Nobel Prizes and Reputation
How citations predict Nobel Prizes.

Simon Pratt

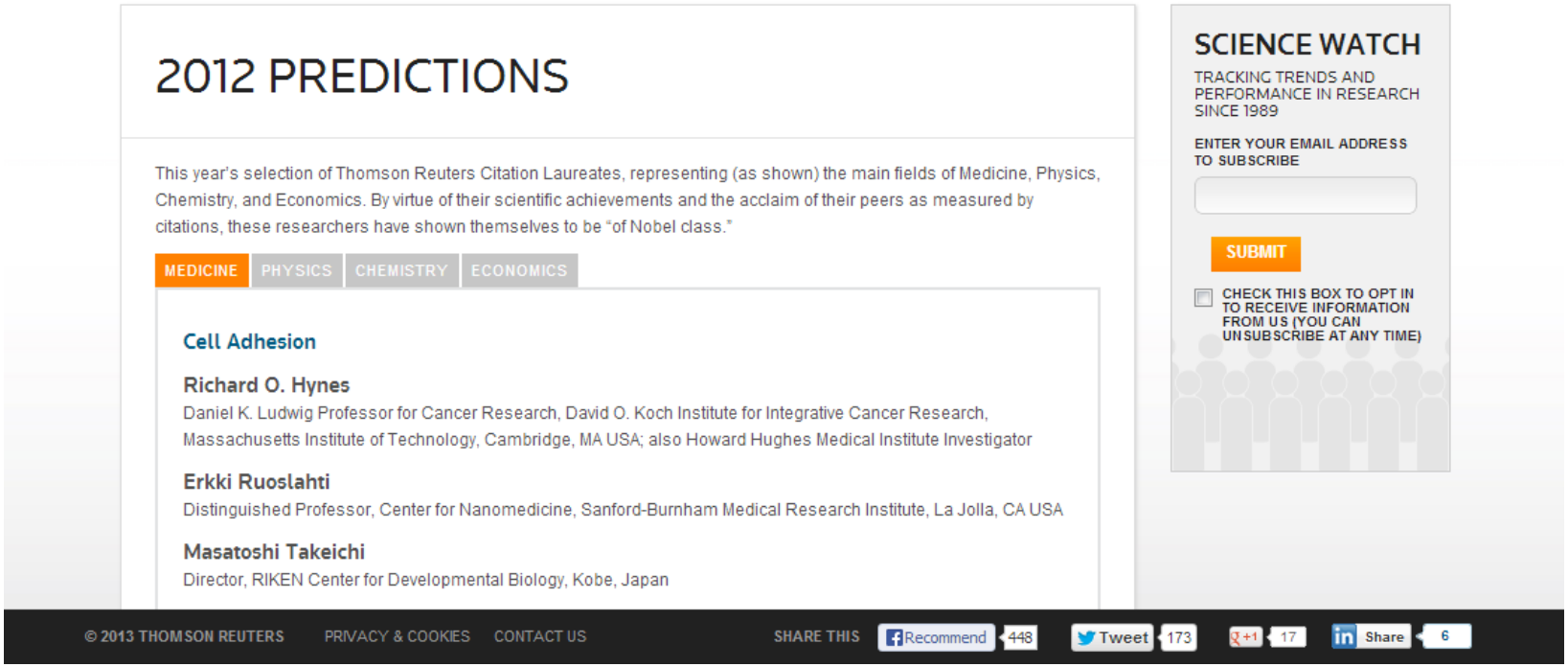
THOMSON REUTERS

What do we do?

- Every year since 2002 we have predicted potential Nobel Prize winners
- Over the years we have got quite a few right!
  - But rarely in the right year....
  - It requires a bit of luck to predict a Nobel Prize, but we aim to maximise our chances
- It’s a fantastic PR campaign for us
  - Coverage in global news media
  - Website traffic
  - Social media
  - Recipient's promotional materials

2013 predictions

- Sorry they aren't available yet....
- But keep your eyes on: sciencewatch.com over the next few days



How do we do it?

- “Numerous studies in the past three decades have shown a strong correlation between citations in the literature and peer esteem, often reflected in professional awards, such as the Nobel Prize.
- This should cause no surprise. Citations have been likened to repayments of intellectual debts, so persons who have accumulated such credits from their peers are often those whom these peers nominate for prizes and other honors”
  - David Pendlebury, Thomson Reuters

How do we do it?

- We look at a variety of indicators
  - High-impact papers
  - Total citation counts
  - Citations per paper relative to field averages
  - Author disambiguation is time consuming
- Does the data reflect themes that might be considered worthy by the Nobel Committee
- There are other considerations, for example:
  - Nobel prizes are generally not awarded for theoretical research (unless proven)
  - Deceased researchers are not awarded the prize

Not simply a list of names

For each prediction we aim to have a package of information

Hunter is suggested as a possible Nobel Prize winner "for the discovery of tyrosine phosphorylation and contributions to understanding protein kinases and their role in signal transduction"

Pawson is suggested "for identification of the phosphotyrosine binding SH2 domain and demonstrating its function in protein-protein interactions"

OVERVIEW | INTERVIEW

Interview with **Anthony "Tony" R. Hunter**, American Cancer Society Professor, Molecular and Cell Biology Laboratory, Renato Dulbecco Chair, Salk Institute for Biological Studies, and Adjunct Professor, Section of Molecular Biology, University of California, San Diego

For the discovery of tyrosine phosphorylation and contributions to understanding protein kinases and their role in signal transduction

…ief overview of your field of research and explain what led you to focus in this area?

…stand how signal transduction pathways that transmit signals through post-translational …eins, such as phosphorylation, regulate cell behaviors, including proliferation and cell cycle …rk on animal tumor viruses as models for human cancer, when I joined the Salk Institute as …71. I was studying a small DNA tumor virus called polyomavirus, and ultimately this led to our …T antigen, one of the three polyomavirus transforming proteins, is associated with a protein …e unique ability to phosphorylate tyrosine in proteins. This was quickly followed by our …forming protein encoded by Rous sarcoma virus was also a tyrosine kinase, implying an …yrosine phosphorylation in cancer. Ever since then, I have been deeply interested in the functions of protein phosphorylation. When the first protein kinases were cloned and sequenced in the early 1980s, I began to catalogue protein kinases based on the relatedness of their catalytic domains, and this led to my 1987 prediction that mammals might have as many as 1001 protein kinase genes. When the human genome sequence was reported in 2001, we were able to define the complete human kinome, which has over 530 protein kinases, including 90 tyrosine kinases.

Q: **What did you want to accomplish when you began your research?**

A: When I began studying tumor viruses, I hoped to learn more about the mechanisms of cellular transformation at the molecular level that might ultimately lead to better cancer therapies. We have certainly been successful in that regard, but my research has not taken a linear path and we have diversified in many directions, and based on my interest in phosphorylation, which is involved in most cellular processes, we have moved into many new areas.

Q: **What notable problems, challenges, or obstacles did you face? Conversely, have there been particular sources of enjoyment, satisfaction, or pride?**

A: In the early days of our work on tumor viruses, molecular biology techniques were very primate, and the lack of

Anthony "Tony" J. Pawson

SW COLUMNIST PODCAST

Listen to ScienceWatch Biology correspondent Jeremy Cherfas discuss these Citation Laureates and their insights into cellular function.

LAUREATE INTERVIEW

Interview with Citation Laureate, Anthony "Tony" J. Pawson

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Sometimes we have a ceremony too

- Although there is not a formal ceremony, we have on occasion given “Citation Laureate” awards

Professor Masatake Haruta, Tokyo Metropolitan University

Recipients also publicise the award

Institute for Integrated Cell-Material Sciences, Kyoto University
京都大学 物質－細胞統合システム拠点

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New Thomson Reuters Citation Laureates Susumu Kitagawa, Shinya Yamanaka

Media Coverage

Septer

Thomson Reuters announced on the 21st that Kyoto University's Institute for Integ
Material Sciences (iCeMS) Deputy Director Susumu Kitagawa as well as the universi
for iPS Cell Research and Application (CiRA) Director and iCeMS Prof. Shinya Yam
among the 21 recipients of its 2010 Thomson Reuters Citation Laureates.

Laureates typically rank among the top one-tenth of one percent (0.1%) of rese
their fields, based on citations of their published papers over the last two decades.

Prof. Susumu Kitagawa	
Prize Category	Chemistry
Reason	*For the design and development of porous metal-organic framew applications include hydrogen and methane storage, gas purificat separation, among others.*

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Nobelprize.org
The Official Web Site of the Nobel Prize

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Nobel Prizes and Laureates

Medicine Prizes | 2012

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All Nobel Prizes in Physiology or Medicine
All Nobel Prizes in 2012

The Nobel Prize in Physiology or Medicine 2012
Sir John B. Gurdon, Shinya Yamanaka

Shinya Yamanaka - Facts

Photo: U. Montan

Shinya Yamanaka

Born: 1962, Osaka, Japan

Affiliation at the time of the award: Kyoto University, Kyoto, Japan, Gladstone Institutes, San Francisco, CA, USA

Prize motivation: "for the discovery that mature cells can be reprogrammed to become pluripotent"

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How successful are we?

- 27 successful predictions since 2002
  - Chemistry 3
  - Economics 7
  - Medicine 10
  - Physics 7
- We typically predict 3 research topics per year, up to 3 people per topic.
- We get something right every year. But often the prediction pre-dates the award by a number of years

The media impact: Website

27,632 people visited this site

Visits	32,392
Unique Visitors	27,632
Pageviews	78,929
Pages / Visit	2.44
Avg. Visit Duration	00:02:03
Bounce Rate	47.01%
% New Visits	85.30%

The media impact: Media

- Facebook – 225,000 reach, 2,200 likes, 600 shares
- 294 media outlets ran the press release
- 537 media outlets covered the 2012 citation laureates
- 122 original articles and significant blog posts
- Major coverage on Reuters news, AP and USA Today – generated 121 additional press appearances

Thank you!

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