

The appropriation of public-funded research in the Bayh-Dole emulation

Conferência Internacional:

***Direito a saúde: O papel da Universidade
no acesso a medicamentos essenciais***

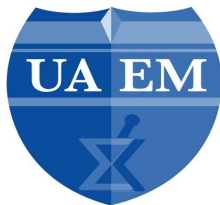
17 e 18 de Agosto, 2010

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at Harvard Law School**





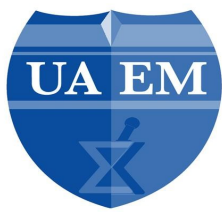
O lugar da inovação, pesquisa, responsabilidade social e transparência em nossas Universidades

The Place of Innovation, Research, Social Responsibility and Transparency in our Universities



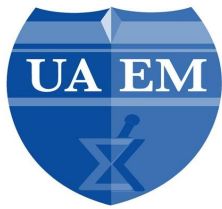
Main argument

- A2K is what **facilitates (traditional and open) innovation** in the information society
- The way we achieve A2K directly affects the amount of innovation and creation
- We need a mix of **open cyberinfrastructure and open licensing**, driven by **universities seen as public spaces and connectors to the individuals**, to maximize creativity and innovation from A2K.



Innovation Process

The innovation process has to be seen as a
complex and cumulative process
that needs a
complex and flexible environment,
where **all actors have the chance to interact**
and give their contribution.

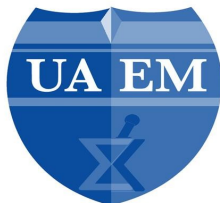


Emulating Bayh-Dole

“Traditional Innovation” - Intellectual Property serves as a primary measurement of innovation and a safe-guard to attract investment

= ...

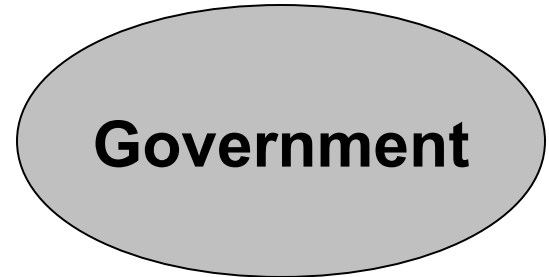
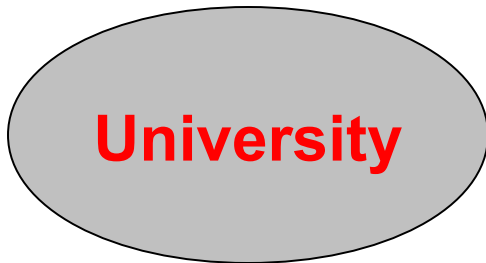
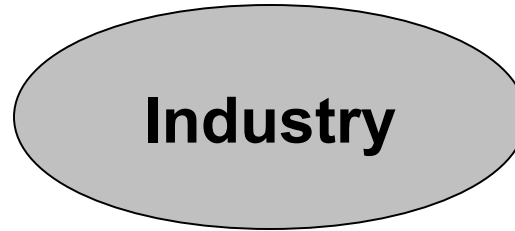
The Public Domain is being enclosed, by the replication around the word of Bayh-Dole Like innovation systems, **that privatizes knowledge produced with public-funding**



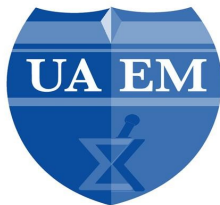
The Patent and Trademark Law Amendment Act 96-517 of 1980, more commonly known as the Bayh-Dole Act, is the legal framework for transfer of university generated, federally funded inventions to the commercial market place. Bayh-Dole “swept away the patchwork of individual agency-controlled IPAs and instituted a uniform federal patent policy for universities and small businesses under which they obtained the rights to any patents resulting from grants or contracts funded by any federal agency.”



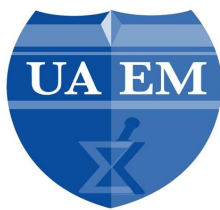
Actors in Traditional Innovation



connect these three together into a network for e-R&D



The legislation is intended to use patent ownership as an incentive for private sector development and commercialization of federally funded research and development (R&D).



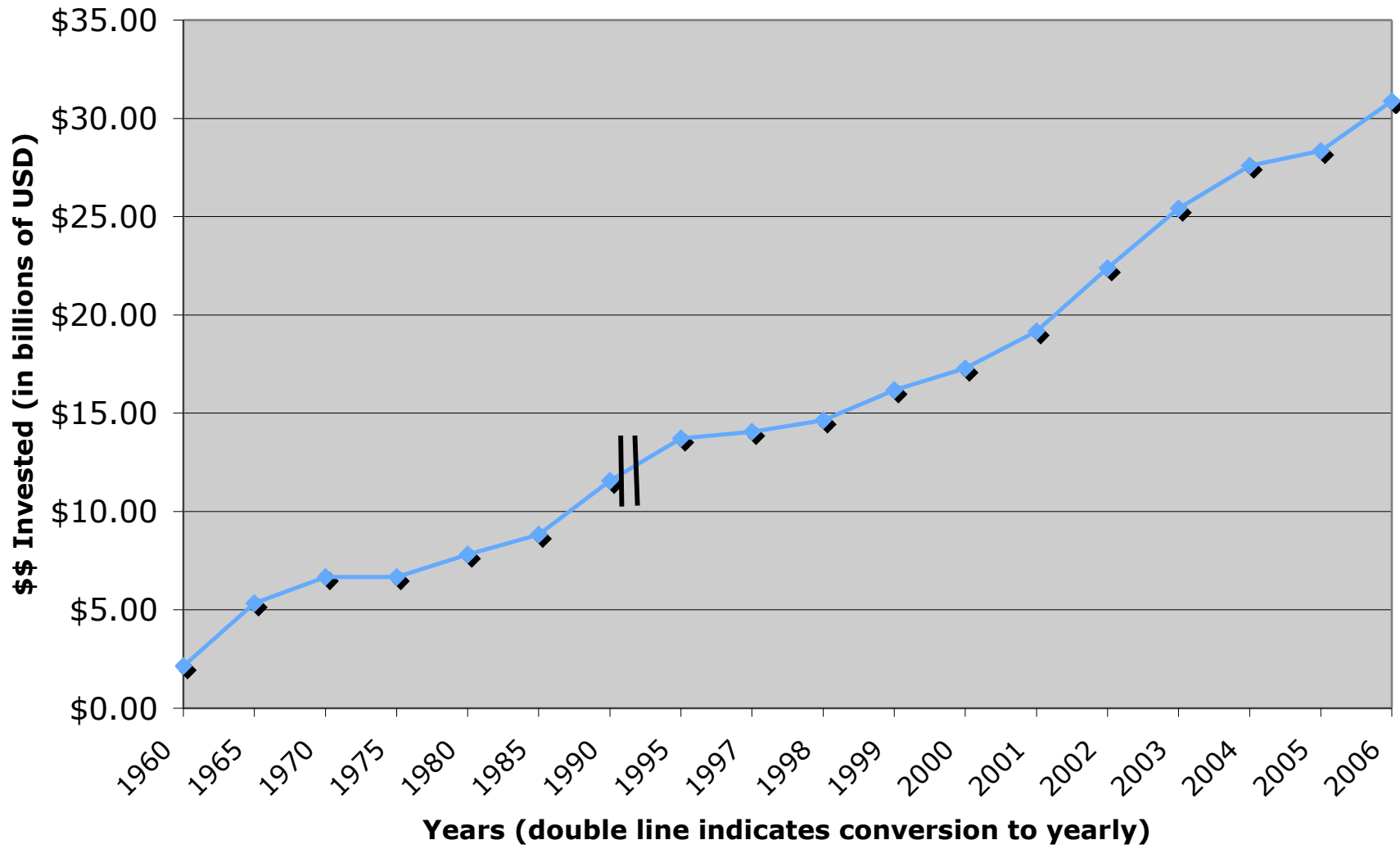
The University participation in technology innovation design and diffusion varies over time and sector. However, academics agree that “[o]ver the past century, American research universities have been extremely important economic institutions. In a range of industries, from agriculture to aircraft to computers to pharmaceuticals, university research and teaching activities have been extremely important for industrial progress. Most economic historians agree that the rise of American technological and economic leadership in the postwar era was based in large part on the strength of the American university system.”



- * The Bayh-Dole plays a problematic role by not drawing distinctions between inventions that lead directly to commercial products from the ones that are fundamental advances => tragedy of the anti-commons
- * sensitivity of importation to Universities of alien business cultures with profit-oriented approaches. The concerns of these critics are related to the possible impact of this cultural change
- * licensing practices may restrict the dissemination of academic research by leveraging the time of secrecy in order to avoid lack of patent novelty and/or the trigger of the statutory bar
- * concerns in relation to the effects of extensive patenting practice in some fields, such as biomedicine, and calling for peer-patent review mechanisms, affirm that it is probably incorrect to say that the Bayh-Dole, and the change in patent-ownership policies, had a positive or a negative impact in the innovation process.



R&D Funding to Universities





Perception of Relative Importance of Knowledge Channels (n=68)

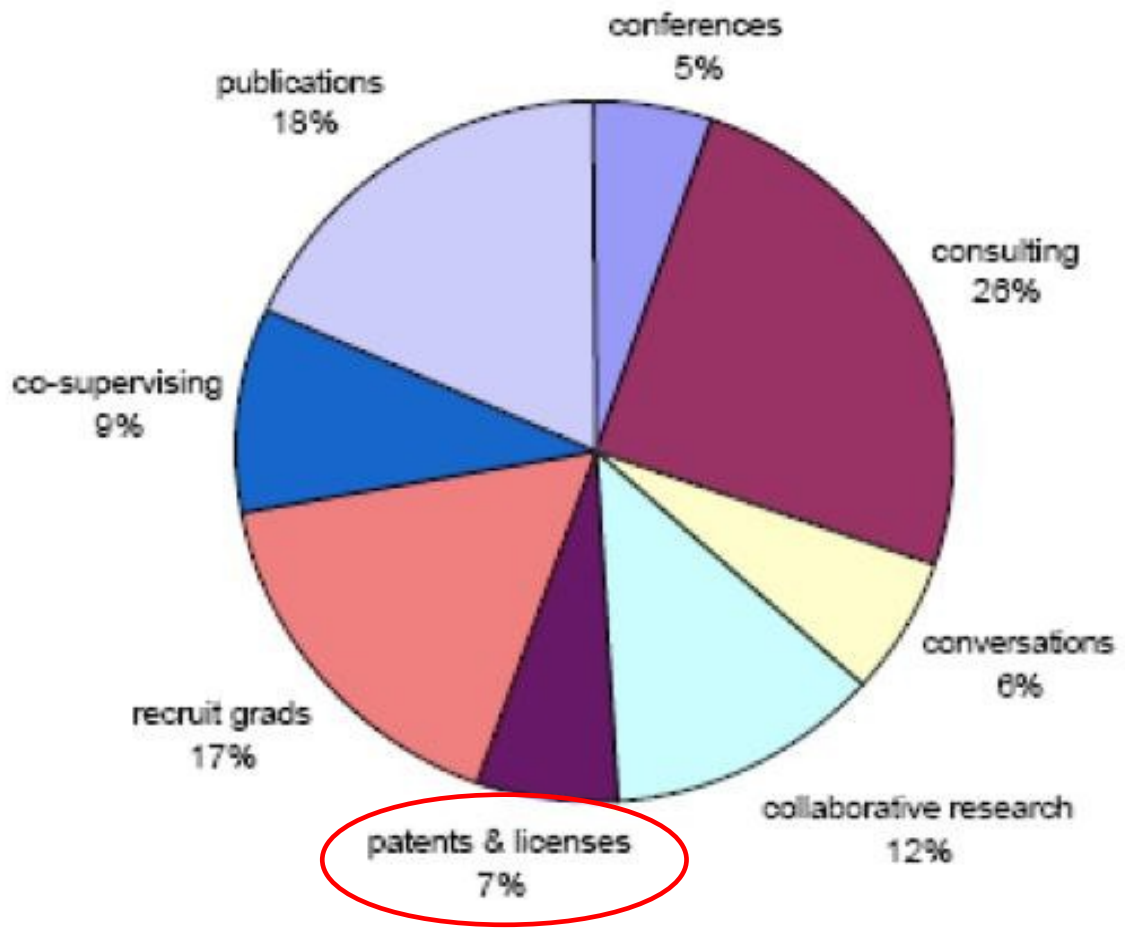
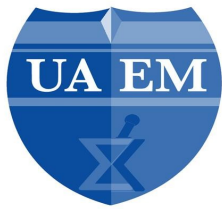




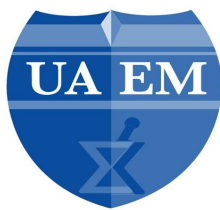
Table 1:
Importance to Industrial R&D of Sources of
Information on Public R&D (including
University research)

Information source	% rating it as “very important” for industrial R&D
Publications & reports	41.2%
Informal Interaction	35.6
Meetings & conferences	35.1
Consulting	31.8
Contract research	20.9
Recent hires	19.6
Cooperative R&D projects	17.9
Patents	17.5
Licenses	9.5
Personnel exchange	5.8

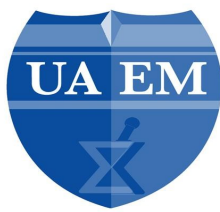


Is it working?

- North American academic research is **inconclusive in relation to the benefits of appropriation**
- **Complex internationalization** since developing countries may not present strong private equity markets, technology transfer community, or an entrepreneurial support system
- Patent Failure: "We find that the patent system **discourages investment in innovation by the average publicly traded** American firm."



- * The conception of an environment able to foster strategic horizontal partnerships among universities, science and technological institutes and companies.
- * Stimulus to the participation of science and technology institutions in the innovation process,
- * Norms to stimulate the researcher-inventor.
- * Encouraging innovation in the company.
- * Appropriation of knowledge under intellectual property rights:



European Commission

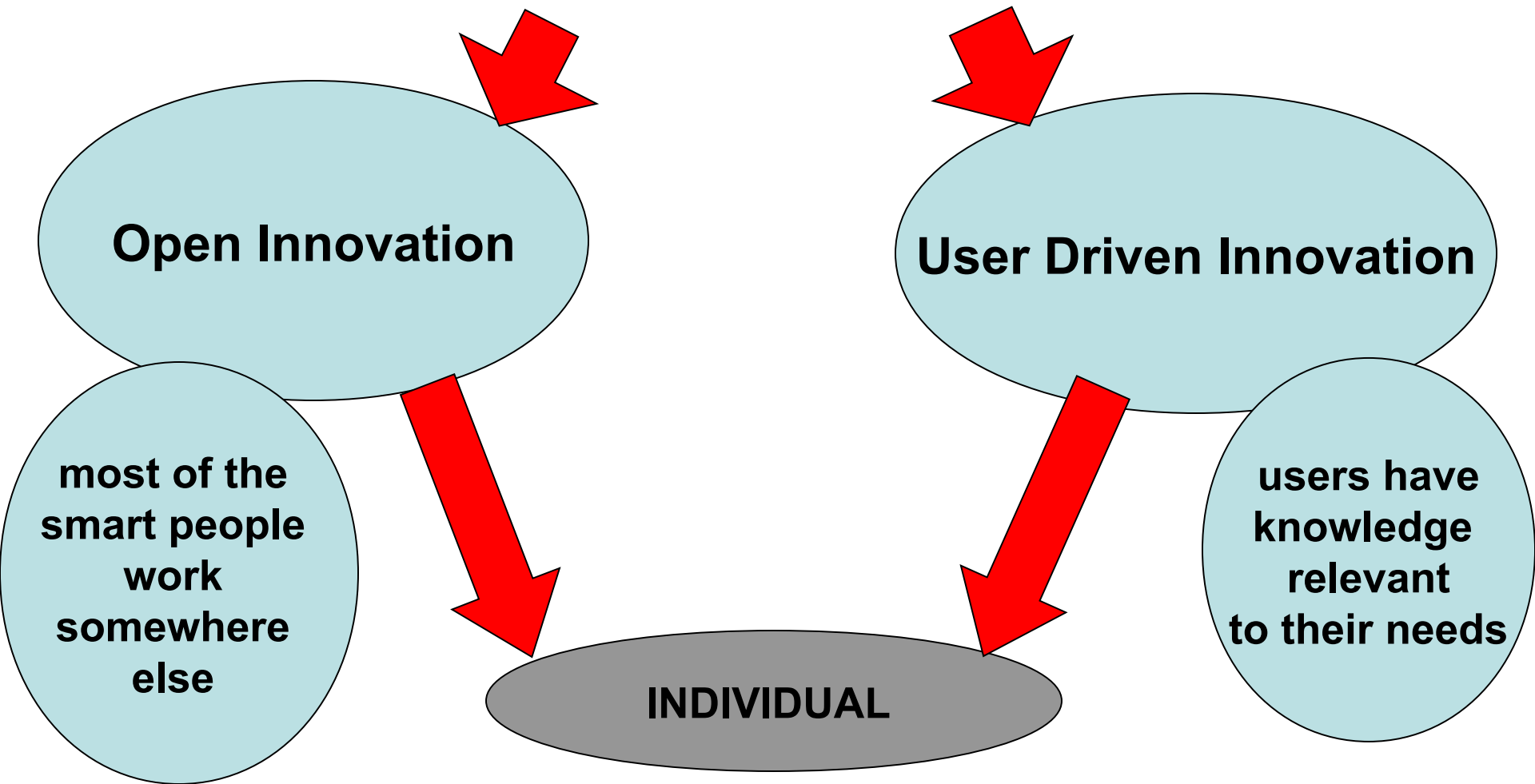
“Various ‘creative commons’ approaches (open access, open publications, open software,...) are increasingly endorsed by many universities. These mechanisms can ensure a more effective dissemination (...). It is therefore important to ensure that **researchers are aware of the benefits of both approaches and that decisions are made on the basis of socio-economic impact.**”

Improving knowledge transfer between research institutions and industry across Europe: embracing open innovation, Implementing the Lisbon agenda (2007)



Here comes everybody!

non-Traditional Innovation and the generative web



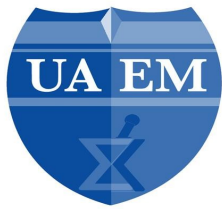


Examples

- From Brazilian peripheries (from freezers and pipes, to software, mobile content, Internet-based games and music in our telecenters);
- To African models of printing on demand and movies production and distribution models;
- To kitesurfing and Postgres SQL and NMR spectroscopy

What do they have in common?

the desire of the user to solve a local problem with local knowledge



What is needed for i-R&D?

- Cyberinfrastructure
- Low/No constraints to publishing and Open Access
- Research Exemption
- Cooperation
- Data-sharing



Open Cyberinfraestructure

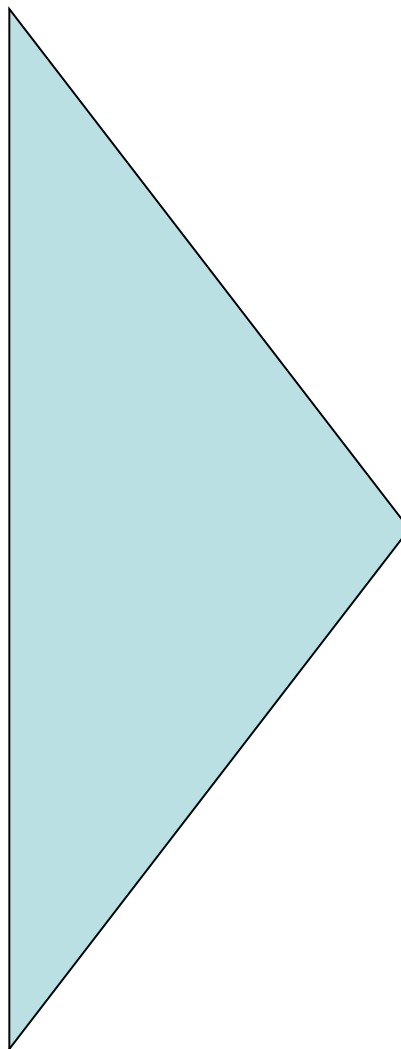
Federated

Open-source

Open-development

Open-access

(guarantee of interoperability)



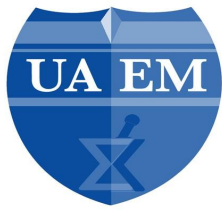
Improve
research
productivity and
enable
breakthroughs
not otherwise
possible



Open Access

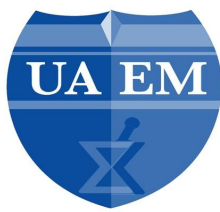
free availability to the public internet, **permitting users to read, download, copy, distribute, print, search, or link to the full texts of these articles, crawl them for indexing, pass them as data to software,** or use them for any other lawful purpose, **without financial, legal or technical barriers** other than those inseparable from gaining **access to the internet itself."**

(Budapest Declaration)



Benefits of (truly) Open Access Journals

- It's not free, it is freedom;
- Cost less for users;
- Grant re-use rights associated with "web culture";
- Innovation in distribution and publishing models;
- They are peer-reviewed;
- And yes, they have great index of impact results.

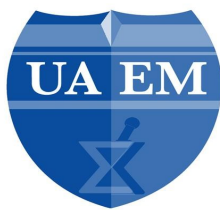


Role of University

sufficiently complex internal policy of intellectual property to **allow the open innovation and user-driven innovation models, that asks for **A2K strategies****

What brings together:

- user reinvention;
- economics of open source;
- open licensing;
- clear exceptions and limitations
- technologies of cooperation and collective action;
- cyber-infrastructure for national and international collaboration and;
- access to and transfer of knowledge in an open science context .



- * Universities should define policies and strategic planning based on patent valuation and peer-comment, to define what is worth patenting and what is not worth patenting.
- * Universities should be aggressive in term of negotiating publishing policy.
- * Since law interpretation may vary, Universities should contractually reconstruct research exemptions,
- * Universities should ensure access to research tools and enable the flow of materials that are not protected under IPRs, such as software and biological tools,
- * University (and the NITs) should do not forget to focus on the traditional role of University, improving the other channels of knowledge transfer
- * Universities should be careful in regard to policies defining ownerships of student creations, since these do not fit in the employee or contractor categories.
- * Universities should open the doors for the user-innovator, by calling the community to contribute to projects and research;
- * Exclusive licensing should be the last option.



Is it working?

Maybe

Maybe not

SAGE BIONETWORKS

GREENXCHANGE

OPEN DATA FOR ENERGY

ALZHEIMER'S

EFRCs



A call for Public Universities' action

University will need interlocking **governmental policies** that support infrastructure development for non-traditional innovation and social responsible approaches and a **legislative and judicial** compromise to bar the expansion of the Intellectual Property and Technological Protection Measures

Bringing back balance into the equation.



*"Thus, this book speaks.
It has a voice that allows
you to read yourself and
you are invited to
contribute to its writing."*

Pierre Lévy

Thank you!!!!

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