



ORGANISATION FOR ECONOMIC
CO-OPERATION AND DEVELOPMENT

OECD EXPERT WORKSHOP ON KNOWLEDGE MARKETS IN LIFE SCIENCES

**To be held at the National Academy of Sciences,
2100C Street, NW, Washington DC, United States**

16-17 OCTOBER 2008

OECD EXPERT WORKSHOP ON KNOWLEDGE MARKETS IN LIFE SCIENCES

16-17 OCTOBER 2008

In the health sector, new mechanisms are emerging to trade an increasing variety of intellectual assets (*e.g.* data, materials, expertise, services). Such “knowledge markets” facilitate knowledge creation and may increase the speed and efficiency with which health-related research is translated into innovative goods and services. The purpose of the Workshop is to explore whether Knowledge Markets could be more broadly used and to identify what governments may need to do to help make such new markets become a reality. The workshop will: (1) explore what “Knowledge Markets” are, through theoretic as well as real world examples of exchange mechanisms; (2) understand what are the business, economic and policy incentives behind the creation of knowledge markets in the life sciences; (3) identify what sort types of health data, information, and know-how could create greater added-value if more easily exchanged or traded; (4) discuss what impacts knowledge markets have on biomedical innovation and health outcomes; and (5) discuss the factors that influence their development and their possible application beyond the health sector.

This workshop is the first policy meeting to consider what new exchange mechanisms – and especially markets – are being experimented with in the life sciences in order to improve access to and use of the vast amounts of data, knowledge and information created in the biomedical sciences. What is new here is the attempt to understand how financial pressures in the biomedical industries are dove-tailing with public policy priorities and not-for-profit/not-for-loss business models which deliver greater access to intellectual assets. The workshop will bring together expertise from academia and public research organisations, health and IT industries, the venture capital and institutional investor community, non-governmental organisations, as well as policymakers. They will debate whether not only knowledge markets improve innovation efficiency but also whether they are creating new business opportunities and business models.

Participants: The workshop will include international speakers and participants from the policymaking, business and research communities from the 30 OECD countries and beyond. It will increase awareness among policymakers about new trends in organising access to data, knowledge, and information in the life sciences and provide a typology of knowledge markets. It will show how the research infrastructure is evolving and help governments understand how their policies can influence the emergence of knowledge markets, as well as explain why they may want to do so.

OECD Outputs: The workshop will deliver actionable recommendations for discussion by OECD governments about the policies that influence the creation of knowledge markets in the health sector. The OECD has broad expertise in a number of areas related to knowledge markets including: collaborative mechanisms for access to intellectual property, intellectual asset valuation, knowledge flow measurement, data on public research licensing behaviour and guidelines on good licensing practices, new models for organising research in health innovation. Based on the workshop discussions, the OECD will produce a Chairman’s summary of the main policy messages in 2008 and a Policy Report in 2009. These will be discussed and agreed by OECD countries through the OECD Working Party on Biotechnology.

OECD EXPERT WORKSHOP ON KNOWLEDGE MARKETS IN LIFE SCIENCES

**National Academy of Sciences, 2100 C Street, NW, Washington
DC, United States**

16 – 17 OCTOBER 2008

DRAFT PROGRAMME

THURSDAY, 16 OCTOBER 2008

09:00

Morning Chairman – Dominique GUELLEC, Directorate for Science, Technology and Industry, OECD

Introductory Remarks : *Richard JOHNSON, Arnold & Porter, CEO Global Helix LLC, United States*

09:15–10:45

SESSION 1: Intellectual Assets in Health: Current Inefficiencies and Future Trends

What are the intellectual assets of the health and biomedical sector? How are these identified, reported, valued and exploited? Are there inefficiencies in the way existing intellectual assets are used in the health sector? Are certain intellectual assets under-used or under-shared? This session will give an overview of the types of knowledge, be it data, products, know-how or networks for which the existence of a knowledge market would open new commercial possibilities for both the suppliers and users.

Underused and Undershed knowledge in bio-medicine	Fiona MURRAY, MIT Sloan School of Management, United States
Breaking the Rosetta Stone: Patient Data as the Key Asset to Accelerate Medical Research	Greg SIMON, President, FasterCures, United States
Intellectual assets and Information Asymmetry in the BIO and Pharmaceutical industries	Jonathan KLEIN-EVANS, MedImmune, United States
What is new about Markets for Technology: The recent Business and Economics Literature	Ashish ARORA, Carnegie Melon University, NBER, United States

10:45 – 11:15 COFFEE BREAK

11:15 – 12:30

SESSION 2: Knowledge Markets in Theory and Practice – What are they and what do they do?

How are Knowledge Markets defined and how do these modes of organisation improve the management and exploitation of different intellectual assets? What types of knowledge markets exist already and in which industries? What lessons can be drawn about their applicability to the health sector? This session will explore the different modes for making available, valuing and trading knowledge and information including: warehouses, clearinghouses, auctions, brokerages, pools. It will draw on the experiences in other sectors (e.g., information technology, engineering IP, journalism).

What are Knowledge Markets? Problems and Paradoxes	Brian KAHIN, University of Michigan, and Computer & Communications Industry Association, United States
Tapping a Network: Approaches and Applications	Alph BINGHAM, Co-Founder and Member Board of Directors, InnoCentive, United States
Intellectual assets – creating national wealth in the 21st century	Claude RUBINOWICZ, Chief Executive, Agency for Public Intangibles of France (APIE), France

12:30 – 14:00 LUNCH

14:00 – 15:15

Afternoon Chairs – Stephen MERRILL, National Academy of Sciences, United States and Bénédicte CALLAN, Directorate for Science, Technology and Industry, OECD

SESSION 3: What is the Policy interest in Knowledge Markets for Health?

Why is the emergence of knowledge markets in health of interest to OECD countries and beyond? What are the potential economic spill-overs or contributions to public health that knowledge markets can help achieve?

Reduced Drug Development Costs and Improved Clinical Care	Joe FECZKO, Chief Medical Officer, Pfizer Inc., United States
Applying Genomics to Health care: Drug development, treatment avoidance	Sam ABRAHAM, Vice President Strategic Relations, BC Cancer Agency, Canada
The TI Pharma Strategy	Willem de LAAT, Managing Director, TI Pharma, The Netherlands

15:15–16:45

SESSION 4: Existing Infrastructures for Knowledge Pooling and Sharing

A variety of “pre-competitive” consortia in the life sciences have recently been created – many of these with the involvement of the NIH/NCI in the US. These seek to pool research results, and in some cases, even create standards for use in regulatory approval processes. What can be learned from present experiences? What knowledge resources that were once proprietary are being shared more broadly? What arrangements appeal to the private sector?

Overview of NCI/NIH initiatives for knowledge access and use	Ken BUETOW, NCI Chief Information Officer, Director of the Centre for Bioinformatics, United States
Collaborative Knowledge Networks for Physicians	Iwan von WARTBURG, University of Hamburg, Germany
Clinical Trials: registration, results reporting and data sharing	Jerry SHEEHAN, National Library of Medicine, United States
The Biomarkers Consortium and the Genetic Association Information Network	David WHOLLEY, Director, Biomarkers Consortium, United States

16:45 – 17:15 **COFFEE BREAK**

17:15 – 18:00

SESSION 5: Niche Brokering: Finding New Users for Old Knowledge

This session will discuss how proprietary knowledge that has no immediate value to the owner (for example older molecules or failed clinical trial data) can find new markets or can be repurposed, shared and exploited, for different uses or markets leading to new products and services. Services are emerging to match the holders of such knowledge with those that have a new use for it. What are the challenges niche-brokers have to address? Is such brokering become more common; is there data on the frequency of its use; and is it scalable?

Repurposing Technologies with low NPV for Infectious Disease treatment	Wendy TAYLOR, Founder and Vice President of Strategy and Operations, BIO Ventures for Global Health, United States
How Pharmacogenetics may bring new life to failed drugs	Wayne ROSENKRANS, Chairman, Personalized Medicine Coalition, United States

18:00-20:00 **COCKTAIL FOR ALL PARTICIPANTS**

FRIDAY, 17 OCTOBER 2008

09:00 – 10:30

Morning Chairman – Lisa DROUILLARD, Health Canada, Canada

SESSION 6: The Future of Knowledge Markets: Opportunities and Challenges

(Moderated panel discussion)

Looking forward, what are the factors pushing or impeding the greater exchange of knowledge in the health sector? In some cases the competitive value of the data to the owner prevents it from being shared or traded without the appropriate incentives or regulation in place. In other cases, operational difficulties such as asset valuation, interoperability of data, and information asymmetries make data pooling difficult. What types of data, information and knowledge might be ripe for pooling or exchange and what types are unlikely to ever be? What is pushing the creation of knowledge markets forward?

The Future of Sharing access to compound Libraries	Paul WYATT, Director of Drug Discovery, University of Dundee, United Kingdom
Algorithms, data structures and web computing for data mining in Biomedicine	Jonas ALMEIDA, Dept of Bioinformatics and Computational Biology, University of Texas, MD Anderson Cancer Center, United States
Pooling toxicology Data and Drug screening tests	Frederico GOODSID, Office of Clinical Pharmacology, FDA, United States

10:30 – 11:00 COFFEE BREAK

11:00 – 12:15

SESSION 7: Application of Knowledge Markets beyond Health

Just like the greater exploitation of knowledge can create added value and increase efficiency in drug development and health outcomes, so too might the trading and sharing of knowledge create greater value along the industrial biotechnology value cycle, or foster innovation in the development of synthetic biology. This session will explore where and how knowledge markets are applicable in biotechnology sectors beyond health.

A Knowledge Market Prototype: From Conception to Execution	Wolfgang MAASS, Director of the Research Centre for Intelligent Media, Hochschule Furtwangen University, Germany
Knowledge Markets and IT in the Life Sciences	Sylvia SPENGLER, Division of Information and Intelligent System, National Science Foundation, United States

12:15 – 13:45 LUNCH

13:45 – 15:00

Afternoon Chairman – Anita EISENSTADT, Office of Science and Technology, Department of State, United States

SESSION 8: What are the Forces and Incentives Facing Knowledge Markets

(Moderated panel discussion)

What are the trends in the valuation of pharma/biotech knowledge and what is the impact on knowledge management? What pressures, financial or otherwise, are driving the creation of markets for knowledge intensive intellectual assets and what are the challenges? Is better knowledge management important in valuing companies? What interests do scientists, investors, policy makers and the industry have to increase valuation, access to and interoperability of knowledge assets?

Measurement, reporting and valuation of intellectual assets: The Investor view	Alexander WELZL, European Coordinator, Commission on Intellectual Capital, European Federation of Financial Analysts Societies (EFFAS)
Intellectual Capital Reporting – Two business cases from Healthcare and Bio-medicine	Michael KIMBROUGH, Harvard Business School, United States
Securitisation of Clinical Trials	Peter BROWN, SecureAid, United Kingdom

15:00 – 15:30 – COFFEE BREAK

15:30 – 16:30

SESSION 9: What can Governments do?

What can governments do to help the emergence of knowledge markets move forward? What might impede their creation? What is the role of competition policy, regulatory policy, accountancy standards, or the articulation of industry standards? Should governments encourage such structures or be involved in setting up prototypes?

Moderated panel discussion with a selection of representatives from across the OECD.

Bénédicte CALLAN	Directorate for Science, Technology and Industry, OECD
Lisa DROUILLARD	Health Canada, Canada
Bart WIJNBERG	Ministry of Health, Welfare and Sport, The Netherlands
Winston BAATJES	Department of Science and Technology, South Africa

16:30 – 17:00

Concluding Remarks