UNITED NATIONS
الاسكوا
ESCWA

أكاديمية البحث العلمي والتكنولوجيا
Academy of Scientific Research and Technology

EXPERT GROUP MEETING ON INTELLECTUAL PROPERTY SYSTEMS IN THE ARAB REGION

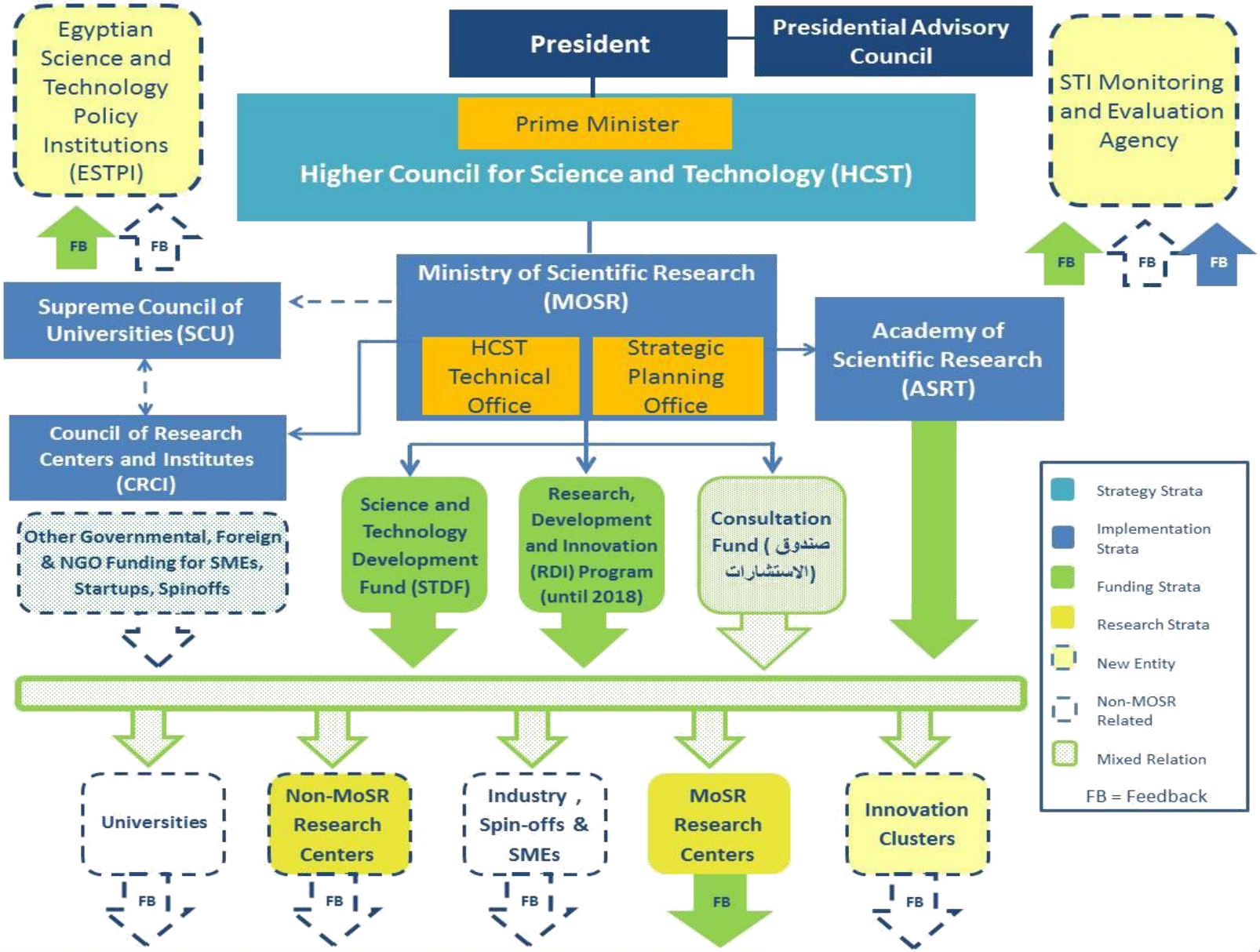
Experience of Egypt in technology transfer and IPR management

Prof. Mahmoud Sakr
President of ASRT, Egypt
msakr@asrt.sci.eg

Beirut, Lebanon, 17-18 April 2019

Contents

National STI Organogram



Better Science for Better Life

أكاديميـــة البحـــث العلمي والتكنولوجيا
Academy of Scientific Research & Technology

Vision:

أكاديمية وطنية فاعلة تتعاون مع باقى عناصر منظومة العلوم والتكنولوجيا والابتكار في تحسين وضع مصر العلمي والاقتصادي

Effective National Academy, cooperates with other entities of STI, to improve scientific and economic status of Egypt

Mission:

تهيئة بيئة مشجعة للعلوم والتكنولوجيا ودعم الدورة الكاملة للابتكار

Nurturing enabling environment for STI and supporting the complete cycle of innovation

nature
International journal of science

News

THE EGYPTIAN ACADEMY OF SCIENCES

A. M. MOSHARRAFA PASHA

Published online 04 May 1946

Abstract

EGYPTIAN men of science have for some time felt the need for establishing an academy of sciences in Cairo. So far the bulk of research work carried out in Egypt has been published in foreign journals or communicated to learned societies abroad. Although the Institut d'Egypte was founded in 1859 (reviving an older institute founded by Napoleon) and counts among its four sections one for Physical and Mathematical Sciences and another for Medicine, Agronomy and Natural History, its main tendency remained literary and artistic. Thus we find Osman Ghaleb Pasha (1845-1920), the biologist, publishing his work on the migrations of *Filaria rytipleurites* in the *Comptes rendus* of the Paris Academy in 1878. Previously Mahmoud El Falaki Pasha (1830-85), the astronomer and physicist, published his work on terrestrial magnetism in the Comptes rendus of the Paris Academy (1856) and the *Mémoires couronés et mémoires des Savants étrangers* of the Belgian Academy (1856).

Nature 1946

nature
International journal of science

Pakistan and Egypt had highest rises in research output in 2018

Dec.2018

Global production of scientific papers hit an all-time high this year, estimates show, with emerging economies rising fastest.

Emerging economies showed some of the largest increases in research output in 2018, according to estimates from the publishing-services company Clarivate Analytics. Pakistan and Egypt topped the list in percentage terms, with rises of 21% and 15.9%, respectively.

China's publications rose by about 15%, and India, Brazil, Mexico and Iran all saw their output grow by more than 8% compared with 2017 (see 'Countries with biggest rises in research output').

Globally, research output rose by around 5% in 2018, to an estimated 1,620,731 papers listed in a vast science-citation database Web of Science, the highest ever (see 'Research output rose again in 2018').

The figures might also reflect changes in how the database is curated, which has added more local or national journals to the mix. But some geographical regions, notably in Africa, are still under-represented, says Tijssen.

Increases in funding and international collaborations might also have boosted the rise in publications in Egypt and Pakistan, say Tijssen and Wagner.

Nature 2018

*Int. publications (38)

*GII (95)

*Academia- Industry

*Innovation Ecosystem

*Public Expenditures (0.72%) 1%

The International Journal
ENTREPRENEURSHIP AND SUSTAINABILITY ISSUES
ISSN 2345-0282 (online) http://jssidoi.org/jesi/
2017 Volume 5 Number 2 (December)
http://doi.org/10.9770/jesi.2017.5.2(3)

ENTREPRENEURSHIP AND SUSTAINABILITY CENTER

enterprise europe network
Business Support on Your Doorstep

CASPA Scopus Web of Science
Clarivate Analytics

Publisher
http://jssidoi.org/esc/home

REVIEW OF THE EGYPT SCIENCE AND TECHNOLOGY SYSTEM; SWOT ANALYSIS

Amr Radwan[1], Mahmoud Sakr[2*]

To achieve the aforementioned strategic objectives, ASRT action plan I (2015-2018) and II (2019-2022) pays too much attention to the following:

- ✓ Efficient National Network of technology transfer
- ✓ Public Network of Technological Incubators & Accelerators
- ✓ Establishing Egyptian STI Observatory
- ✓ Partnership through Co-funding and joint fund between national and international funding bodies & Public Private Partnership (PPP)
- ✓ Scientific Research Networks and Technological Alliances
- ✓ Recognition of Excellence in Science


InTILAc
TICO
Technology Innovation Commercialization Office
LISNG
علماء الجيل القادم
Scientists for Next Generation
EYAS
Knowledge
& Technology Alliances
womenUP
Time for Innovation
القاهرة تبتكر
Cairo Innovates
eib
بنك الابتكار المصري
Egyptian Innovation Bank
ZSOR
Joint Collaborative Efforts of Egyptian Expatriates and Scientific Organizations towards tackling national R&D challenges
children's
جامعة الطفل

Contents

Egyptian Patent Legal System

أكاديمية البحث العلمي والتكنولوجيا
Academy of Scientific Research and Technology

- Starting with Law No. 132/1949, there have been several amendments in the course of developing Egypt's patent legal system
- Now Law No. 82/2002
- Focused on amending and unifying the previously separate laws for patents, trademarks, designs and copyrights in line with TRIPS, which Egypt joined in 1995

Egyptian Patent Legal System

أكاديمية البحث العلمي والتكنولوجيا
Academy of Scientific Research and Technology

- Since issuing Egypt IPR law (82) in 2002, sincere efforts have been done to improve the legal framework for IPR protection and enforcement, with the aim to attract more investment
- Establishment of the Economic Court in 2008 has significantly affected the development in the area of IPR
- After 2011 Revolution, and as a result of political instability, the governmental focus on IPR file has been significantly reduced
- In 2014, Egypt started to regain its stability back and the government took decisive actions to boost technology transfer and commercialization and targeting knowledge-based economy
- Issuing of Egypt law for STI incentives (law no.23) in 2018 can be considered as one of the main decisive actions towards creating enabling environment for innovation, better utilization of IPR and technology transfer

Egyptian Patent Legal System

أكاديمية البحث العلمي والتكنولوجيا
Academy of Scientific Research and Technology

- EGPO was established in 1951, became an affiliated organization under the ASRT since 1971
- Deals mainly with patents and utility models
- EGPO is active in Egypt's joining of various international agreements, for example:
    - Paris convention in 1951
    - PCT in 2003
    - WIPO in 1975
- In 2013, EGPO was the first office in the Arab region to be appointed as an ISA and IPEA

IP Development Strategy - Egypt Vision 2030

A. Background Information

IP development strategy was established for following purposes:

Promote and strengthen the technological capacity of local industries for economic and societal benefits	• Provide key recommendations for reinforcing exclusive rights and promoting public domain simultaneously • Suggest efficient operational plan for different types of IP rights (patents, utility models, trade secrets, etc.)
Enhance the usability of IP in Egyptian national industrial sectors	• Create protection system for traditional knowledge in order to promote Egypt's potential in traditional medicines and agriculture
Improve IP administration and ensure appropriate enforcement	• Modernize of IP administration by collective management system and institutional changes enhance client orientation level of IP services

IP Development Strategy - Egypt Vision 2030

B. Objectives

- Nurturing enabling environment for the localization of technology and production of knowledge
- Develop and promote an integrated national innovation system
- Connect knowledge and the innovation outputs with country priorities

C. Expected Benefits in Economic Growth

- Increasing competitiveness
- Providing new job opportunities.
- Improve Egypt's position on the global market
- Increase exports

IP Development Strategy : ASRT role

أكاديمية البحث العلمي والتكنولوجيا
Academy of Scientific Research and Technology

The main public supporter of innovation and IPR, as the main drivers of technology transfer in Egypt through:

EGPO	•The sole government organization that receives, examines and registers patent applications •Cooperates with WIPO to protect IP and create an environment for better IP protection •IPR awareness and capacity building
TICO	•Helps in marketing IP so that it can create real value and become commercially useful •Provides ideation and prototyping seed fund •Offer technological and innovative solutions based on research findings
INTILAC	National network of 17 general and specialized technological incubators in partnership with Universities, research institutions, NGOs and private sector
www.eib.eg	• Electronic portal of innovation • On line market place for Inventors, Innovators, Bankers, Funding Organization, VCs, Investors, Business men, Industry, …..etc.

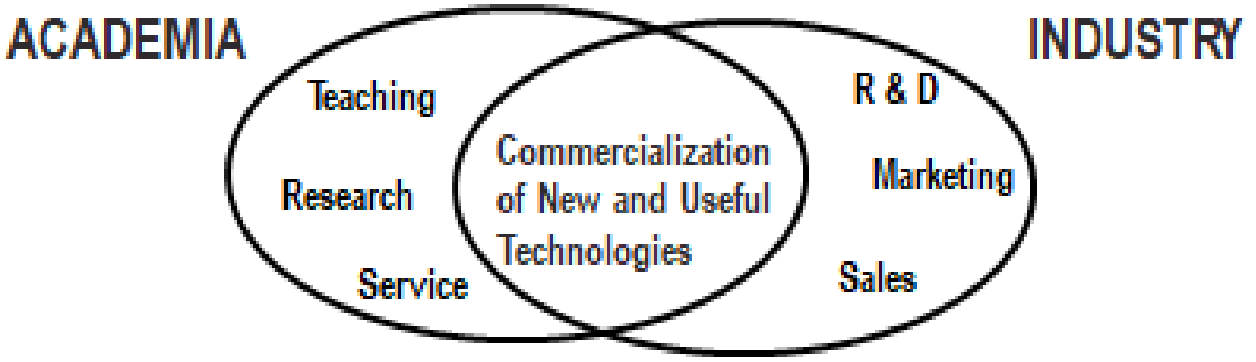
Contents

Technology, Innovation Commercialization Office (TICO)

أكاديمية البحث العلمي والتكنولوجيا
Academy of Scientific Research and Technology

Technology, Innovation Commercialization Office (TICO)

- **Bridging the gab between scientific research and industry**



- Knowledge for knowledge's sake
- Recognition
- Publications, open discourse
- Academic freedom

- Management of knowledge for profit
- Competitive advantage
- Limited public disclosure
- Confidentiality

Technology, Innovation Commercialization Office (TICO)

ASRT supports Conducting of research to develop & transfer solutions to real problems of high national priority. Through TICOs network it:

- Facilitate partnerships between academia and industry to allow adoption of research outcomes for *society* benefit
- Protect intellectual property to enhances adoption of research outcomes and generation of income
- Helps in marketing of IP to create creates real value
- Provides ideation and prototyping seed fund at the institutional levels
- Offers technological and innovative solutions based on research findings

- **Now we have 43 office**

Technology, Innovation Commercialization Office (TICO)

أكاديمية البحث العلمي والتكنولوجيا
Academy of Scientific Research and Technology

TTO

* Matchmaking between industry and academia
* Offer technological and innovative solutions to industrial problems
*Define industrial challenges and transforming it into R&D proposals to be funded with the aim of solving the problem
* Commercialization of research findings, innovations and patents

TICS

*IPR protection & Capacity building
* Raising IPR awareness
*Helps institutions to develop institutional IPR Policies

GICO

*Disseminate national and international funding opportunities
* Capacity building in proposal writing, research project management, ethics,
Research team, networking and finding appropriate partners for Int. grants

TICO

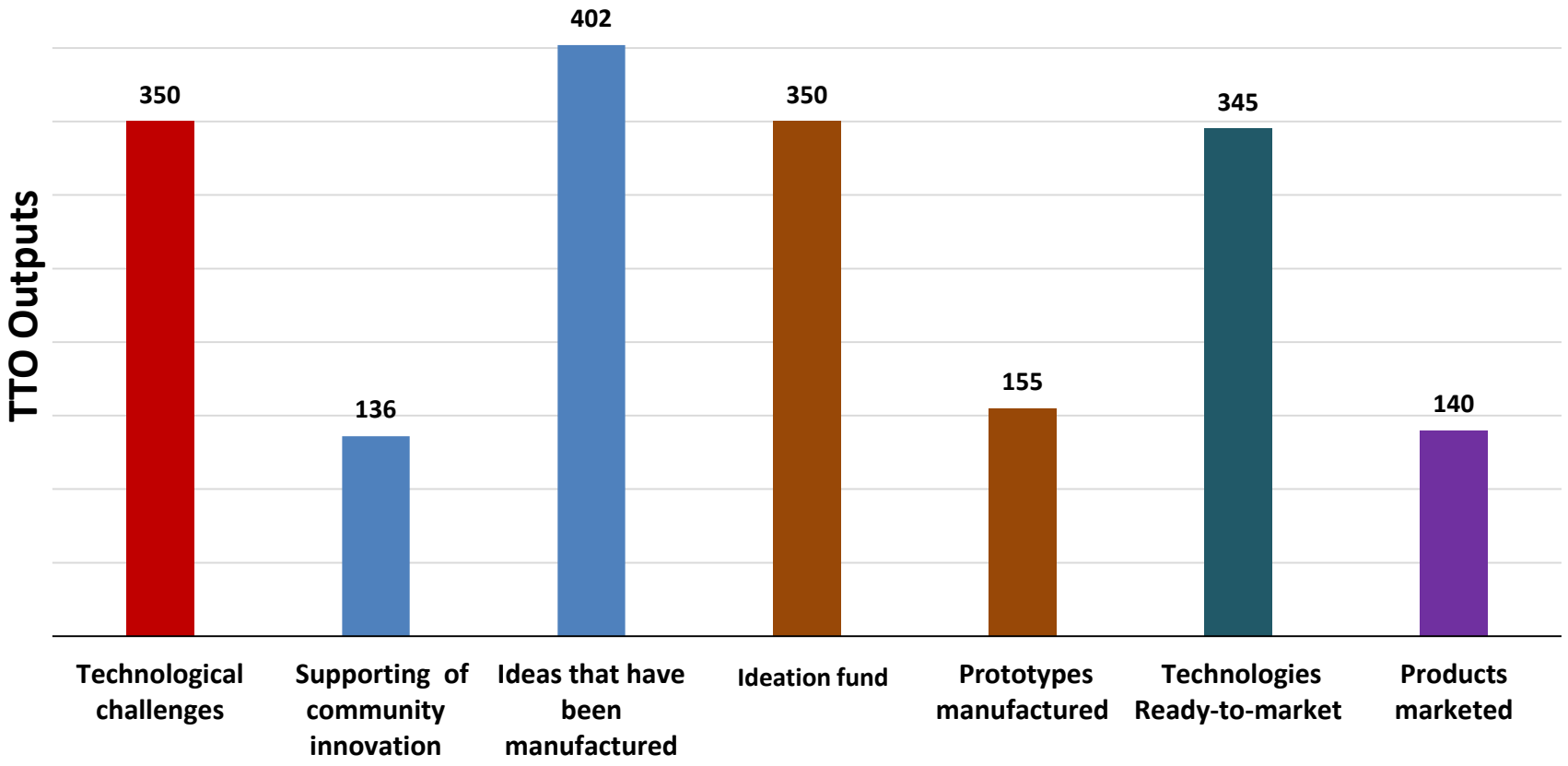
Technology, Innovation Commercialization Office (TICO)

أكاديمية البحث العلمي والتكنولوجيا
Academy of Scientific Research and Technology

TICOs activities also includes:

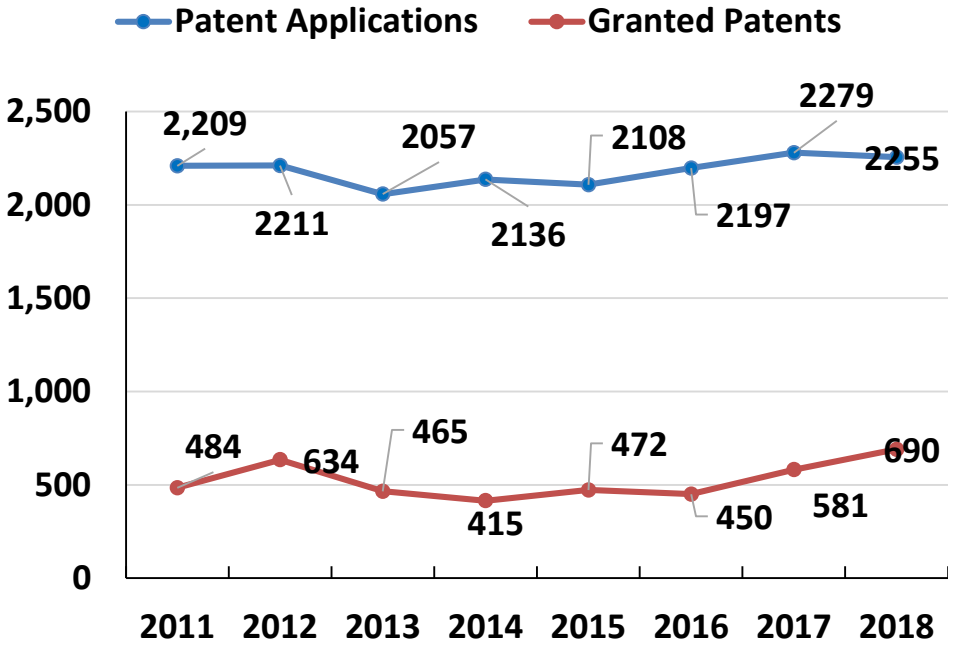
Technology, Innovation Commercialization Office (TICO)

- Technology Transfer Office achievements , TTO From 2013 to 2018
- Now we are conducting a national study to measure the impact and ROI

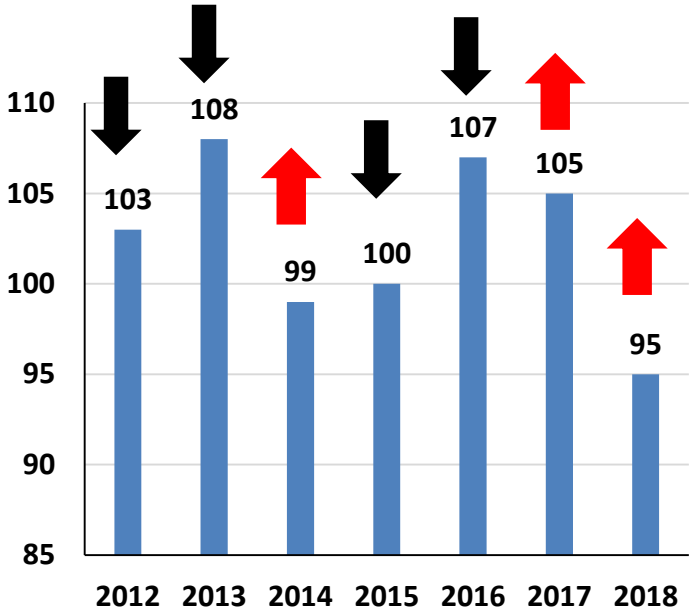


Technology, Innovation Commercialization Office (TICO)

➢ **Impact of Technology Innovation Support Center, TISC**

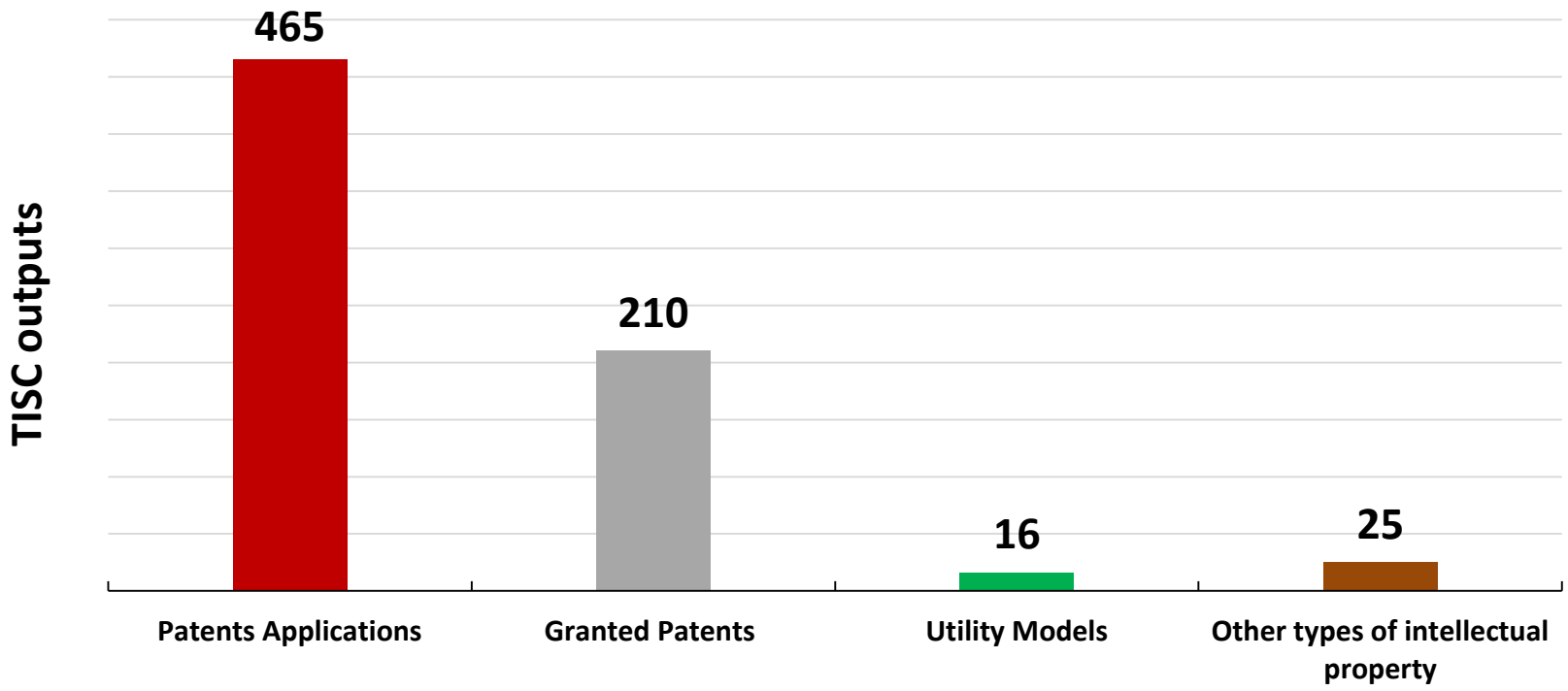


Trends of Egyptian Patent



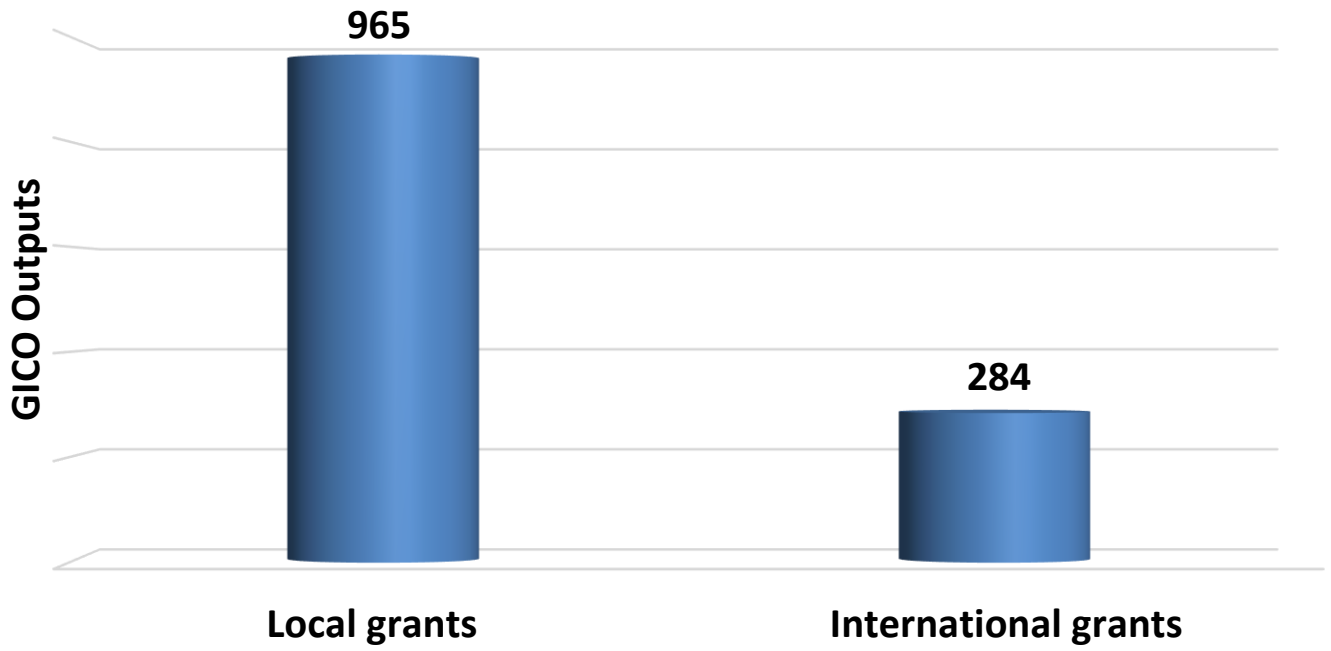
Technology, Innovation Commercialization Office (TICO)

➢ **Technology Innovation Support Center Achievements, TISC**



Technology, Innovation Commercialization Office (TICO)

➢ **Grant and International Cooperation Office, GICO**



Technological Incubator (INTILAC)

E-club, Ideation and prototyping fund, support of graduation projects, R& D projects

Incubation

Promising Start Ups

Smart Fund Co-funding in collaboration with VC

Exit

Complete cycle of Innovation (Linear & Open)

INTILAC is:

The largest national, governmental and multidisciplinary network of technological Incubators (17 branches), targeting undergraduate and postgraduate students and their graduation projects, the entrepreneurs in their early steps, the researchers in Universities and Research Centers and social innovators

Vision:

Boosting innovation ecosystem in Egypt through establishing a public national network of general and specialized technological Incubators allover Egypt, capable to accommodate and transform innovative ideas into final commercial products (Startup/Spinoff) .

Mission:

Incubate, accelerate, spin, technology push and create jobs

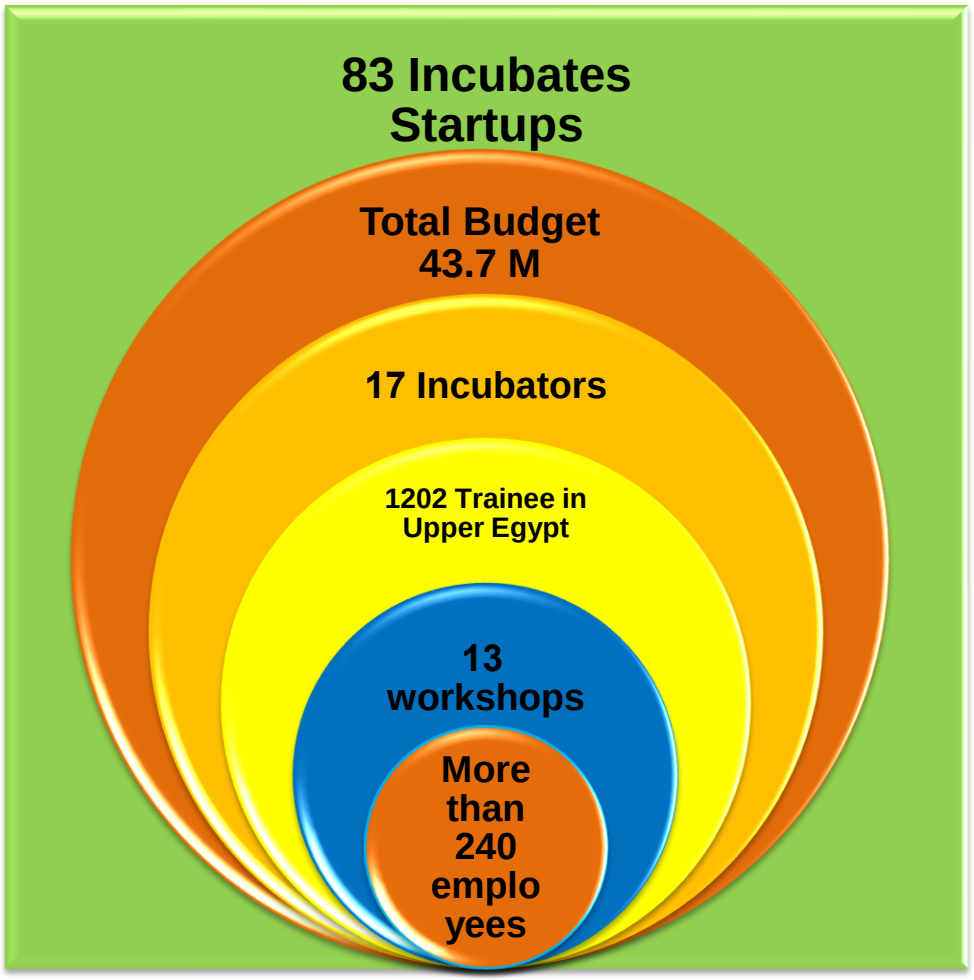
INTILAC Branches

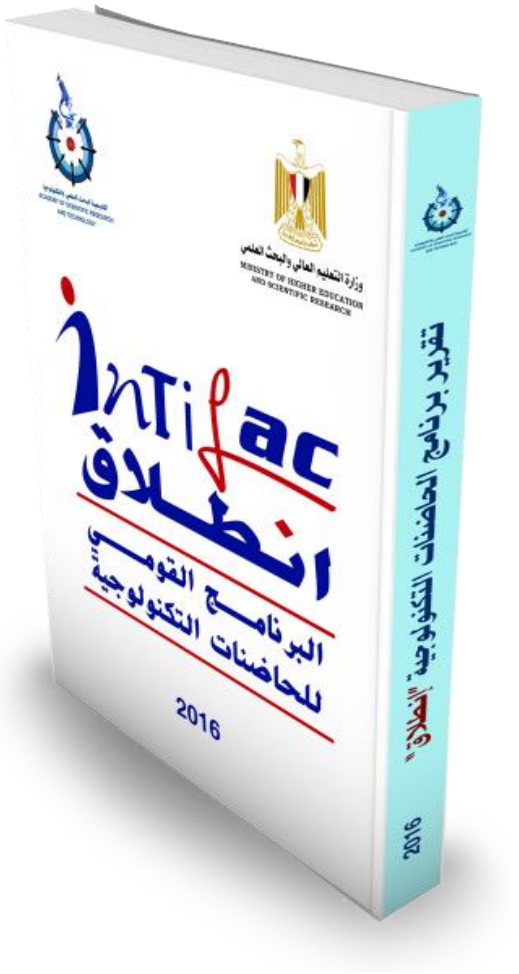
	Incubator	Specialization	Address
1	Bedaya-Cairo	General	Bedaya Center – General Authority for Investments and Free Zones – Nasr City
2	Bedaya-Sohag	General	ASRT Regional Center – Karman - Sohag
3	GESR - Cairo	General	Mokattam - Cairo
4	Ice- Alex	General	Alexandria
5	Suez	General	ASRT Regional Center – Suez University
6	Hemma	General	Assuit University
7	Rawak	General	Faculty of Engineering – Al-Azhur University - Quena
8	Heliopolis	General	Heliopolis University

INTILAC Branches

	Incubator	Specialization	Address
9	Tech Space	Artificial Intelligence & Block chain	Nile University
10	Tareek	IT	Electronics Research Institute
11	Ed venture	Education	Nahdet Masr Foundation
12	Tafaneen	Design and Jewelers	Fashion Technology Center
13	Ebdaa	Augmented & Virtual Reality	Chamber of Information Technology
14	Ebni - Cairo	Internet of Things	Etisal
15	Ebni - Borg El-Arab	Internet of Things	Etisal
16	Naseej	Textile	ASRT Regional Center - Tanta
17	Wathba	Furniture	ASRT Regional Center – Damietta

INTILAC in Numbers

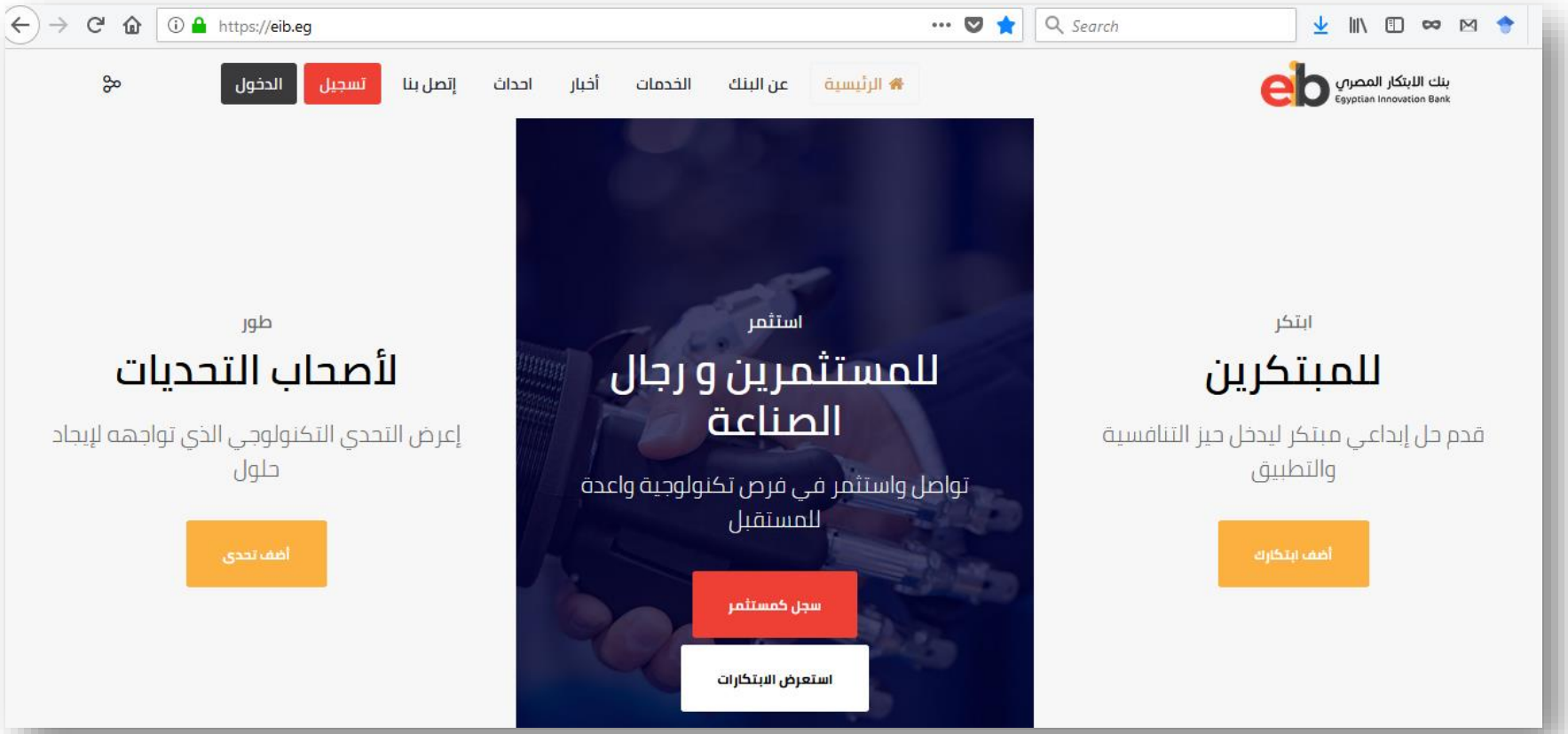




Egyptian Innovation Bank (eib)

بنك الابتكار المصري
Egyptian Innovation Bank

www.eib.eg



Contents

ASRT has 3 different cases show wise management of IPR

1. Medicine (SOFOSBUVIR)
2. Heritage (Civilisation Rights)
3. Encyclopaedia (Medicinal Plants)

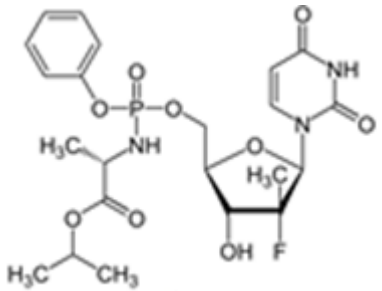
Case Study (1)

A. Egypt SOFOSBUVIR Rejection Report

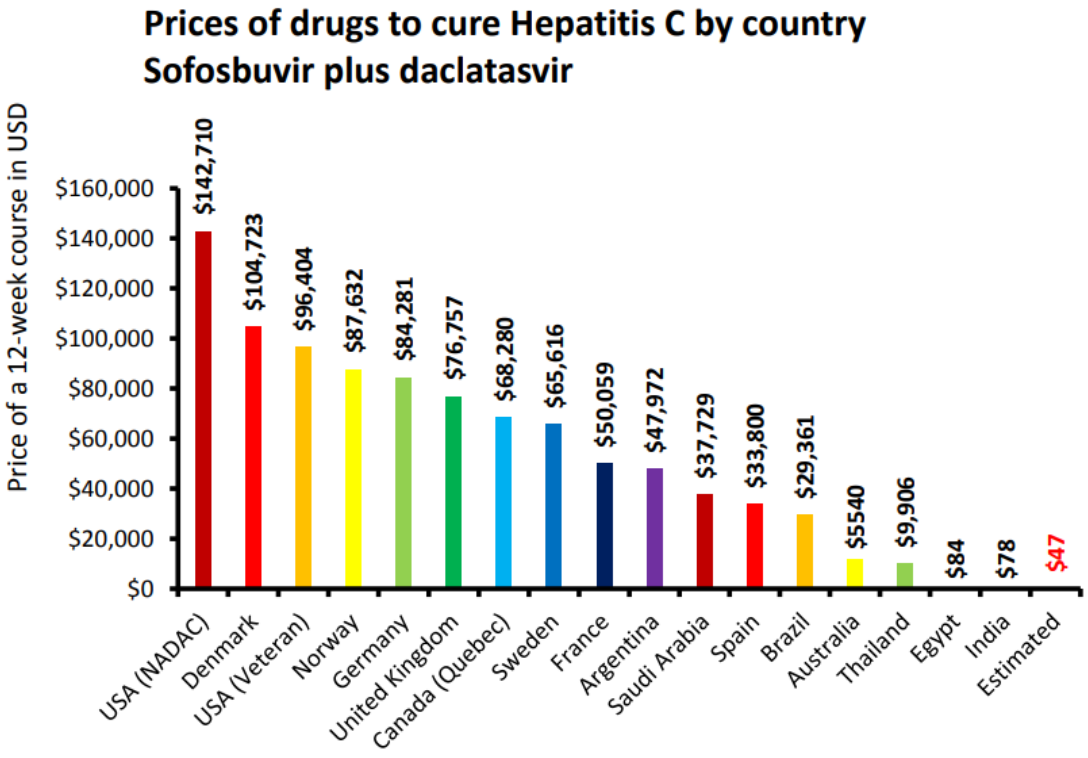
Sofosbuvir main application filled at EGPO: 2011 11 1955 (20/11/2011)

N- [(2 ' R) -2 ' -DEOXY-2 ' -FLUORO-2 ' -METHYL-P-PHENYL-5 ' -URIDYLYL] -L-ALANINE 1-METHYLETHYL ESTER AND PROCESS FOR ITS PRODUCTION.

- The patent application No.2011 11 1955 corresponding to the international patent publication WO 2010/135569 (priority date: 20/05/2009) was examined and rejected for lack of Novelty and Inventive step according to the following prior art documents:
- WO 2005/003147
- WO 2008/121634 (CA2682230)
- PCT/NA2005/000592.



B. Generic SOFOSBUVIR Prices



Source:

Prices versus costs of medicines in the WHO Essential Medicines List
Dr. Andrew Hill
Department of Translational Medicine, University of Liverpool, UK
WHO Geneva, Feb 26th 2018

C. SOFOSBUVIR Worldwide Oppositions

Brief: Partial Revocation Of EPO Patent On Sofosbuvir, Key For Hepatitis C

05/10/2016 BY INTELLECTUAL PROPERTY WATCH — 4 COMMENTS

Share this:

By Alexandra Nightingale for *Intellectual Property Watch*

Following a public hearing at its headquarters in Munich, the European Patent Office (EPO) decided to reject in part the arguments made by Gilead Sciences to uphold their patent on sofosbuvir, according to a non-profit group.

The EPO decided today that Gilead's patent extended beyond the content of the patent application and thereupon patent protection would no longer apply to sofosbuvir, according to MdM's statement. [*Update*: EPO has issued a contrary statement to journalists, more reporting to come] China, Ukraine and Egypt have already fully rejected Gilead's patent.

"Patent oppositions are critical to improving the quality of examination and we applaud the EPO for revoking key claims that were not in compliance with the law. What is really needed is more rigorous patent examination before patents are granted in order to improve patent quality – this will stop companies from blocking people living with hepatitis C from getting the medicine they need to get healthy."

C. SOFOSBUVIR Worldwide Oppositions

C. SOFOSBUVIR Worldwide Oppositions

POSTED ON 4 DECEMBER, 2017 BY V0020935

Hepatitis C: In Argentina INPI rejected a key patent on Sofosbuvir

Argentina has made an important step forward to protect local production of generics of an essential medicine to treat Hepatitis C. This brings significant advantages for Public Programs which procure the medicines.

Patent on Hep C drug rejected in Ukraine: price of sofosbuvir will significantly reduce

March 19, 2018

The Ministry of Economic Development and Trade of Ukraine (MEDT) refused to grant the pharmaceutical company Gilead a patent for hepatitis C drug sofosbuvir. On 2 March 2018, the MEDT issued the order (No. 305) which approved the decision to reject the patent application. If issued, a patent could give the company a 20-year monopoly on the import of sofosbuvir to Ukraine.

"This is a very important achievement for Ukrainian patients," says Serhiy Dmitriev, head of the advocacy at the All-Ukrainian Network of People Living with HIV (the Network). "Thanks to this decision, we expect that the price of medicines may drop three-fold, and for us, this means that three times more patients with hepatitis C will have access to modern drugs.

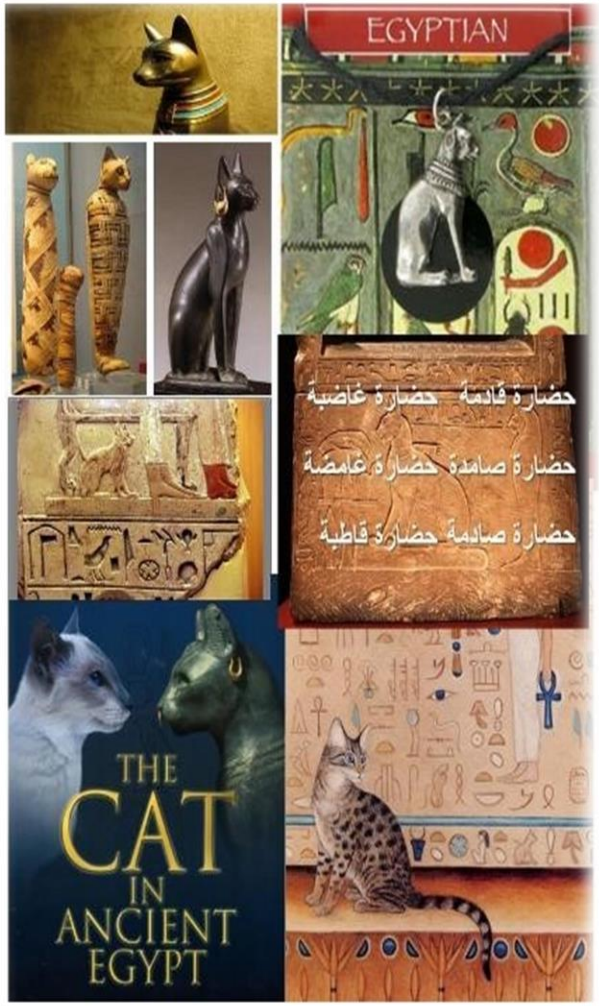
Case Study (2)

Civilization Rights Campaign

- To create a national goal around which all Egyptians will gather to protect their civilization and benefit from it as a material for development and recovery of the economy
- To raise public awareness and encourage innovative solutions with regard to the Egyptian civilization rights

Campaign video

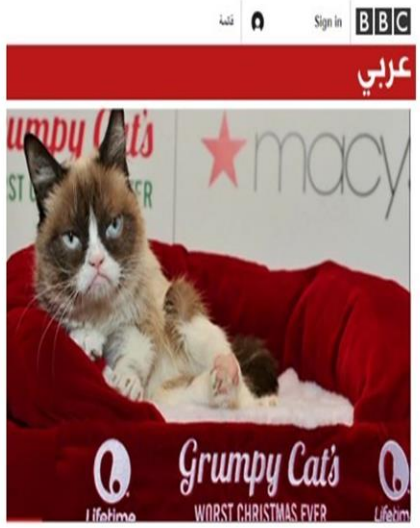
https://www.youtube.com/watch?v=VDtStlsb1Fs&fbclid=IwAR1U1ZJOawLh6Xzbu-JPi2HWQH2dciz5phTJXPNH3oKHBTMeFGUaGtMhj88



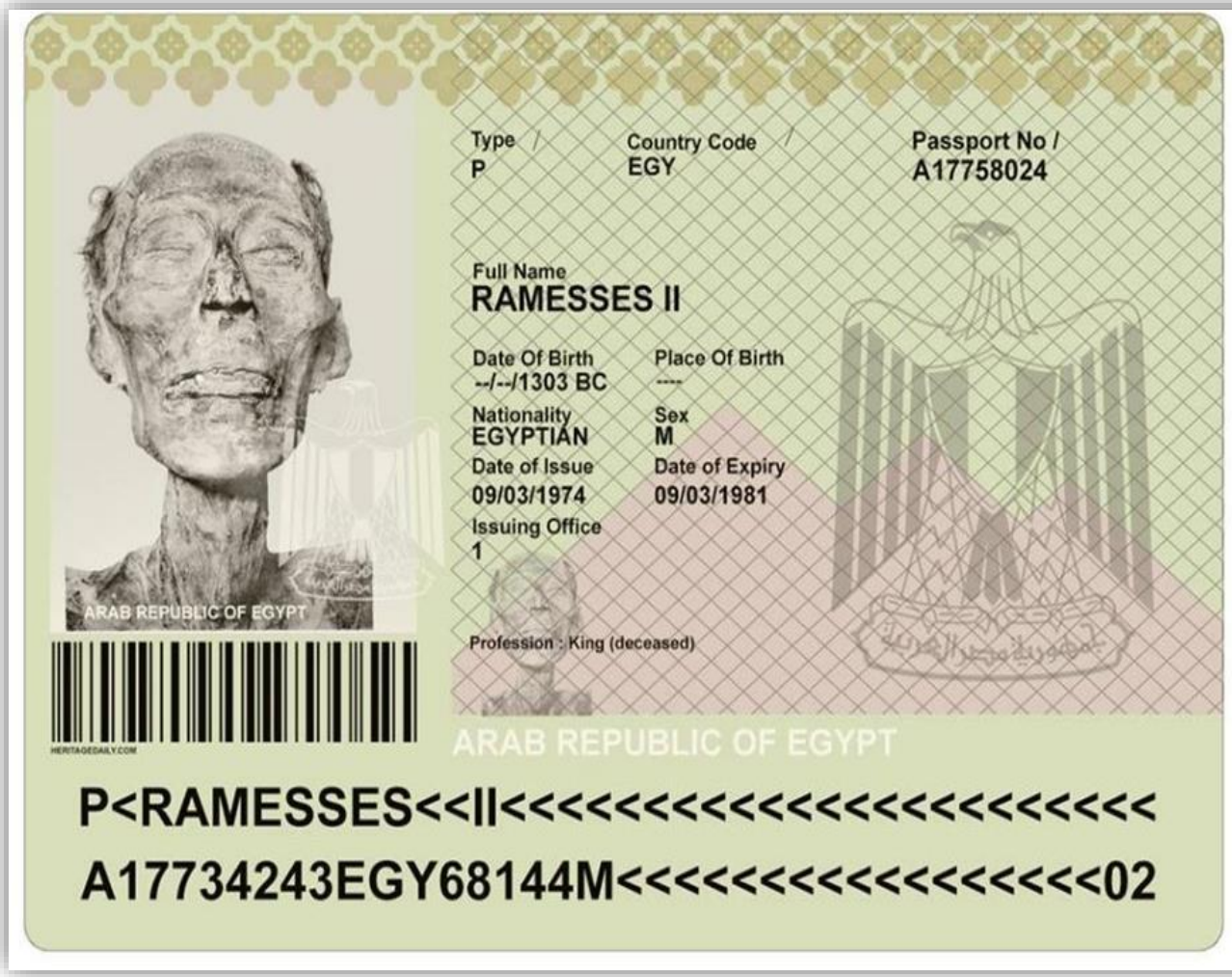
حقوق حضارة
CIVILIZATION RIGHTS

صورة القطة العبوس التي تساوي 710 الف دولار

- نظرت محكمة أمريكية في يناير 2018 دعوى أقامها أصحاب القطة ضد شركة مشروبات لاستخدامها صورتها للإعلان عن مشروب دون الرجوع إلى أصحابها، وحكمت المحكمة بتعويض قدره 710 آلاف دولار



محكمة تمنح "القطة المتجهمة" تعويضا قدره 710 آلاف دولار


Type
P
Country Code
EGY
Passport No /
A17758024
Full Name
RAMESSES II
Date Of Birth
--/--/1303 BC
Place Of Birth

Nationality
EGYPTIAN
Sex
M
Date of Issue
09/03/1974
Date of Expiry
09/03/1981
Issuing Office
1
Profession : King (deceased)
ARAB REPUBLIC OF EGYPT
ARAB REPUBLIC OF EGYPT
P<RAMESSES<<II<<<<<<<<<<<<<<<<<<<<<<<<
A17734243EGY68144M<<<<<<<<<<<<<<<<02


حضارة قدماء
المصريين

Case Study (3)

Wealth of Egypt:
1- Encyclopedia of Wild Medicinal Plants

- The flora Egypt contains 2,145 species
- ASRT has launched a national project " Wealth of Egypt" aiming at documentation, protection , preservation and better utilization of Egyptian wealth from genetic resources and IK
- The specific objectives of the project are:

1) Series volume of Monographs together will structure the Egyptian Encyclopaedia of the main wild medicinal plants and will be published by ARST.
2) Established database on the wild medicinal plants in Egypt.
3) Reports on the status of wild medicinal plants the different phyto-geographical regions in Egypt.
4) A DNA barcods of the selected wild medicinal plants.


شكرا
Thank You
Mangrove forest Red Sea, Egypt
Mahmoud, December 2015