

# Accelerating Higher Education Expansion and Development Operation (AHEAD)



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**MINISTRY OF HIGHER EDUCATION  
AND HIGHWAYS**



**WORLD BANK GROUP**



**UNIVERSITY GRANTS COMMISSION**

## Assessment of DOR and RIC will be based on the total number of

- Research publications as journal articles
- Books
- Scientific communications, presentations at conferences
- Working papers
- Monographs by reputed publishers
- Patents
- Securing IP as copyrights and/or related rights, trademarks, industrial designs and commercialization of such IP with appropriate industries

# Outcome indicators of RDIC

- Developing research results into marketable products in partnership with the corporate world is an important step for universities to contribute to innovation and growth and for the country to move toward a UMIC economy.

# Research commercialization can be defined as

Work which:

- has a market value—someone is willing to pay for it and/or the intellectual property it represents
- is useful—it has a potential or realized application
- may involve a partner from ‘industry’ (any group which might apply the results of the work, such as a government department, non-profit organization, corporation or other commercial partner).

## Successful examples from the world on commercialization of IP with industry partnership

- A success story about the research at Hanoi University of technology, Viet Nam contributed to the economy  
<http://www.wipo.int/ipadvantage/en/details.jsp?id=3244>
- How a patent on polyacrylonitrile carbon fiber change an industry in Japan  
<http://www.wipo.int/ipadvantage/en/details.jsp?id=2909>
- An Indonesian scientist responded to socio-economic needs through a patent  
<http://www.wipo.int/ipadvantage/en/details.jsp?id=2616>
- Story from Zimbabwe on a smart use of patent on an automatic sadza cooking apparatus  
<http://www.wipo.int/ipadvantage/en/details.jsp?id=2536>

# Lessons from Australia for HEMS academics on commercialization



“The Council for the Humanities, Arts and Social Sciences (CHASS) exists to raise awareness of humanities, arts and social sciences (HASS) and their critical role in building the societies of the future”

The paper on “Commercialization of research activities in the humanities, arts and social sciences in Australia” by Toss Gascoigne & Jenni Metcalfe May 2005 can be downloaded using the link below

<http://www.chass.org.au/wp-content/uploads/2015/02/PAP20050501TG.pdf>

# Examples from USA

## Carnegie Mellon University

- Philosophy Department: licensed software to teach logic to a major textbook publisher. Visit <https://www.cmu.edu/dietrich/news/news-stories/2015/december/wilfried-sieg.html>
- Music Department: licensed a software for pacing the playing of accompaniment music to the player's tempo. <https://docs.google.com/viewer?url=patentimages.storage.googleapis.com/pdfs/US5913259.pdf>
- English Department: software for a text analysis environment with a suite of interactive visualization tools for corpus-based rhetorical analysis. <http://www.cmu.edu/dietrich/english/research/docuscope.html>

# Start-ups from Carnegie Mellon University

- E-learning platform to improve students' mathematics knowledge

<https://www.carnegielearning.com/>

- Build on-line education platforms

<https://www.insidehighered.com/news/2015/05/18/learning-house-acquires-carnegie-mellon-u-spinoff-acatar>

- Optimize learning

<http://acrobatiq.com/about/about/>

- A collaboration between English and Computer Science departments: a software for collective annotation of documents

<http://classroomsalon.com/>



# Intellectual property Tourism and Culture

Tourism is a major player in international commerce

- Eco-tourism: promoting environmentally friendly tourism
- Agro-tourism: touring farms providing cultural exchange opportunities
- Heath-tourism: treatment experiences combined with tourism
- Religious-tourism: pilgrimages to different religious sites

Create IP relevant for tourism to promote leisure, hospitality and culture based economic activities

## **Related Intellectual property:**

Trademarks, copyrights and geographical indications/appellation of origin

# Research towards a Green Economy

## **Environmentally sound technologies**

- Renewable energy
- Water purification
- Air purification
- Sewage treatment
- Environmental remediation
- Solid waste management
- eGain forecasting
- Energy conservation

## **Clean energy technologies**

- Biofuel
- Biomass
- Geothermal
- Hydropower
- Solar energy
- Tidal power
- Wave power
- Wind power

Green economy initiatives

<http://web.unep.org/greeneconomy/>

# Export Development Board

## Export Products & Services

- Sri Lankan Apparel
- Rubber & Rubber based Products
- Gem Diamond & Jewellery
- Aquarium fish
- Ceramic & porcelain products
- Floriculture products
- Plastic products
- Footwear and leather products
- Giftware & toys
- Handloom products
- Ayurvedic & herbal products
- Wooden products

- Ceylon Tea
- Coconut and coconut based products
- Food & Beverages
- Spices & Allied products
- Sea food
- Fruits and Vegetables
- Organic products

- Professional services (ICT, financial & accounting, legal outsourcing and construction services)
- ICT / BPO
- Electrical & electronics
- Printing & stationery products
- Boat and ship building
- Light engineering

# Sri Lankan traditional knowledge

Traditional forms of innovation consists of

- Traditional knowledge (TK)  
(traditional medicine)
- Traditional cultural expressions (TCE)  
(art, songs, handicrafts)
- Genetic resources (GR)  
(biological material that contains genetic material of value)

# India has compiled a database of traditional knowledge

- <http://www.tkdil.res.in/tkdil/langdefault/common/TKDLSearch.asp?GL=Eng>

→ [www.tkdil.res.in/tkdil/langdefault/common/TKDLSearch.asp?GL=Eng](http://www.tkdil.res.in/tkdil/langdefault/common/TKDLSearch.asp?GL=Eng)

 **Traditional Knowledge Digital Library** 

**Simple Search**

Representative 1200 Formulations

[Advance Search](#) | [TKRC Search](#) | [IPC Search](#)

Enter your query below:

with local names [Tips for Searching](#)

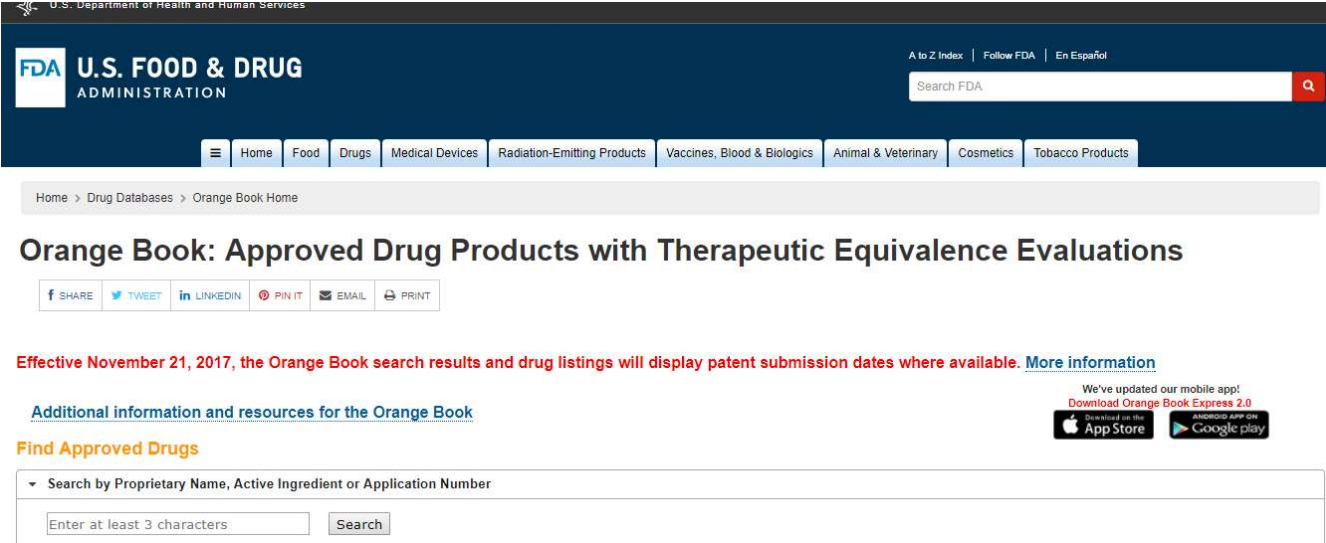
- Search using keywords with or without space entered within single quotes will not give desired results and the keyword would not appear highlighted.
- Search on multiple keywords without Boolean operator is not accepted for eg: "curcuma", "oil"
- Use of special characters (~!@#\$%^&) in search text box is not accepted.

Documents 1 to 10 of 50 matching the query "Aloe".

1. [MA3/693 Dawa-e- Ahmar](#)   
size 4653 bytes - 12/10/2009 9:09:11 PM GMT
2. [AT/15 Kanyasvarasa](#) 

# Orange Book: Approved Drug Products with Therapeutic Equivalence Evaluations

- US Food and Drug administration online orange book
- <http://www.accessdata.fda.gov/scripts/cder/ob/>



The screenshot shows the FDA Orange Book website. At the top, there is a dark blue header with the FDA logo and the text "U.S. FOOD & DRUG ADMINISTRATION". To the right of the header is a search bar labeled "Search FDA" and links for "A to Z Index", "Follow FDA", and "En Español". Below the header is a navigation menu with buttons for "Home", "Food", "Drugs", "Medical Devices", "Radiation-Emitting Products", "Vaccines, Blood & Biologics", "Animal & Veterinary", "Cosmetics", and "Tobacco Products".

Below the navigation menu is a breadcrumb trail: "Home > Drug Databases > Orange Book Home". The main heading is "Orange Book: Approved Drug Products with Therapeutic Equivalence Evaluations". Below this heading are social media sharing buttons for "SHARE", "TWEET", "LINKEDIN", "PIN IT", "EMAIL", and "PRINT".

There is a red text announcement: "Effective November 21, 2017, the Orange Book search results and drug listings will display patent submission dates where available. [More information](#)". Below this is a link for "Additional information and resources for the Orange Book".

At the bottom, there is a section titled "Find Approved Drugs" with a dropdown menu set to "Search by Proprietary Name, Active Ingredient or Application Number". Below the dropdown is a search input field with the placeholder text "Enter at least 3 characters" and a "Search" button.

On the right side of the page, there is a mobile app promotion: "We've updated our mobile app! Download Orange Book Express 2.0" with buttons for "App Store" and "Google play".

## Purple Book: Lists of Licensed Biological Products

- Purple Book: lists biological products, including any biosimilar and interchangeable biological products, licensed by FDA under the Public Health Service Act
- <https://www.fda.gov/drugs/developmentapprovalprocess/howdrugsaredevelopedandapproved/approvalapplications/therapeuticbiologicapplications/biosimilars/ucm411418.htm>

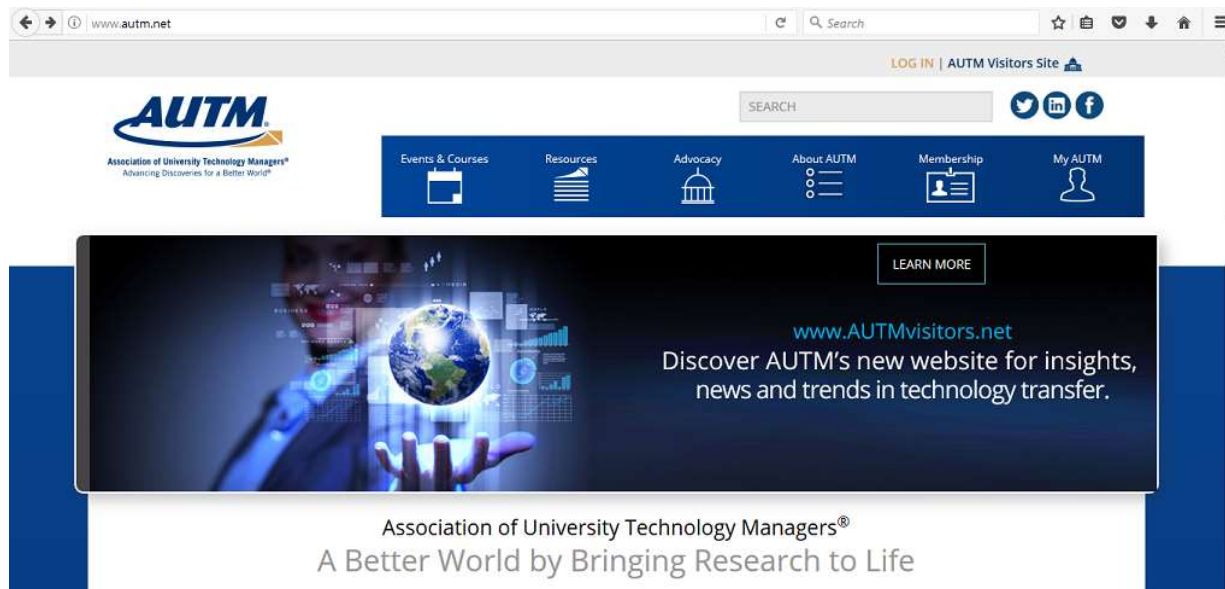
# Molecular biology related

- DNA patent database:  
<http://dnapatents.georgetown.edu/search/index.htm>
- Gene sequences:  
<http://www.lens.org/lens/bio/sequence>



# Association of University Technology Managers (AUTM)

www.autm.net



- AUTM better world projects: visit <http://www.betterworldproject.org>
- Latest university technologies available for licensing: visit <http://gtp.autm.net/>
- Templates such as material transfer agreements: under resources

**Thank You!**