

Nanotechnology Industry Roadmap, Dublin, November 10th 2005

Collaborative Research Opportunities in Nanotechnology for SMEs

Jenny Melia, Industrial Technologies, Enterprise Ireland

Jenny.melia@enterprise-ireland.com, 01-6082404

Overview

Finding the research opportunities

The low hanging fruits: accessing available technologies

SME National & International Case studies

Local and National Nanotech

Local: Is there nanotech R&D ongoing in the local IT/research institute? In what areas?

National: Find out more via Enterprise Ireland Industrial Technologies (www.indtech.ie) and the Irish Nanotechnology Association (www.nanotechireland.com)



Fast track to innovation-low hanging fruits

- Several nanotech projects are funded annually throughout Ireland by EI whose aim is to commercialise the technology
 - ◆ Nanomaterials, (nanostructures, nanotubes, quantum dots), electronics, diagnostics, high performance plastic, photonics)

- Commercialisation activities
 - ◆ Technology facilitator
 - ◆ Networking events – EI, INA

Commercialisation Fund - Proof of Concept

- Epoxy materials reinforced with carbon nanotubes. Funded by EI and IP retained by TCD
- Technology being trialed by an Irish SME in their polymer materials for a number of products – Innovation Partnership Programme
- Successful and cost effective = licensed from TCD

Advantages: Technology basics proven in university, Innovation Partnership scheme for follow up R&D, potential to develop new products

Commercialisation Fund - Technology Development

- TCD team produces a specific silver nanoparticle
- Nanoparticles + antibodies = rapid, very sensitive diagnostic test
- Patent filed and technology was introduced by TCD to several diagnostic companies. Two SMEs are evaluating the technology.
- Technology moved into disease markers - cardiac
- **Advantages: Rapid user-friendly technology, platform technology for POC diagnostics**

Innovation Partnership

- University and company working together
- EI covers X% of research costs (up to 190K)
- Nanomaterials, nanocomposites, electronics
- Two parts 1. feasibility 2. main programme
- **Electronic and polymer applications.**
- **Advantages: Technology specific to your company, IP pre-negotiated, paperwork light, open call**

EU funded R&D Programmes

- Four year programmes
- Wide range of project schemes
- Budget for NMP was €1.4B (€3-4B)

- Two examples:
 - ◆ CRAFT in polymer nanocomposites - 4 SMEs
 - ◆ STREP in nanotube technology - 4 SMEs

FP5 CRAFT Project - completed

- Consortium – 6 partners (4 SMEs, 2 Institutes) €1M.
- Polymer nanocomposite technology
- IP arrangements agreed at start
- SMEs worked independently of each other with the institutions

- **Advantages: SMEs own IP, institutes are paid to deliver a research service**

FP6 STREP project - underway

- Nanotube research with 2 high tech start-ups, 1 nanotech SME & established SME – aim to introduce NTs into one of their products.
- Runs for 36mths, 13 partners, €3M
- Exploitation manager tracking the industrial requirements and SMEs will trial results in their products.

Advantages: Exposure to researchers who are leaders in their field, results are hot off the press, technology to develop further on conclusion of the project.

Other EU project opportunities

- **Integrated project** - industrial partners can join over the course of the project lifetime
- **Marie-Curie scheme** – companies take researchers in-house to work on a project for up to 2 years. EU will cover the researcher's cost. Scheme open early next year. Contact Siobhan Harkin in IUA. Could be any technology not just nanotech.....
- **EUREKA** - collaborating with companies abroad

Summary

- Numerous schemes to undertake nanotech R&D
- R&D capability in-house & funding available
- Talk to us in EI – either through DA or directly
 - ◆ Jenny.melia@enterprise-ireland.com
 - ◆ Robert.flood@enterprise-ireland.com
 - ◆ Colin.pope@enterprise-ireland.com
 - ◆ IUA (Marie Curie): Siobhan.harkin@iua.ie