

Elsevier Research Intelligence

# Open Science – an Elsevier & Hungary perspective

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Budapest, March 2<sup>nd</sup> 2017

# The World of Research is Changing

- The WoR is rapidly changing. Researchers find themselves in a **demanding and competitive environment**
- Researchers need **new tools to be more efficient and more productive** to increase their chances of success

Key driving elements and behaviours for change:

## **Innovation and technology:**

creating the technological infrastructure to solve the pain points in the researcher workflow

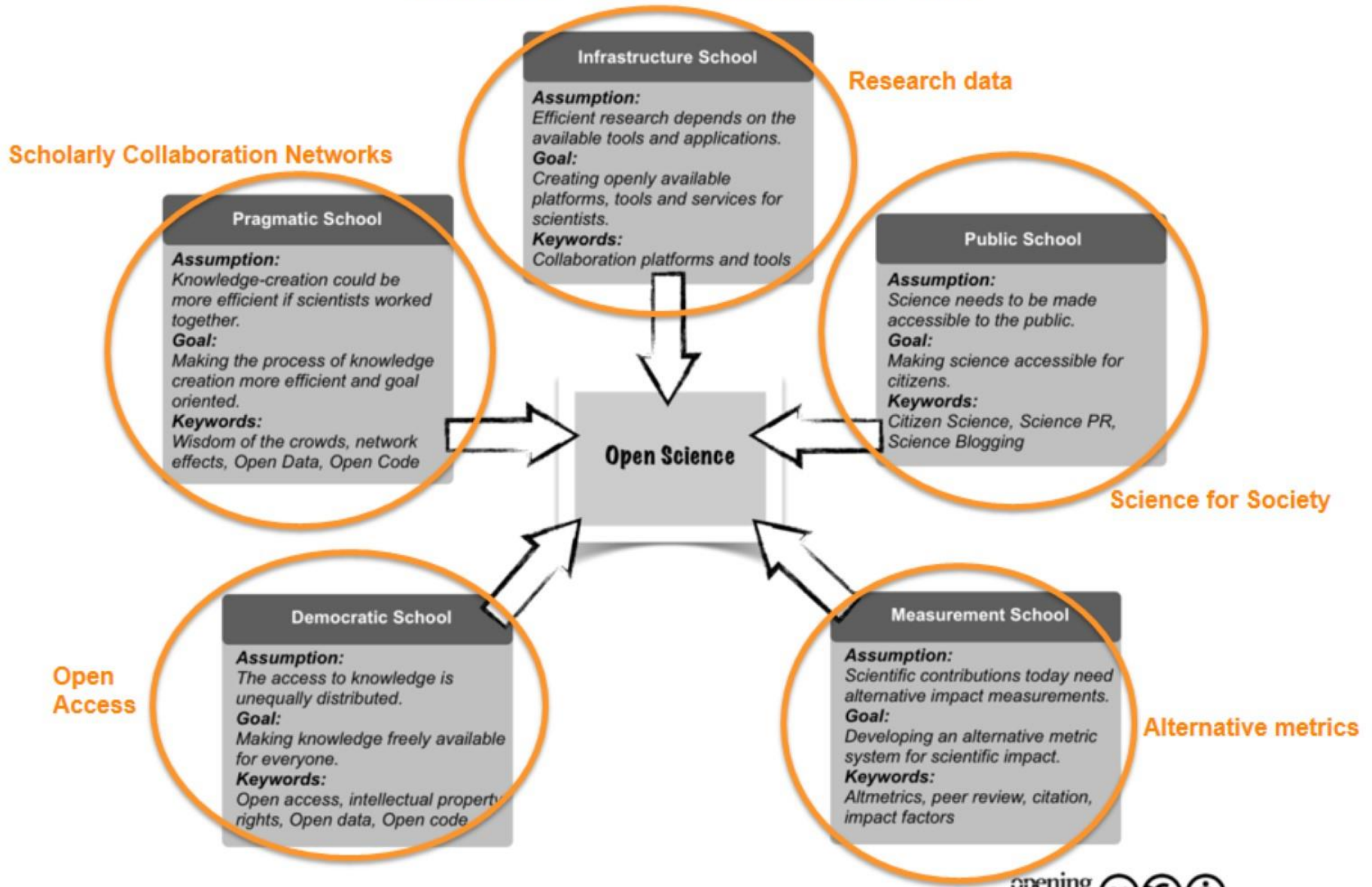
## **Collaboration:**

researchers connecting across disciplines and regions, embracing increased transparency, reproducibility and sharing of knowledge

## **Increasing and assessing the impact of research:**

increasing the dissemination of high quality, trusted content whose impact on society is measured beyond traditional methods

# What is Open Science ...?







Elsevier has a unique vantage point on research - *“Publishing is our heritage, technology and innovation is our future”*

Each year

- 1 million article manuscripts received by ~2,000 journals (all offer Open Access options)
- 350,000 new articles published, in addition to 11M existing articles
- 2,000 new books published

Primary publishing

- ScienceDirect: 750M digital article downloads
- Scopus: 55M records, 21,900 titles, 5,000 publishers, 700M citations
- SciVal: 75 trillion metrics values
- Pure: current research information system: >200,000 researchers supported
- Mendeley: 3M users globally
- Grants: 7,000 sponsors, 20,000+ active opportunities, ~5M awarded grants
- Patents: >93m records, 100 patent offices
- Compounds: 22M compounds, 35M reactions; 3.3M molecular facts
- Drug information: 16k branded drugs; 12k generic drugs

Derived and aggregated data

## Open Science and Elsevier

### - We support the World of Research -

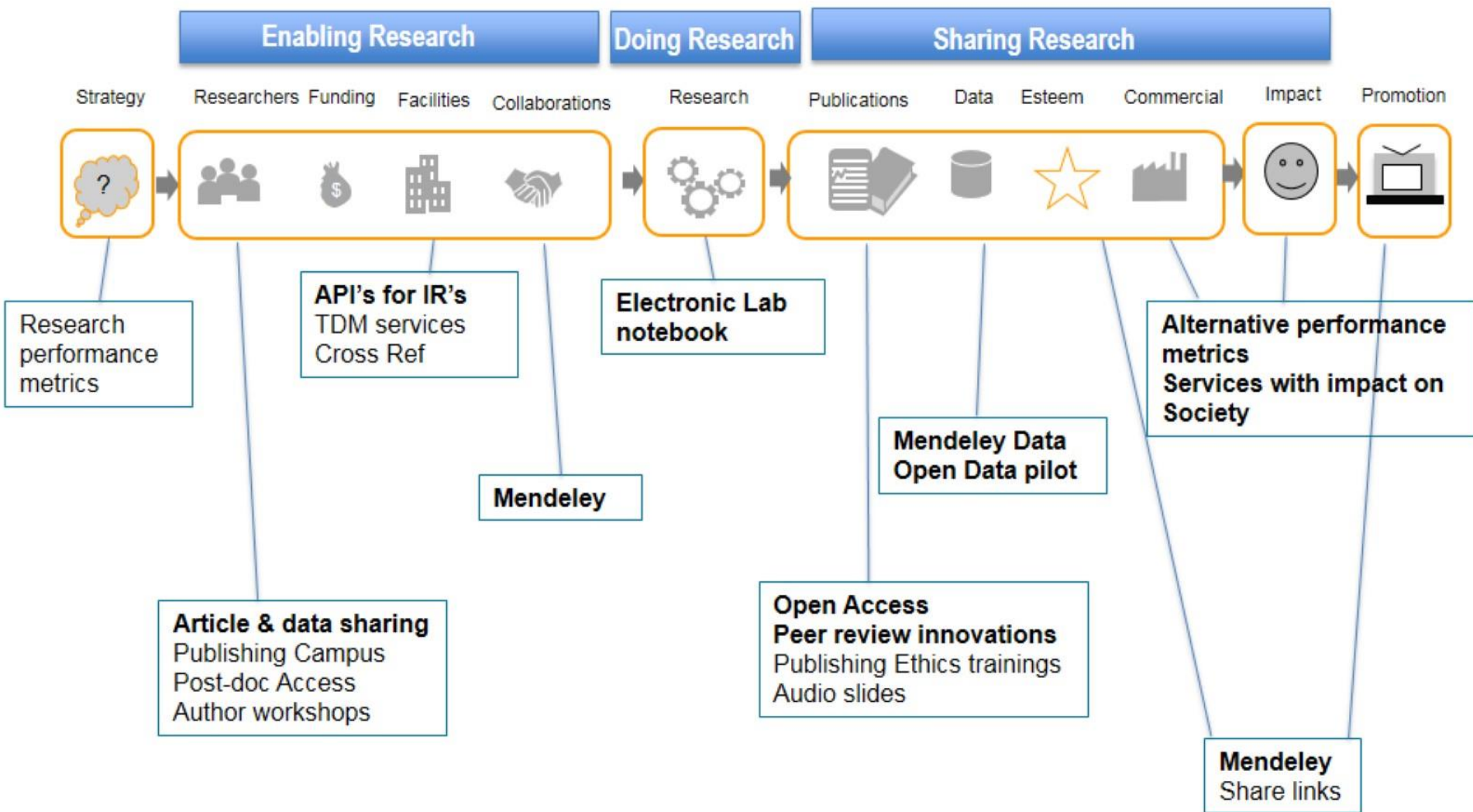
Elsevier offers a suite of **solutions, platforms** and **initiatives** for the changing World of Research, many addressing Open Science.

We provide Open Science services based on a **sound understanding of researcher, funder and other stakeholders' needs** – we develop and validate new innovative concepts together with the research community.

Elsevier invests in **innovative** solutions to help researchers being more effective, better equipped to collaborate and share their research.



# Open Science – A World of Research perspective

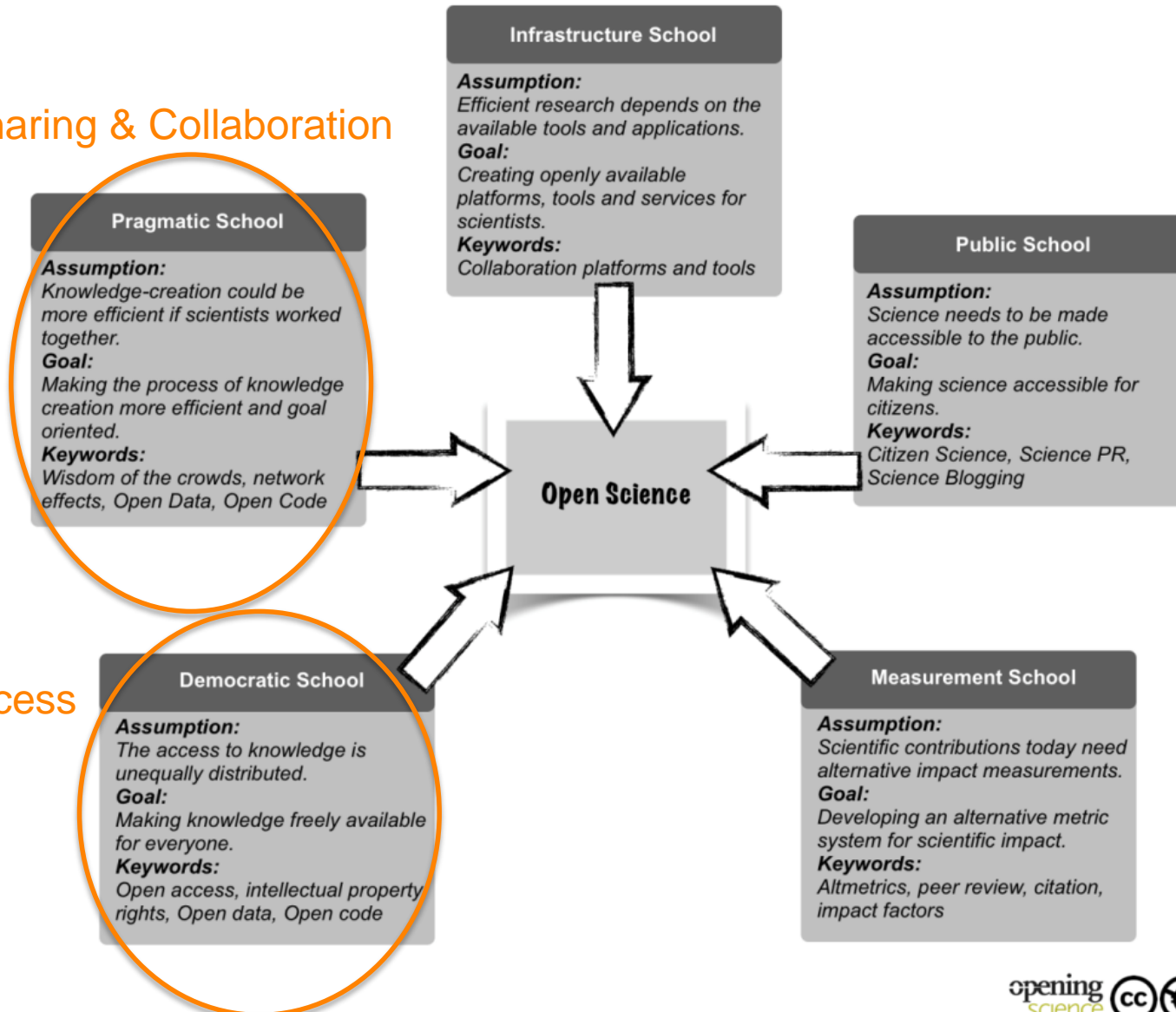


# Today we'll discuss some key Open Science themes

- Open Access & Collaboration
  - Research Metrics
  - Research Data
- Connecting Science to Society

# What is Open Science ...?

## Sharing & Collaboration



## Open Access





## Some important jargon!

### **Gold** open access – a new business model

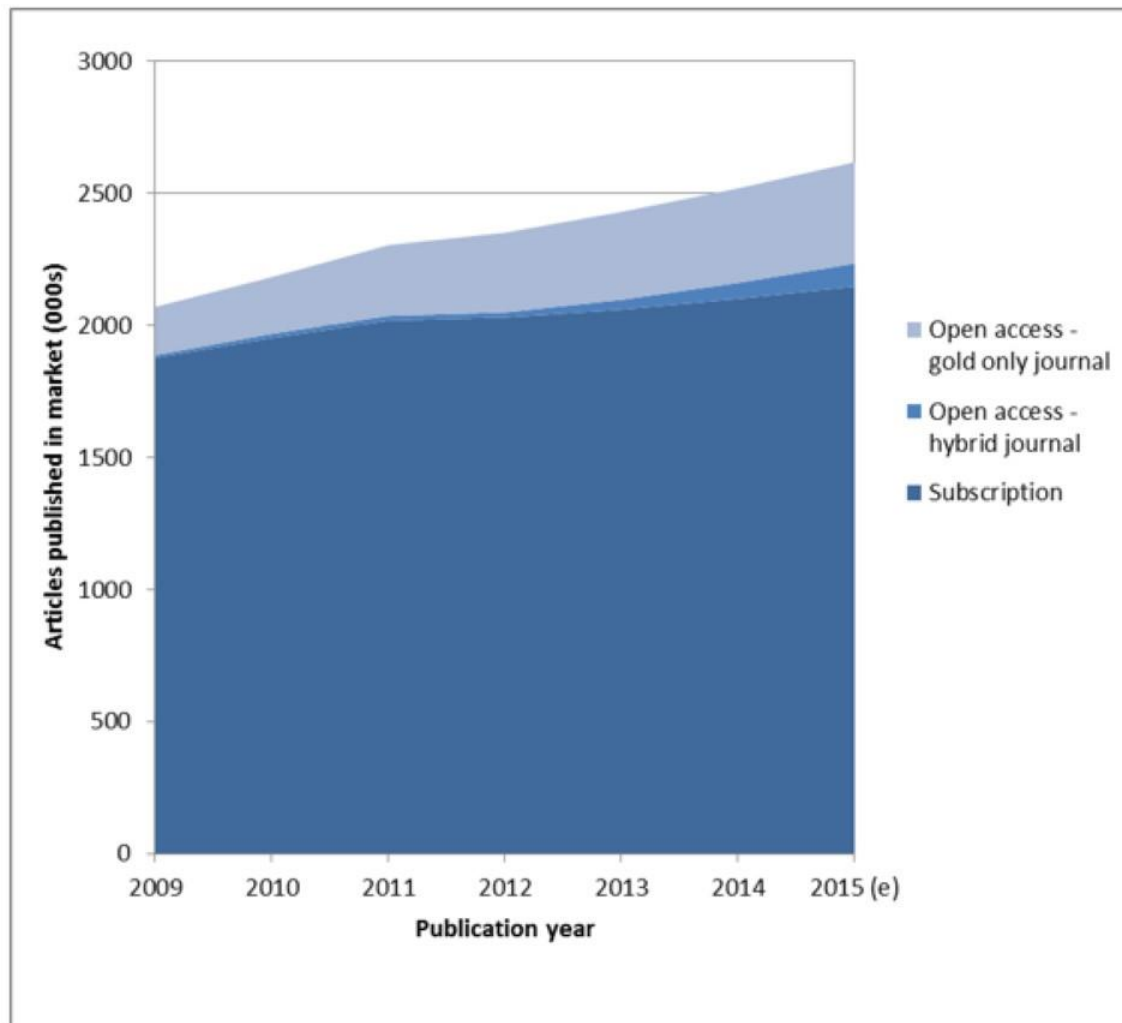
- Publishing costs are recovered upfront through Article Publication Charges (APCs) or Subsidies
- APCs are typically paid from research grants or from sponsoring funders or societies

### **Green** open access – works in harmony with the subscription business model

- Publishing costs are recovered after publication through Subscriptions
- A version of the article, typically the Accepted Manuscript, is made available after a time delay, known as an embargo period.

# Total article growth by journal business model

In 2015 there were an estimated 2.1 million subscription and almost 0.5 million open access articles published worldwide.



## Subscription content

- 82% share of total articles in 2015

## Open access content

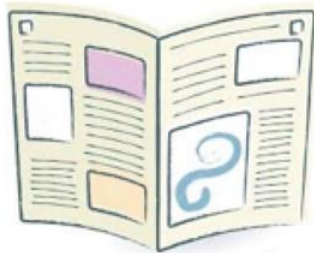
- Gold open access articles is 13% share of total content in 2015
- All open access, including subsidized articles, is 18% share of total content.

## Elsevier perspective

- In 2015, Elsevier published almost 400,000 articles
- Includes over 20,000 open access articles

## Sharing: The central principle of Research Collaboration

- Digital change has tremendously changed the way scientists are sharing their work and build relationships



- Scholars have shared various versions of their scholarly articles with their colleagues in specific journals.



Online versions and online distribution makes it much easier to share scholarly articles and research data.



Publishers are committed to expanding the ways that researchers can engage in responsible sharing and collaboration.

# Online platforms allowing researchers to develop and maintain professional relationships



## Enabling:

- **Discussion** or exchange of research and information
- **Sharing** of research results, articles and data



## **Publishers are supporting this new way of sharing**

- **While maintaining the value of peer reviewed publications**

**Publicly sharing the official, Publisher's version of an article on a commercial platform is not allowed.....**

**..... unless the article is published under a Gold Open Access author license agreement (CC BY)**

# Mendeley, a social network for researchers



Feed Library Suggest Stats Groups

Features How we help Our users Compare Videos

**The best free way to manage your research**  
Organize, share, discover

- 1 Download Mendeley for free
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Available for Mac, Windows and Linux

**Reference Manager**  
Generate citations and bibliographies in Microsoft Word, LibreOffice, and LaTeX.

**Read and Annotate**  
Open PDFs and capture your thoughts through sticky notes and highlights.

ScienceDirect Journals Books

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You have selected 1 citation for export.

Direct export

**Save to Mendeley**

Save to RefWorks

Export file

Export

1 article found

Download PDFs if available

**Polypurine reverse Hoogsteen hairpins as a gene therapy tool against survivin in human prostate cancer PC3 cells in vitro and in vivo**

Rodriguez, Laura; Villalobos, Xenia; Dakhet, Stella; Padilla, Laura; Hervas, Rosa et al. (2013) Biochemical Pharmacology vol. 86 (11) p. 1541-1554

Add to: AGRM Mendeley demo group

Tags: Demo export to Mendeley

Notes:

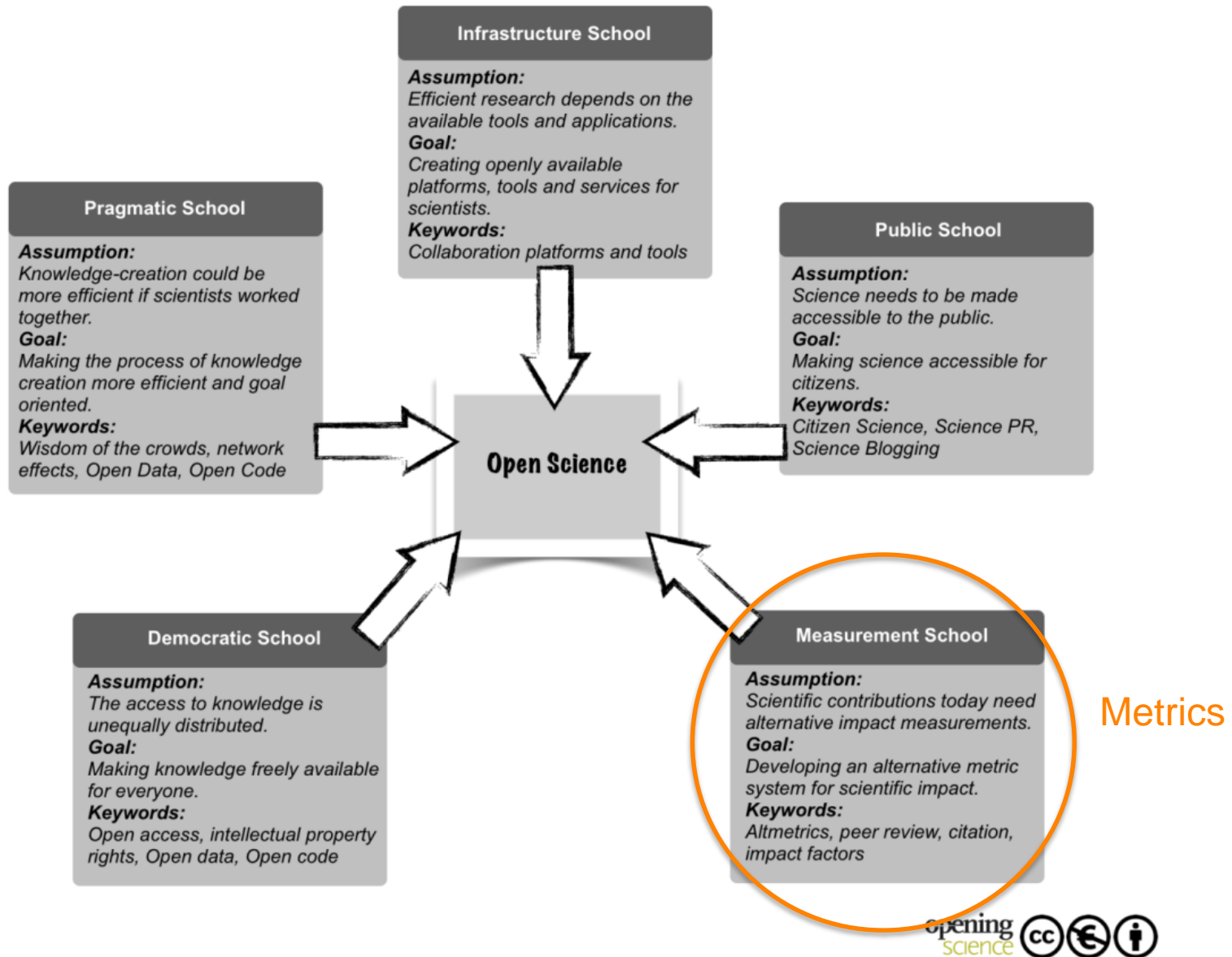
Save

Abstract

As a new approach for gene therapy, we recently developed a called polypurine reverse Hoogsteen hairpins (PPRHs). We de vitro and in vivo effect of PPRHs in cancer choosing survivin as involved in apoptosis, mitosis and angiogenesis, and overexpre. We designed four PPRHs against the survivin gene, one of the template strand and three against different regions of the codin were tested in PC3 prostate cancer cells in an in vitro screening

<https://www.mendeley.com>

# What is Open Science ...?



# Open Metrics

## Elsevier's view on research metrics:

- A **diversity** of metrics is essential
- The methodologies should be **open** and data agnostic
- Metrics should be **transparent**, valid and replicable
- Definitions should be owned by the **community**
- Metrics should be used appropriately
- No proprietary / black-box metrics





# New Alternative Metrics in Scopus

Scopus

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Brought to you by Scopus Team

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Alerts

My list

My Scopus

Back to results | < Previous 2 of 2

Full Text | Webcat Plus | Copac | View in EMBASE | Export | Download | More...

Science

Volume 348, Issue 6237, 22 May 2015, Page 847

## Ancient DNA pinpoints paleolithic liaison in Europe: Romanian fossil was the great-great-great-grandson of a Neandertal - But an evolutionary dead end (Short Survey)

Gibbons, A.

Abstract

[No abstract available]

Indexed keywords

EMTREE drug terms: DNA

GEOBASE Subject Index: DNA; evolutionary biology; fossil record; Neanderthal; paleobiology; Paleolithic

EMTREE medical terms: Antiquity; Europe; evolution; fossil; genome; Homo neanderthalensis; human; human genome; Paleo Survey






Regional Index: Romania

Cited by 0 documents

Inform me when this document is cited in Scopus:

Set citation alert | Set citation feed

### Metrics

	<b>862</b>	Citations	99TH PERCENTILE
	<b>77.98</b>	Field-Weighted Citation Impact	
	<b>363</b>	Mendeley Readers	99TH PERCENTILE
	<b>35</b>	Blog posts	
	<b>241</b>	Tweets	99TH PERCENTILE
	<b>63</b>	Mass Media stories	
	<b>71</b>	Mentions in 4 additional sources	

Select data provided by altmetric.com

# .....as well as new journal metrics

Scopus
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Register
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Source details
Feedback > Compare sources >

## Journal of Biomedical Science

Open Access ⓘ

Scopus coverage years: from 1993 to Present

Library subscription: from January 2009 to December 2099

Publisher: BioMed Central

ISSN: 1021-7770 E-ISSN: 1423-0127

Subject area: Medicine: Biochemistry (medical) v

Set document alert
Journal Homepage
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More >

Visit Scopus Journal Metrics v

CiteScore 2015 ⓘ

3.07

SJR 2015 ⓘ

1.632

SNIP 2015 ⓘ

1.560

CiteScore
CiteScore rank & trend
Scopus content coverage

CiteScore 2015 v

3.07

\*Documents 2012-2014

\* CiteScore includes all available document types

Calculated on 03 June, 2016

Citation Count 2015

913 citations

Documents 2012-2014

297 documents

View CiteScore methodology >

### CiteScore rank

In category: Biochemistry (medical) v

Percentile: 84th Rank: #9/56 >

View CiteScore trends >

CiteScore Tracker 2016

Last updated on 29 September, 2016

Updates monthly

1.76

Documents 2013-2015

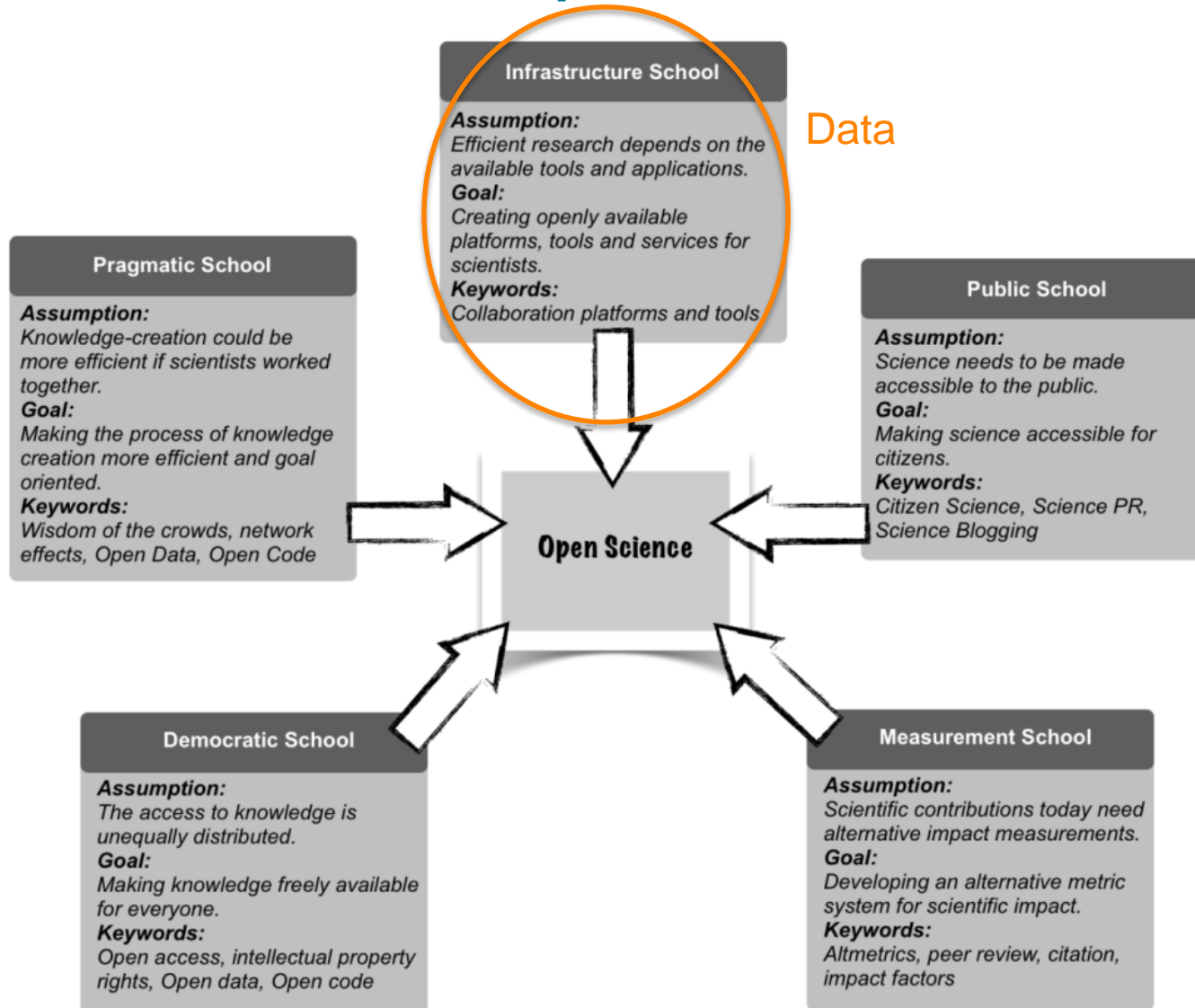
Citation Count 2016

581 citations to date >

Documents 2013-2015

330 documents to date >

# What is Open Science ...?



# Innovation through all the data cycle

PROGRAMS & PILOTS



MISSION & POLICY

Elsevier Research Data Policy

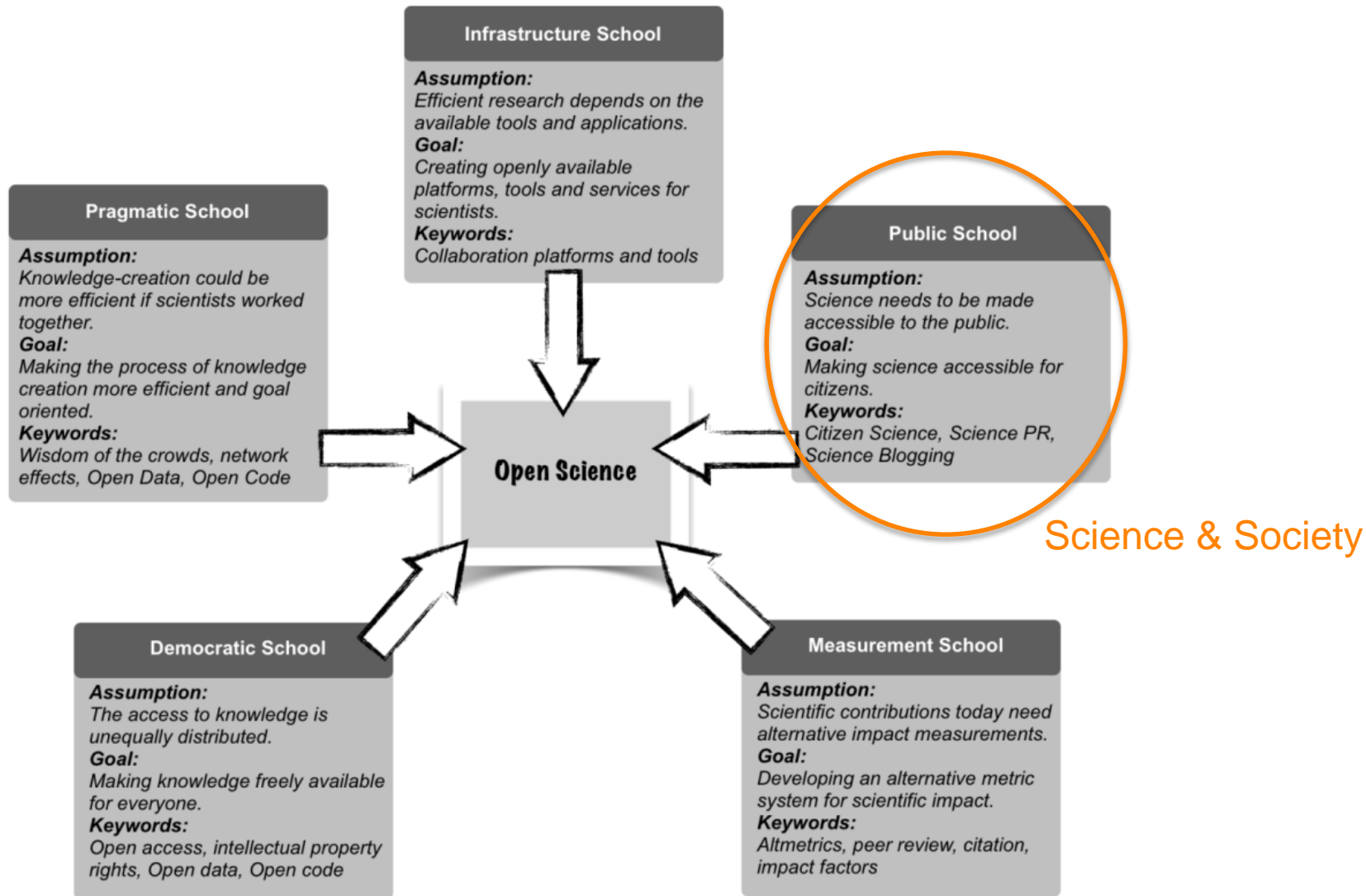
“Raw research data should be made freely available to all researchers wherever possible” – STM Brussels Declaration 2007

We help researchers **store, share, discover, and use data**

<https://www.elsevier.com/about/open-science/research-data>



# What is Open Science ...?



# Science & Society at Elsevier

## Emergency & Patients



- Elsevier Emergency Resource Centres
- US National Library of Medicine (NLM) - Emergency Access Initiative (EAI)
- patientAccess & patientINFORM

## Society



- Media Access
- STM Digest
- Atlas
- AudioSlides
- Share Links
- Science & People

## Partnerships



- Wikipedia Library's Access Donation Program
- Onsite Access for UK Public Libraries
- Research4Life
- Bookshare
- Load2Learn
- Accessible Books Consortium (ABC)
- Pint of Science
- REISearch
- Sense About Science
- The Science Media Centre
- White City Maker Challenge Programme, Imperial College London
- VALERIE Research Project, Wageningen University - the Netherlands

# Elsevier Resource Centres

Updates, research, reviews, editorials, correspondence and commentary

[www.elsevier.com/connect/zika-virus-resource-center](http://www.elsevier.com/connect/zika-virus-resource-center)

## Welcome to Elsevier's Zika Virus Resource Center

This page will provide continually updated resources from Elsevier's content and experts, including [The Lancet](#), [Cell Press](#) and world-renowned infectious disease expert Dr. Raphael Dolin. We developed it to give anyone interested in Zika virus – medical professionals, health researchers, policy makers, the media and members of the public – one place where they can access the depth and breadth of information.

Elsevier's resources span scientific and medical journals and textbooks, educational products and a variety of other content. We have also asked our clinicians to provide original commentary. Our goal is to provide these resources for free as the Zika crisis continues. If you have any question or suggestions, we welcome you to leave them in the comment section.

- [Online resources](#)
- [Journal articles](#)
- [Insight into research](#)



The Zika virus is transmitted by the *Aedes* species mosquito (*A. aegypti* and *A. albopictus*), which also spreads dengue and chikungunya viruses. (Source: Centers for Disease Control)



## Brexit Resource Centre

Free access to research, data and analysis

By the Elsevier Community Posted on 28 September 2016

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[www.elsevier.com/connect/brexit-resource-centre](http://www.elsevier.com/connect/brexit-resource-centre)

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### Ebola Resource Centre

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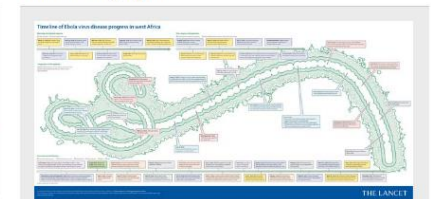
Latest Updates: Long-term aims for infectious disease outbreaks

#### Focus



**Ebola vaccine efficacy:** final results of the experimental Ebola vaccine rVSV-ZEBOV from Guinea highlight the vaccine's safety and efficacy, the first vaccine to prevent infection. The trial was led by WHO, together with Guinea's Ministry of Health and other international partners.

#### Timeline infographic



[www.thelancet.com/campaigns/ebola](http://www.thelancet.com/campaigns/ebola)

## Virtual journal: Atlas

- Recognizes the impact of scientific, technical and medical research on people's lives around the world
- Articles chosen by external advisory board
  - shortlist from Elsevier's 1800+ journals
  - [Board members](#) from NGOs across the world
- Winning articles summarized in a lay summary by a scientific journalist and hosted on Atlas website
- Author receive the Atlas award and have their article free to access on ScienceDirect



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# Maximise impact of research on society

Healthy Cities: UCL-Lancet Commission



0:47 / 3:50

Healthy Cities: UCL-Lancet Commission

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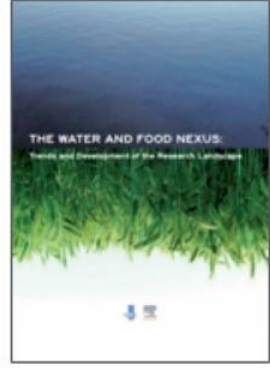
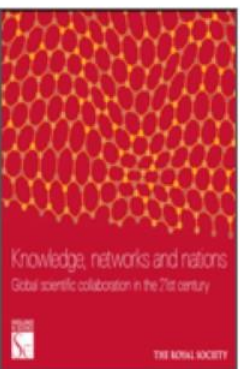
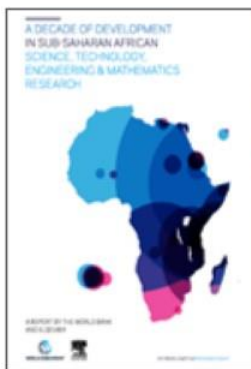
Lancet and University College London Institute for Global Health Commission  
Managing the health effects of climate change

The Elsevier Foundation honors Early Career Women Scientists from Developing Countries for Research into the Medicinal Properties of Natural Compounds

The Elsevier Foundation, TWAS and OWSD Recognize 2014 Winners at the AAAS Annual Meeting



On February 15th, 2014, five women chemists have been honored with the Elsevier Foundation Awards for Early Career Women Scientists in the Developing World, for their research that looks to nature for ways to address cancer, malaria and other medical problems. The winning researchers, representing five regions of the developing world, are from Indonesia, Jamaica, Nigeria, Uzbekistan and Yemen.



- Conduct joint commission on topic of mutual interest, e.g. as with Lancet/UCL on Climate Change, Cities
- Co-launch report on a strategic research initiative, e.g. as with Stem Cell/Kyoto University launched World Stem Cell Summit
- Co-sponsor awards to recognize achievements and raise awareness in areas of research policy priority



*Thank you very much*

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