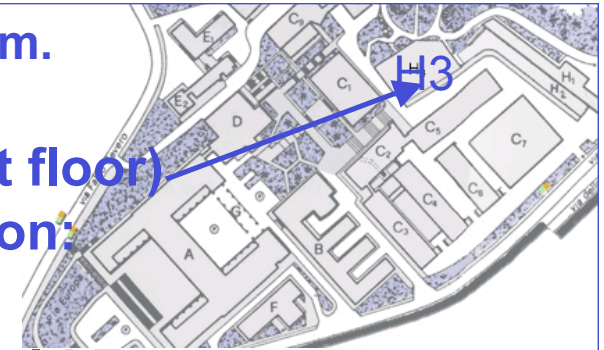




Monday 28 May 2007, 4.00- 6.00 p.m.
University of Trieste
Building H3, Lecture Room 1A (first floor)
Special International Presentation:



HIGHLIGHTS of the G8-UNESCO World Forum
on 'Education, Research and Innovation: New Partnership for
Sustainable Development', held in Trieste, May 2007
(In English) All students, researchers, lecturers are cordially invited

Program

- 16,00 Introduction: Education-Research-Innovation - **Gianrossano GIANNINI (TS/Italy) (10')**
- 16,10 Why UNESCO? Why Africa? Why Trieste?- **Paolo ALESSI (TS/Italy+UNESCO) (10')**
- 16,20 Education in the Knowledge-Based Society - **Gabriele GARBIN (TS/Italy+UNESCO)(10')**
- 16,30 Environment: Global Challenges - **Gianrossano GIANNINI (TS/Italy) (10')**
- 16,40 Innovation and Society - **Rachel OBED (Nigeria+ICTP) (10')**
- 16,50 Sustainable Development and Health - **Omer A. Ali (Sudan+ICTP) (10')**
- 17,00 Sustainable Development and Energy - **Gabriele GARBIN (TS/Italy+UNESCO) (10')**
& Anna Maria Novello (TS/Italy) (5')
- 17,15 Research and Innovation: Role of Governments-**Patrizia TIBERI VIPRAIO (UD/Italy))(5')**
& Rachel OBED (Nigeria+ICTP))(5')
- 17,25 Knowledge and Sustainable Development **Gianrossano GIANNINI (TS/Italy) (10')**
- 17,35 Science/Technology/Innovation: Perspectives for Africa-**Elie SIMO (Cameroon+ICTP) (15')**
- 17,50 Knowledge for Sustainable Development:The future **Patrizia TIBERI VIPRAIO(UD/Italy)(10')**
- 18,00 End

Innovation and Society

Rachel I. OBED
ICTP, Associate



HIGHLIGHTS of the G8 – UNESCO World Forum – University of Trieste, 28 May 2007

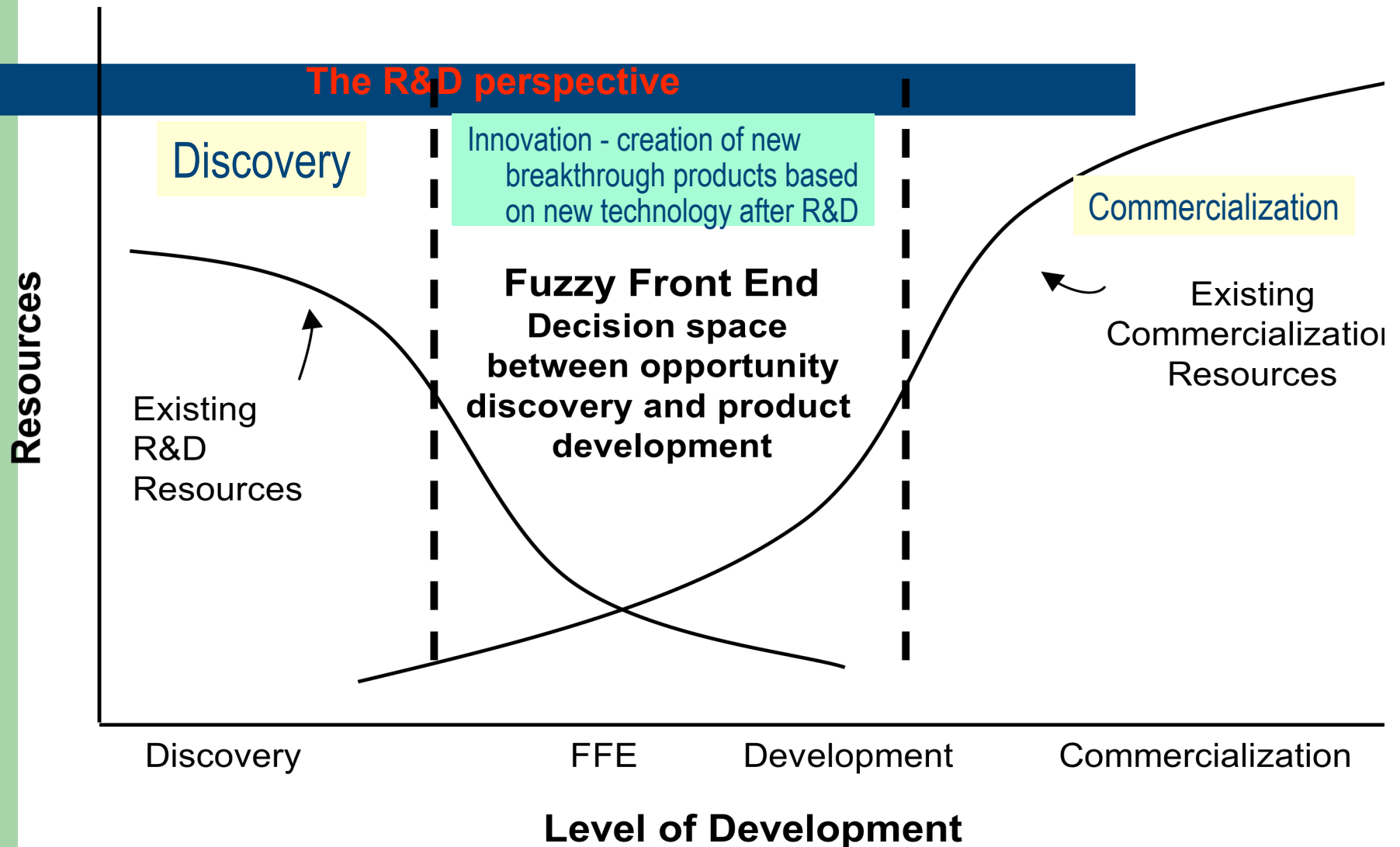
OUTLINE

- Introduction
- Governance of Emerging Technologies to Enhance Innovation (Milhail C. ROCO, NSF)
- Science and Innovation (Robert AYMAR, CERN)
- Innovation, knowledge competitiveness and development (Bruno LANVIN, WORLD BANK)
- Conclusion

Introduction

- **Research is the transformation of money into knowledge;
Innovation is the transformation of knowledge into money**
– Geoff Nicholson/ 3M
- Need – technology – scientific discovery
- Skilled people – interactive scientific and industrial environment
- A significant number of today's big industries are relative newcomers

Governance of Emerging Technologies to Enhance Innovation (Milhail C. ROCO, NSF)



Converging New Technologies

Implications

- Expanding human cognition and communication
- Improving human health and physical capabilities
- Enhancing societal (individual, group) outcomes, including new products and services
- Changing societal relationships, including reshaping
 - policies for R&D investments and infrastructure,
 - models for organizations and business
 - risk governance for innovative technologies
- Personal security
- Unifying science and education

INNOVATION AND SOCIETY

- SPECIFIC RISKS INDUCED BY EMERGING TECHNOLOGIES:
 - Increased technology complexity and uncertainty in comparison with traditional technologies
 - Increased importance of societal implications which may not be known at the release of the technology etc.
- HOW TO STRENGTHEN THE INNOVATION CULTURE?
 - Support “foundations”: knowledge, tools, education, organizations, partnerships
 - “Bridging” diverse ideas: converging technologies, fostering R&D platforms etc.
- HOW TO ACCELERATE INNOVATION AND RAISE CITIZENS’ INCLUSION AND PARTICIPATION?
 - Citizen participation in international debates and decisions etc.

Great Challenges in Science and Innovation

(Robert AYMAR, CERN)

- Fundamental science attracts the best scientists from everywhere
- Particle Physics at CERN, a data-intensive science requiring novel technologies
- WWW 15 years ago, Data Grids, e-Science now – revolutionary technologies
- “Open Access”, networked e-Repositories: realising today’s library of Alexandria?

Innovation in Industry

- A new idea, device realised and exploited
- Catalysts:
 - Customer needs, competition, science base
- Recipe of “innovation leaders”:
 - Excellent research
 - Promote, support interaction of science and industry
- “Greater” challenges (climate, food, health...)?
 - Governments prefer national or local challenges
 - Industry’s interest is short -term and profit-driven

Innovation, knowledge competitiveness and development (Bruno LANVIN, WORLD BANK)

Main conclusions

- Information is the core engine of globalization
- The digital divide is less about equipment and technology than about content and value
- In a global information economy, winners will be 'permanent innovators' and 'continuous learners'
- All economies (not just the most advanced) will strive to be knowledge economies
- This phenomenon will put human resources back at the center of competition and development
- In this new world, all stakeholders will need to consider accepting new roles (private/public, producers/consumers, importers/exporters) and fundamental concepts will need to be revisited (usage/property, e.g.)

The ABC of e-competition

- **Access**
 - Infrastructure, costs, competition/regulation
- **Basic skills**
 - Basic education, vocational training, entrepreneurship
- **Content**
 - Local value, languages
- **Desire**
 - Local will to reform, adapt and change
- **Excellence**
 - In-source knowledge, outsource high costs, retain excellence

Conclusions

- Innovation follows scientific discovery
- Information and Communication Technologies:
 - Enhance collaboration
- Improve the science/engineering base in less developed countries:
 - collaboration with G8 universities using ICT
 - Address common goals, share knowledge
- G8 and less developed countries together:
 - Bridge the digital divide!

**Thank you
for your attention!**

Grazie mille

Friday, 11 May

Sustainable Development and Health

How to develop integrated healthcare approaches that can meet the challenges of the 21st century, arising from aging populations, environment deterioration and possible global pandemics?

Identify issues related to intellectual property and health care, including impact on developing countries. Identify critical areas of research, e.g. bio-nanotechnology, biomolecular medicine, genetic engineering, telemedicine and new cancer therapies.

Chair



Professor Phyllis PITT-MILLER
Dean
Faculty of Medical Sciences
THE UNIVERSITY OF THE WEST
INDIES

Eric Williams Medical Sciences Campus
TRINIDAD & TOBAGO

Rapporteur



**Prof. Dr.
Nouria LAKHDAR-GHAZAL**
Head Neuroscience Unit and
Group of Research on Biological
Rhythms - Faculty of Science

Mohammed-V University MOROCCO

Keynote Speakers



Dr. Aristides PATRINOS
President
Synthetic Genomics, Inc.
U.S.A.



Dr. Pratap C. REDDY
Founder and Executive
Chairman
Appolo Hospitals Group
INDIA



Dr. Giorgio TAMBURLINI, MD
Research Director
and Paediatrician
Institute of Child Health IRCCS
"Burlo Garofolo" TRIESTE



Dr. Francisco E. BARALLE
Director-General International
Centre for Genetic Engineering
and Biotechnology (ICGEB)
TRIESTE