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## KnowledgeLink newsletter June 2009

### GLOBAL INNOVATION

Page 3: World-class news and data direct to your iPhone, iPod or BlackBerry

Page 4: Put your research on the map with Intelligent Information for Life

### INFORMATION PROFESSIONAL DEVELOPMENT

Page 5: Scholarly R&D: coping with cuts

Page 6: Journal Citation Reports 2008 – more titles, new metrics

Page 7: Metrics-based research evaluation

Page 8: Open standards and accurate author identification - join the debate

Page 9: InCites - charting research performance

### INTELLECTUAL PROPERTY

Page 10: A new set of rules for innovation

Page 11: Asian innovation takes hold in the US

Page 12: Join our seminar in Tokyo: Innovation crisis - how to evolve IP in your business strategy

### PHARMACEUTICAL KNOWLEDGE

Page 13: Influenza A (H1N1) and the threat of pandemic:

Page 14: Building a benefit-risk framework for new medicines

Page 16: HIV Pathogenesis - is a vaccine possible?

Page 17: The problem with cancer

Page 18: Can intelligent cuts in drug R&D ease the pain?

Page 19: Protecting a nation from drug disasters

### SCIENTIFIC RESEARCH

Page 20: Swine influenza - lessons from history

Page 21: Race against time - building on past research to contain the H1N1 viral outbreak

Page 25: Thought leaders in the unthinkable

Page 26: Parasites - disease or delight?



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**World-class news and data direct to your iPhone, iPod or BlackBerry**

*The new Thomson Reuters mobile news application delivers much more than headlines – and it's free!*

The Thomson Reuters News Pro application enables iPhone, iPod touch and BlackBerry users to pull from the depth and breadth of our multimedia content including the latest breaking news, award-winning photographs, video coverage, financial charting, customized market data and company profiles.

“Rather than merely talking about innovation, we are actually putting substantial resources behind experimentation and development of new multimedia products for innovative devices and platforms”, said Chris Ahearn, president of media for Thomson Reuters. “This application is another way we provide our content across multiple platforms, enabling our business professional audience to access to Thomson Reuters content anytime, anyplace and anyway.”

**Download the news app now**

Thomson Reuters News Pro is currently available free from Apple’s App Store on iPhone and iPod touch or at <http://reuters.com/iphone>.

BlackBerry users can download the Thomson Reuters mobile reader free at <http://reuters.mwap.at/>

Read the Financial Times commentary on these news applications:

<http://tinyurl.com/mgbb97>



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## Put your research on the map with Intelligent Information for Life

*Thomson Reuters customers are applying intelligent information to tackle the challenges of the world – see our innovation map and hear some of their stories.*

There is a staggering amount of information available for scientists, scholars and researchers. We aim to help these professionals put facts to work in real-time - giving weight to inspiration, connecting scientists and innovators, and helping them tackle the challenges of the world. This extension of an individual's knowledge and expertise is what we call "intelligent information".

Intelligent Information for Life showcases how leading scientists and business professionals are using information, tools and services from Thomson Reuters to accelerate their research, discovery and innovation. The dedicated website includes a new innovation map where we feature groundbreaking research from around the world in areas as diverse as biomarker research, climate change cycles and crustacean parasites.

Put your research on the map! Visit the Intelligent Information for Life website:

<http://intelligentinformationforlife.com/home/>

### Scholarly R&D: coping with cuts

*It's inevitable there are going to be cuts in research funding. But even in the downturn, there are success stories for those who are prepared to show evidence of value.*

Jonathan Adams, Director of Research Evaluation for Thomson Reuters, sees core data being used in new ways to help research organizations demonstrate a return on investment. "Everyone is expecting cuts," he said. "We can now supply new services and analytical reports to help these organizations to come out on top when times get good again." Even in the downturn there are success stories for those who are prepared to show evidence of value.

### Bucking the trend

The University of Leeds is expanding its research program despite the downturn. Professor Peter Buckley, Director of the Centre for International Business at Leeds attributed the success to a concentration on areas of "outstanding research capability" and moving researchers to publish in high-impact journals. "We recently broke into the top 1% for citations in the field of Economics and Business," he said. "Achieving consistent high grades in research-assessment exercises means we have been able secure the funding to expand research capacity of the School."

See our Intelligent Information for Life interview with Jonathan Adams:

<http://intelligentinformationforlife.com/talkingpoint/jonathanadams/>

Read an interview with Professor Peter Buckley: <http://sciencewatch.com/inter/ins/09/09janUofLeeds/>



## Journal Citation Reports 2008 – more titles, new metrics

*Register now for free web-based training to help keep you up to date and take advantage of new functionality in Journal Citation Reports®.*

*Journal Citation Reports 2008 Science and Social Sciences Editions, released on June 19, 2009, deliver a series of content and analysis enhancements:*

- 350 titles+ with a Journal Impact Factor for the 1st time
- First ever update to new metrics: Five Year Impact Factors and *Eigenfactor™* Metrics (available only in *JCR® Web*)
- Over 400 new titles in the Science and Social Sciences Editions
- More than 8,000 of the world's most highly cited, peer-reviewed journals, including over 6,500 in the Science and over 1,900 in the Social Sciences Editions
- Journals from 3,300 publishers in approximately 227 disciplines, from 60 countries
- The largest time-trend analyses ever available

You can also take advantage of new functionality in *JCR Web* such as:

- Rank-in-Category Tables: Evaluate journals in the context of multiple categories
- Journal self-citations: See how self-citations affect Impact Factor
- Impact Factor boxplots: Visualize Impact Factor by journal category

We offer a variety of free training opportunities to help you explore today's journal landscape, including pre-recorded sessions and live web-based classes: <http://science.thomsonreuters.com/training/jcr/>. Plus, visit the Citation Impact Center forum to learn more and discuss how the latest release affects your view of today's journal landscape: <http://science.thomsonreuters.com/citationimpactcenter>

## Metrics-based research evaluation

*The challenges in building robust research evaluation and management systems in institutions can be best overcome by the research management and librarian community working together.*

Metrics-based research evaluation offers a pragmatic approach to ensuring transparency, consistency and objectivity, and is gaining increasing importance in assessing research performance on international, national and institutional levels. The challenges in building robust research evaluation and management systems in institutions can be best overcome by the research management and librarian community working together. These were some of the views that delegates shared following an international bibliometrics conference jointly hosted by the Healthcare and Science business of Thomson Reuters and the University of Queensland (UQ) in Brisbane, Australia in April 2009.

During the conference, which had over 140 delegates, distinguished international and Australian speakers addressed critical issues of research evaluation from their national perspectives, including the importance of synergy between institutions Libraries and Research Offices.

Conference podcasts, statistics and more:

<http://science.thomsonreuters.com/ausbiblioconference>

Conference report:

[http://www.thomsonreuters.com/content/press\\_room/sci/394860](http://www.thomsonreuters.com/content/press_room/sci/394860)

Learn more about bibliometrics in research evaluation:

<http://science.thomsonreuters.com/news/2008-07/8465001/>



## Open standards and accurate author identification – join the debate

*New Community Forums for ResearcherID include some lively exchanges around author identification.*

ResearcherID, available via ResearcherID.com, provides the global research community with an invaluable index to accurate author identification and information. By assigning a unique identifier to each author who participates, ResearcherID expressly associates each researcher with his or her published work—standardizing and clarifying author names and citations and making information searches more straightforward and relevant.

The new ResearcherID Community Forums – open to all – provide the opportunity for researchers to exchange ideas about issues surrounding author identification, to share techniques for getting the most out of ResearcherID, and to suggest new features and functionality to the ResearcherID Product Development team.

ResearcherID community forums:

<http://community.thomsonreuters.com/ts/?category.id=researcherid>

ResearcherID:

<http://www.researcherid.com>



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## Charting research performance

*Information Today's Barbara Brynko interviewed Jim Pringle about InCites, a customized, citation-based research analytics tool that enables you to evaluate and benchmark your institutional productivity.*

Jim Pringle, vice president of product development at Thomson Reuters, recently spoke to Information Today's Barbara Brynko about a Thomson Reuters initiative to help institutions and organizations track their performance in the marketplace, and analyze research productivity against their peers.

In focus groups and surveys, users reported their need for a reliable, fast, and easy way to calculate their research footprint in the global environment, and for more analytics to review data accurately and easily. InCites has been developed to meet these needs, and is now available via Web of Science.

InCites: Charting Research performance—read the full article

[http://science.thomsonreuters.com/m/pdfs/IT\\_Reprint.pdf](http://science.thomsonreuters.com/m/pdfs/IT_Reprint.pdf)

Learn more about InCites:

<http://isiwebofknowledge.com/incites/>

## A new set of rules for innovation

Stuart Recher

Thomson Reuters

*In tough economic times, forward-thinking IP leaders need to establish their own change management initiative such that corporate strategy is shaped (and in some cases dictated) through a company's investments.*

Business executives, regardless of their industry, are grappling with balance sheets in a state of flux as world leaders struggle to bring a sense of calm to their economies. With economies in the United States, Europe and Japan officially contracting, the reach of the recession is far and wide, touching all industries. However, there are two areas that should be insulated from its effects – IP portfolio management and research and development (R&D).

For those working in intellectual asset management (IAM), there is an important point to acknowledge: R&D and IP investment are as paramount in a bad economy as they are in a good one. These are the times when C-level executives should focus their IP and IAM strategies on resource optimization and innovation. IP portfolios become a fresh source of untapped value that can:

- increase a company's market value;
- provide a steady stream of cash;
- enable competitive advantage; and
- ensure predictable earnings growth.

In tough economic times, forward-thinking IP leaders need to establish their own change management initiative such that corporate strategy is shaped (and in some cases dictated) through a company's investments in innovation.

A new set of rules for innovation during times of economic uncertainty (PDF): read Stuart Recher's article, taken from "Building and enforcing intellectual property value 2009" (published by Globe White Page) <http://ip.thomsonreuters.com/media/pdfs/ipvalue2009.pdf>

## **Asian innovation takes hold in the US**

*The Thomson Reuters 2008 Global Innovation Study revealed that Asian innovation is taking hold in the US*

The Thomson Reuters 2008 Global Innovation Study analyzed the leading innovators by key region. The study tracked the top ten innovators in China, Europe, Japan, Korea and the U.S. on the basis of total number of unique inventions issued in granted patents and published patent applications. It found that 70 percent of the top ten innovators in the U.S. were non-U.S. companies. In contrast, home region innovators dominate the Asian and European top ten lists.

### **Innovation in the US**

Among the top innovators in the U.S. were — in order — Samsung Electronics Co. Ltd. (Korea); International Business Machines Corp. (U.S.); Microsoft (U.S.); Toshiba (Japan); Canon (Japan); Fujitsu Ltd. (Japan); Sony Corp. (Japan); General Electric Co. (U.S.); Seiko Epson Corp. (Japan); and Hon Hai Precision Ind. Co. Ltd. (Taiwan). Among the Asian firms who have developed a large innovation footprint in the U.S., Samsung, Toshiba, Canon, Sony Corp. and Seiko Epson also rank among the top ten innovators in their home regions. The American companies among the U.S. top ten do not rank in the top ten of any other regions in this study.

### **Europe**

In Europe, just one of the top ten innovators was from outside Europe: Samsung Electronics Co. LTD (Korea), which was the third most innovative company there last year. The remaining nine of the top ten are all European businesses. No European companies were in the top ten in the U.S. or Asia.

### **Asia**

All the Asian regions studied show that Asian companies see the importance of their native markets in terms of innovation reinvestment. The top ten innovators in Japan, China and Korea are Japanese, Chinese and Korean organizations, respectively.

See charts showing the breakout of the top ten innovators in each region, using data compiled using Derwent World Patents Index (DWPI):

[http://science.thomsonreuters.com/press/2009/innovation\\_study/](http://science.thomsonreuters.com/press/2009/innovation_study/)



**Join our seminar in Tokyo: Innovation crisis - how to evolve IP in your business strategy**

*Join industry leaders for a seminar and panel discussion on the innovation crisis, exclusively for intellectual property professionals.*

Thomson Reuters invites you to join us in Tokyo on July 8th to discover how to better manage your intellectual property (IP) portfolio and capitalize on your IP assets in the current economic climate.

Our distinguished guest speakers will be:

Mr. Hisamitsu Arai, ex-Commissioner of the Patent Office

Mr. Takafumi Yamamoto, CEO at TODAI TLO Ltd.

Mr. Kenichiro Senoo, Professor, Research Center for Advanced Science and Technology, The University of Tokyo

You can network with other intellectual property executives and specialists, learn how to manage business challenges encountered during the various stages of the IP lifecycle, and hear about the vision and direction of IP solutions at Thomson Reuters.

Date and time: July 8, 13:00-17:15

Venue: Tokyo International Forum Hall B5

Full information and registration at: <http://scientific.thomsonreuters.com/jp/ic>



## Influenza A (H1N1) and the threat of pandemic

*Download our free disease briefing on influenza, and access further detailed sources of information.*

As the influenza A (H1N1) virus spreads across the world, attention is focused on the pharmaceutical industry: how it will respond to the crisis, and what is being done to prevent further epidemics.

Thomson Reuters is adding its knowledge and expertise to the fight against this and further influenza A epidemics. We are pleased to offer, free to download by any interested party, our entire disease briefing on influenza, taken direct and unabridged from the wealth of information and knowledge in our investigational drug database Prous Science Integrity® and updated daily.

To download it, visit <http://science.thomsonreuters.com/pharma/h1n1/>

The disease briefings in Prous Science Integrity are dynamic executive summaries of the current status and future trends in drug therapy for a specific disease or disorder, providing key facts on the disease, such as risk factors, prevalence and incidence, morbidity and mortality figures, and cost, along with a structured, scientific approach to the R&D-related aspects of diagnosis, prevention and treatment. They utilize a mechanistic (target- or mechanism of action-based) approach to describing drug therapies that are currently under development and thus are potential new treatment options for the future.

The daily, free-to-download influenza disease briefing on the Thomson Reuters website differs from the information found on other H1N1 sites in its focus on drugs and vaccinations that are currently in the development pipeline or on the market. It brings a drug R&D approach to this subject, providing information designed for scientists in the pharmaceutical industry and academia, in contrast to the medical or epidemiological approaches found elsewhere.

It is our hope that making these data freely available will give investigators and researchers the information they need to better support efforts to limit its spread and severity.

## Building a benefit-risk framework for new medicines

Larry Liberti  
Thomson Reuters

*The CMR International Institute for Regulatory Science has made significant advances in outlining a common framework for the assessment of the benefits and risks of new medicines.*

Developing strong relationships with the regulatory agencies across the globe is key to the growth and popularity of the Emerging Markets Program from the CMR International Institute for Regulatory Science, a Thomson Reuters business. This program brings together regulators from emerging countries with academics and industry representatives to discuss ways to improve the regulatory processes to expedite patient access to medicines.

During a recent trip through Asia, Larry Liberti (Institute VP), Professor Stuart Walker (Institute Founder), and Dr Neil McAuslane (Institute Director) met with members of the Chinese SFDA, Center for Drug Evaluation, where they presented the results of several Institute research and development initiatives, particularly in the area of benefit risk.

Recently, the Institute has made significant advances in outlining a common framework for the assessment of the benefits and risks of new medicines. Several workshops have been convened on this topic and work continues on the development and refinement of a multi-criteria decision-based model and the study of the use of that model in real-world regulatory environments. Rather than follow the traditional pattern of first developing this framework with established regulatory agencies in Europe, the United States, Canada, Japan, and Australia, Institute Workshop participants recommended that agencies from emerging pharmaceutical markets be involved in the development of the model, so that complex regional, cultural and organizational differences be considered from the start.

Building the benefit-risk framework requires:

- identification of the factors of a medicine and its comparators to be evaluated
- identification of the evaluation criteria
- assessment of the performance of the medicine and its comparators against the criteria,
- assigning weights to the criteria
- calculation of the weighted scores
- a sensitivity analysis.

Challenges to the construction of a global framework include inconsistent clinical records, lack of direct



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comparator data, issues of confidentiality, and the different weights assigned to benefits and risks arising from disparate culture and medical practice. Additionally, a common lexicon must be established and the evolving nature of benefit-risk throughout a medicine's life cycle has to be accommodated. Institute members agree, however, that a quantitative benefit-risk model is achievable and would result in transparent and focused communication to all stakeholders.

You can read more about the Institute work on Benefit Risk in the Proceedings of its recent Workshop: Measuring Benefit and Balancing Risk: Strategies for the Benefit-Risk Assessment of New Medicines in a Risk-Averse Environment:

<http://www.nature.com/clpt/journal/v85/n3/abs/clpt2008277a.html>



## HIV pathogenesis. Is a vaccine possible?

*Webcast by Françoise Barré-Sinoussi, winner of the 2008 Nobel Prize in Medicine, on the current and future state of HIV research.*

Françoise Barré-Sinoussi, winner of the 2008 Nobel Prize in Medicine, recently gave a keynote speech at a celebration of the 10th anniversary of Prous Science - Timely Topics in Medicine-SIDA. In her presentation, Prof. Barré-Sinoussi discusses HIV pathogenesis, and the important lessons it provides for the future development of HIV/AIDS vaccines.

Professor Barré-Sinoussi is a researcher at the Regulation of Retroviral Infections Unit of the Virology Department, Pasteur Institute, Paris, and was awarded the 2008 Nobel Prize in Medicine for the discovery of HIV in 1983.

Dr. Bonaventura Clotet, Head of HIV Unit at the University Hospital Germans Trias i Pujol, Badalona, Barcelona, and Dr. Josep M. Gatell, Head of the Infectious Diseases Department at the Hospital Clinic, Barcelona, are codirectors of the continuing medical education program on AIDS ([www.ttmed.com/sida](http://www.ttmed.com/sida)), jointly sponsored by Abbott, Boehringer-Ingelheim, Gilead, Janssen-Cilag and Pfizer.

HIV Pathogenesis and the prospects of an HIV/AIDS vaccine, view the webcast:

<http://webcasts.prous.com/TTMED-SIDA2009/html/1-en/Home.htm>

Timely Topics in Medicine:

<http://www.ttmed.com/>



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## The problem with cancer

*Dr Jeffrey Ross talks about his research focusing on identifying biomarkers in breast and prostate cancer – and whether cancer screening could do more harm than good in some cases.*

Dr Jeffrey Ross is a renowned oncology researcher based at Albany Medical College in the USA. His career has been on two of the most common cancers in the western world - prostate cancer in men and breast cancer in women. In a short recorded interview, he talks about the value of biomarkers in personalizing diagnosis, prognosis and treatment.

Hear our Intelligent Information for Life interview with Dr Ross:

<http://intelligentinformationforlife.com/cancer/>

See Dr Ross' presentation at our Pharmaceutical Vision User Event in early 2008:

<http://science.thomsonreuters.com/biomarkercenter/>

## Can intelligent cuts in drug R&D ease the pain?

*When stock plunges, drug discovery budgets shrink. Survival is all about making the right go, no-go decisions as early as possible.*

Market expectations for sustained high annual growth from pharma remain high, despite shrinkage in drug discovery budgets. Smaller biotechs are also hit badly by the credit crunch as most are funded by raising revenue from capital markets rather than from selling products.

The pressure falls on R&D divisions to churn out multiple compounds each year that will generate enough revenue to offset products with expiring patents. "It's all about making the right go, no go decisions as early as possible in the process," says Phil Gould, Managing Director of Jadara Pharma, "before you've spent USD1 billion on the 'wonder drug' that only makes it halfway." As a former head of product introduction at GlaxoSmithKline, Gould knows that success hinges on the ability to focus full capacity on the most promising projects and cut out the rest.

See our Intelligent Information for Life interview with Phil Gould, Managing Director of Jadara Pharma: <http://intelligentinformationforlife.com/talkingpoint/philgould/>



## Protecting a nation from drug disasters

*Medical oncologist Professor Masanori Fukushima aims to translate Japan's highly regarded life sciences research into clinical practice for the benefit of practitioners and ultimately patients.*

In 2000 Professor Masanori Fukushima was invited to become a professor at Kyoto University and built the first pharmacoepidemiology department in Japan. Now, as Head of the Translational Research Infomatics Center in Kobe, he supervises an alliance of seven universities looking at all areas of medical treatment and devices such as prosthetic limbs.

Prof. Fukushima's mission is to bring Japan's basic medical scientific knowledge up to levels in the West. He attributes Japan's drug disasters, such as the recent 700 deaths resulting from an HIV drug with no evidence of effectiveness, to a weak position on science, with issues to address in drug discovery as well as in the regulatory process of approval and dispensing.

Hear our Intelligent Information for Life interview with Prof. Masanori Fukushima:

<http://intelligentinformationforlife.com/fukushima/>



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## Swine influenza - lessons from history identified by Web of Science

Simon Pratt

Thomson Reuters

*With 110 years of coverage of international scholarly journals, Web of Science can identify highly valuable research relating to influenza.*

Influenza epidemics are a rare occurrence, and the last epidemic of A/H1N1 strain (implicated in the 2009 outbreak of swine influenza) was in 1918. Scholarly research from that period of time may be of value to researchers today—however, research from this period can be difficult to locate because most literature databases do not cover so far back in time. Furthermore, narrowing in on the relevant and important articles may prove difficult because the research has fallen out of institutional memory

Web of Science covers over 11,000 authoritative scholarly journals and 130,000 academic conferences from around the globe, reflecting all fields of scholarly research. Its unique citation coverage facilitates linking between current research articles and those previous articles that were used by the researchers. Additionally, citations can instantly uncover the most important high-impact research.

In a recent Science Watch article, Simon Pratt used Web of Science to uncover important research from the past that may help researchers investigate the current Swine Influenza outbreak.

See the complete Science Watch report on swine influenza:

<http://sciencewatch.com/ana/hot/whatshot/04302009hot/>

## **Race against time - building on past research to contain the H1N1 viral outbreak**

Allen Yeo

Thomson Reuters

*Scientists and national policy makers rely on scientific literature to develop a fundamental understanding of the H1N1 virus and to expedite the development of antiviral drugs and vaccines.*

It has been just weeks since the start of the "swine flu" or H1N1 influenza virus outbreak, which was declared a pandemic on June 11 by the World Health Organization (WHO) (the first such declaration in 41 years). There is a general consensus amongst the global authorities that the virus should not be named Mexican flu since the genetic content is a hybrid of pig, bird and human influenza virus comprised of both European and Asian origin.

Memory is still fresh of the world's most recent influenza pandemic 41 years ago - the 1968 Hong Kong outbreak which took one million lives. The Spanish Flu of 1918-1920 killed more than 50 million people, or 2.5 percent of the world's population. The WHO is sparing no effort to preparing the global population to combat the virus. Any type of influenza outbreak has a high mortality trend associated with children and elderly. Apart from the "running nose" symptom commonly associated with flu, secondary bacterial infections leading to pneumonia or bronchitis are also prevalent.

Dr. Anthony Fauci, director of the U.S. National Institute of Allergy and Infectious Diseases commented that scientists are "working on developing a vaccine with hopes of having a pilot version ready for testing in a few months".

Hence, the quest for scientific literature by scientists and national policy makers is a necessity for their fundamental understanding of the H1N1 virus, as they build on past research studies to expedite the development of antiviral drugs and vaccines in order to prevent a pandemic. The uncovering of critical past knowledge also explains the impact of H1N1 virus on humans, animals and the environment we live in.

### **1976 swine flu outbreak**

It has been reported that there was an outbreak of swine influenza in Fort Dix, New Jersey, USA in 1976 (Gaydos JC; 2006). The virus caused severe respiratory illness in 13 soldiers resulting in one death, but the outbreak was quickly contained within a month. However, the mystery remained as to the source of the virus. Although credit was given to early medical intervention, the authorities were left pondering the question of "why did the transmission stop?" This was followed by a national swine flu vaccination

campaign. Subsequently, it was reported that the vaccine had been strongly associated with the development of the neurologic disorder Guillain-Barre syndrome (GBS) (Nachamkin I; 2008).

The world is worried about human to human transmission, whilst pig farmers are concerned that infected humans do not pass the virus on to their pigs. The Center for Disease Control and Prevention (CDC, USA) recorded that inter-human transmission is low; there were only 12 confirmed cases between 2005 and 2009.

### Vaccine development

G. Neumann in 1999 described a new reverse-genetics system that enables efficient generation of Influenza-A viruses entirely from cloned cDNAs (the core replicating block of genes). This system, which does not require helper virus infection, is very useful in mutagenesis studies and vaccine production, and received more than 300 citations in 25 Web of Science subject categories spanning respiratory and cancer studies to drug development and adversity. The comprehensive mapping of both past and current research is vital to understanding the various research applications to date. Researchers often use the Web of Science citation tree to visualize such revolutionary effect to monitor and clarify related research applications and seek collaborators. The citation tree helps researchers to clearly visualize and understand the connection between relevant past research (cited references) and articles of subsequent influence (known as forward citations).

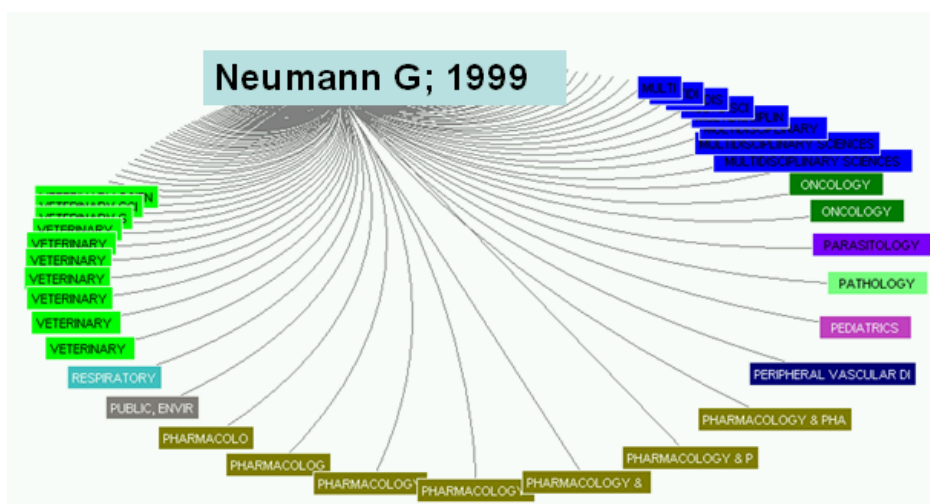


Fig 1: Forward citations as shown by Java-enabled Citation Tree from Web of Science

## Global H1N1 research

The global scientific community has been reporting on H1N1-related influenza studies for many decades. There are, up to date, 1,574 related unique journal articles (or records) and conference proceedings published worldwide in Web of Science® (using topic search field: “H1N1”). Mathematically, Thompson WW in 2003 attempted, in his publication, “to develop a statistical model to predict USA annual flu-associated deaths by age group, virus, and influenza type and subtype”; and this has received a staggering 650 citations in total to date.

So which are the top organizations and countries studying the H1N1 virus? The top five institutions and countries based on total records published in Web of Science® using “H1N1” search field are:

NO.	INSTITUTION NAME (ABBREVIATED)	RECORDS
1	ST JUDE CHILDRENS HOSP (USA)	98
2	CTR DIS CONTROL & PREVENT (USA)	97
3	DI IVANOVSKII VIROL INST (Russia)	58
4	NATL INST HLTH (USA)	76
5	UNIV WISCONSIN (USA)	45

NO.	COUNTRY (ABBREVIATED)	RECORDS
1	USA	681
2	JAPAN	184
3	ENGLAND	164
4	GERMANY	77
5	PEOPLE R CHINA	77

Fig 2: Top five institutions and countries studying H1N1. Source: Web of Science

## Preparing for the second wave

Although the WHO has made it clear that the H1N1 pandemic is indicative of the geographical spread and not the severity of the virus, they have cautioned the health authorities to be prepared for a second wave of infection, possibly a mutated and virulent strain of the virus. The effective search for relevant information in the pursuit of scientific knowledge is paramount in aiding our understanding of what was reported before and helping us uncover critical knowledge of past clinical studies and efficacy of drugs in development. This helps us to avoid the duplication of past research work and focus on promising or new areas of research.

Developing a vaccine or an antiviral drug is undoubtedly a race against the clock. Building on past scientific literature has yielded invaluable knowledge and tools to researchers and scientists worldwide that has proven effective and timely in helping them to understand our community better, and aid in their



'race against time' to develop a cure and vaccine sooner, rather than later.

**References:**

Title: Mortality associated with influenza and respiratory syncytial virus in the United States

Author(s): Thompson WW, Shay DK, Weintraub E, et al.

Source: JAMA-JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION Volume: 289 Issue: 2

Pages: 179-186 Published: JAN 8 2003

Title: Swine influenza A outbreak, Fort Dix, New Jersey, 1976

Author(s): Gaydos JC, Top FH, Hodder RA, et al.

Source: EMERGING INFECTIOUS DISEASES Volume: 12 Issue: 1 Pages: 23-28 Published: JAN 2006

Title: Anti-ganglioside antibody induction by swine (A/NJ/1976/H1N1) and other influenza vaccines:  
Insights into vaccine-associated Guillain-Barre syndrome

Author(s): Nachamkin I, Shadomy SV, Moran AP, et al.

Source: JOURNAL OF INFECTIOUS DISEASES Volume: 198 Issue: 2 Pages: 226-233 Published: JUL 15 2008

Title: Generation of influenza A viruses entirely from cloned cDNAs

Author(s): Neumann, G; Watanabe, T; Ito, H, et al.

Source: PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA Volume: 96 Issue: 16 Pages: 9345-9350 Published: AUG 3 1999

## **Thought leaders in the unthinkable**

*Science Watch examines highly cited research on bioterrorism over the last decade.*

Science Watch's content usually reflects humankind's higher aspirations to advance knowledge and improve life, but its recent analysis represents the opposite impulse: bioterrorism. The study extracted data based on a special list of pertinent keywords, revealing over 12,000 bioterrorism-related papers published in Thomson Reuters-indexed journals between 1999 and 2008. From this set of papers, Science Watch identified the most-cited institutions, authors, and journals.

### **Most cited paper**

The most-cited paper in this collection dates from 2001 and reports the genome sequence of *Yersinia pestis*, the causative agent of plague (S. Baker, et al., *Nature*, 413: 523-7, 2001; now cited nearly 500 times). The next-most-cited paper appeared in the *New England Journal of Medicine* with the succinct title "Anthrax" (T.C. Dixon, et al., 341: 815-26, 1999)—two years before the incidents in late 2001 in which anthrax-tainted mail killed five people in the US; this paper has now been cited more than 400 times.

### **Most cited author**

Arthur M. Friedlander, of the U.S. Army Medical Research Institute for Infectious Diseases, takes first place amongst the highly cited authors. Among many other papers, Friedlander contributed to the reports from the Working Group on Civilian Biodefense (a US group that produced papers examining the potential bio-weapon implications of smallpox, anthrax, tularemia, plague, botulinum toxin, and hemorrhagic fever).

### **Most cited institution**

Based on total numbers of citations, the U.S. Army heads the list of most cited institutions. However by the measure of citations per paper, The Institute for Genomic Research (TIGR) scores highest, thanks in part to its participation in a 2002 report on the sequence of *Bacillus anthracis* Ames—a strain that causes inhalational anthrax—and its comparison to closely related bacteria. Friedlander also contributed to this report, as did some of the other authors featured here: Timothy D. Read, Philip C. Hanna, and TIGR's then-president, Claire M. Fraser-Liggett.

See the complete Science Watch report and data tables:

<http://sciencewatch.com/ana/fea/09mayjunFea/>



## Parasites – disease or delight?

*Biologists have increasingly understood that parasites are part of a fully functional living world and if removed, the infrastructure of our planet would be drastically altered.*

Professor Jens Hoeg from the University of Copenhagen in Denmark studies the highly evolved parasites that live on crustaceans using a series of molecular experiments and field sampling, and by applying the information in Web of Science to optimize his research efforts.

His particular focus is the European shore crab, which through human interference has spread to Tasmania in Australia, and to the east and west coast of America. In these ecosystems the crab spreads much faster than in its home in Europe and could do immense damage to local fauna and shellfish fisheries. In a short interview with Thomson Reuters Prof. Hoeg explains how certain parasites, and even some bacterial diseases, actually sustain and nourish ecosystems and habitats. By understanding these parasites more clearly, we can be in a much better position to protect our environment when natural or imposed changes occur.

Hear our Intelligent Information for Life interview with Prof. Hoeg:

<http://intelligentinformationforlife.com/parasites/>