2010 |  |
| 2011 | KFRI and NRF funding ends |
NRF: Global Research Network Programme Grant
Zinc deficiency in vascular health and disease

Korean Researcher (PI):
Prof. In-Sook Kwun – Dept. of Food Science and Nutrition, Andong National University

Global Network Partners:
Prof. John Beattie - Rowett Institute of Nutrition and Health
Prof. Joerg Feldman & Dr. Andrea Raab – Department of Chemistry
Prof. Graeme Nixon - Institute of Medical Sciences
Zinc deficiency in vascular health and disease

Objective: To demonstrate whether zinc deficiency can influence the development of cardiovascular disease
Zinc deficiency in vascular health and disease

Big health problem – requires multiple approaches, different skills:

Each member of the team has unique expertise:

Prof. Kwun (Andong) –
Zinc deficiency and vascular calcification

Prof. Beattie (Aberdeen) –
Molecular physiology of zinc deficiency affecting vascular health

Prof. Feldmann, Dr. Raab (Aberdeen) –
Chemical speciation of metals in health and disease

Prof. Nixon (Aberdeen) –
Blood vessel function in cardiovascular disease
Funding and Reporting Mechanism

National Research Foundation

Andong National University

Exchange Rate Variable

Aberdeen University
## Rules and Expectations

<table>
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<tr>
<th>ROK/NRF/ANU</th>
<th>UK/UoA</th>
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</thead>
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<tr>
<td><strong>Academic Year</strong></td>
<td>Mar-Feb</td>
</tr>
<tr>
<td><strong>Financial Year</strong></td>
<td>Jan-Dec</td>
</tr>
<tr>
<td><strong>Subcontract</strong></td>
<td>None</td>
</tr>
<tr>
<td><strong>Grant Start</strong></td>
<td>Immediate</td>
</tr>
<tr>
<td><strong>Student Payment</strong></td>
<td>Flexible and capped</td>
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<tr>
<td><strong>Incentives</strong></td>
<td>Included</td>
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<tr>
<td><strong>Procurement</strong></td>
<td>By Credit Card</td>
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<tr>
<td><strong>Fund transfers</strong></td>
<td>Restricted</td>
</tr>
<tr>
<td><strong>Outcomes</strong></td>
<td>Time Limited</td>
</tr>
<tr>
<td><strong>Intellectual Property</strong></td>
<td>Shared Ownership</td>
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<tr>
<td><strong>Reporting Date</strong></td>
<td>End October</td>
</tr>
<tr>
<td><strong>Science Reporting</strong></td>
<td>Annual: Peer Reviewed</td>
</tr>
<tr>
<td><strong>Financial Reporting</strong></td>
<td>Annual: Exact Amount</td>
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</tbody>
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Grant Lead Times
NRF GRNP Grant: Year 1

Aberdeen University

- Award
- Ph.D. Student Recruitment
- Start of Academic Year: Students Start
- First Grant Report Due
- First Financial Report Due

Andong National University

- Award
- Ph.D. Student Appointed
- First Grant Report Due
- First Financial Report Due
Impact of NRF Capped Stipend at Aberdeen University

Negotiations with 3 Heads of School at Aberdeen University: RINH, Dept. Chem., IMS Almost €100k

Costs per Ph.D. Student
Aberdeen:
Fees: €4,300/year
Stipend: €14,500/year
Total: €18,800/year

Andong:
Fees: None
Stipend: €9,200/year
Total: €9,200/year
Project Management

- Meetings (most participants) twice per year
- Additional meetings between partners
- Travel budget small so need to find extra funds
- Seek additional funding for workshop
- Reporting requires submitted publications
- Accounting requires purchases by November
- Successful management required understanding and flexibility on the part of UoA, ANU and NRF
Outcomes

• Over 20 joint peer-reviewed publications in international Journals
• At least 8 further papers expected from NRF-funded work
• Knowledge exchange and knowledge transfer (research)
• Knowledge transfer (public)
Example Publications


Mascall KS, Small, GR, Gibson, G & Nixon GF. Sphingosine 1-phosphate-induced release of TIMP-2 from vascular smooth muscle cells inhibits angiogenesis (under revision)


Thank You!