

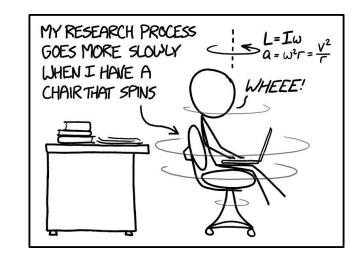
Identifying Key
Scientists and Rising
Stars

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Fanconi Anemia Research Fund 2020 Scientific Symposium



Abstract / Overview

- Established leaders in a scientific area such as Fanconi Anemia are often well-known and easily identified
- Finding the next cohort of top researchers who might benefit from funding can prove to be a challenge.
- We present a method to identify both the Key
 Opinion Leaders as well as the Rising Stars in the
 FA field, based on their scientific publications, using
 Elsevier's technologies and databases.





Key Scientists and Rising Stars

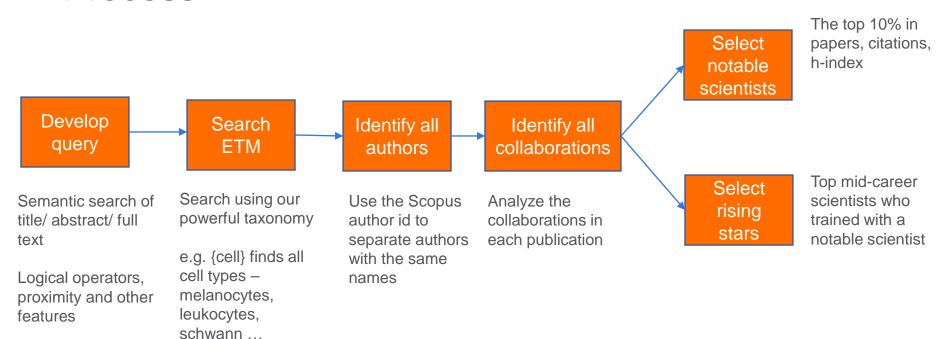
The presented analysis can help scientists and funding agencies:

- Identify the established leaders in your scientific area
- Identify mid-career researchers
- Identify organizations funding that area of research
- Identify funding candidates
- Find collaborators for your projects, established or mid-career
- Identify current collaborations of the key scientists
- Identify funding sources for your research





Process





Process

- 1. Create search to identify the corpus of publications in the desired field.
 - Develop the query for Elsevier Embase or Elsevier Text Mining.
 - Search systems use full taxonomies {cell} finds all types of cells "melanocytes"
- 2. Identify the notable authors of the papers in the corpus
 - "Disambiguate" authors using the Scopus author identification system
 - Find their year of first publication, year of most recent in-field publication
 - Total publications, in-field publications, total citations, in-field citations, h-index, other metrics, total patents filed.
- 3. Identify mid-career researchers who have trained with one or more notable authors
 - Published from same institution as a notable author
 - Compute metrics above

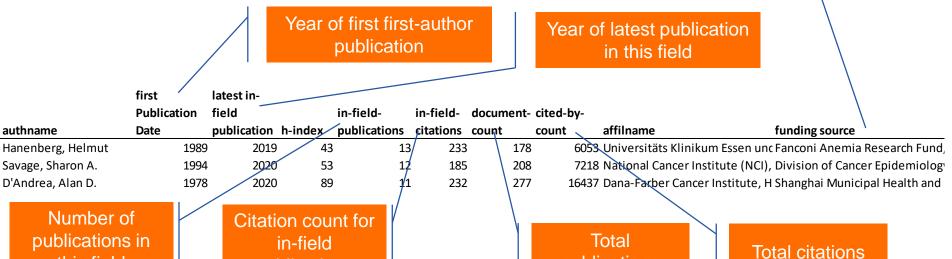


Notable Scientists

 Notable - top 10% of all authors in-field in papers published, citations, h-index (customizable)

publications

Funding sources for research



publications



this field

Rising Stars

1. First publication between 2003-2015 (customizable)

Notable collaborator

2. Collaborated with notable scientist

	first	latest in-										\
	Publication	Publication field		in-field- in	n-field-	document- cited-by-		ed-by-				\
authname	Date	publication	h-index	publications c	itations	count	co	unt affilname		funding source	doi	co-author authname
Mehta, Parinda A.	2004	2020) 25	11	98	3	81	1517 Cincinnati Chi	ildren's Hospital N	Fanconi Anemia Rese	arch F 10.3390/	v100 Davies, Stella M.
Myers, Kasiani C.	2009	2020) 27	7	54	ŀ	87	1181 Cincinnati Chi	ildren's Hospital N	Fanconi Anemia Rese	arch F 10.3390/	v100 Davies, Stella M.
Zhang, Xichen	2008	2020	18	5	39)	43	410 UPMC Hillmar	n Cancer Center	Fanconi Anemia Rese	arch F 10.21873	3/invi Greenberger, Joel



Notable Scientists for Fanconi Anemia

- Aguilera, Andrés Fasth, Anders L Blazar, Bruce R. Gale, Robert Peter Kernan, N.A. Cosset, François Loïc Blomqvist, Carl Leemans, C. René Nebert, Daniel W. Jackson, Stephen P Levine, Beth O'Reilly, R.J. Wessels, Lodewyk F.A. Naldini, Luigi Ideker, Trey Williams, David A. Kiem. Hans Peter Wang, Yinsheng Kojima, Seiji Brakenhoff, Ruud H. Ogawa, Seishi Rosenberg, Philip S. Wipf, Peter Liehr, Thomas Muto, Manabu Davies, Stella M. Sung, P. Tolar, Jakub Chen, Junjie Wagner, John E. Lambert, Paul F. Yamamoto, Masayuki Savage, Sharon A. Gygi, Steven P. Otterson, Gregory A. Savage, Sharon A. Verheij, Marcel Parker, Michael W. Hanenberg, Helmut Vasiliou, Vasilis Locatelli, Franco Hanenberg, Helmut Mullikin, James C. Yeager, Meredith D'Andrea, Alan D. Grompe, Markus Pulsipher, Michael A. D'Andrea, Alan D. Grompe, Markus Lázaro, Conxi Yu, Herbert Alter, Blanche P. Eapen, Mary Schmutzler, Rita K. Alter, Blanche P. Eapen, Mary Joenje, Hans Greenberger, Joel DeFor, Todd E. Socié, Gérard Leblanc, Thierry Bertrand, Yves Zecca, Marco Stoppa-Lyonnet, Dominique Baruchel, André Shapiro, Geoffrey I. Aljurf, Mahmoud Su, Wu Chou Miyano, Satoru Goldgar, David E. Mannermaa, Arto Singh, B. Michel, Gerard Hromas, Robert Borg, Åke Grénman, Reidar Manoukian, Siranoush Hieter, Philip Caldés, Trinidad Helleday, Thomas Chanock, Stephen J.
- Based on initial search of in-field publications in the last 5 years
- Name size proportional to number of in-field publications
- Colour represents number of in-field citations (more blue = more citations)



Rising Stars for Fanconi Anemia

- Butsch Kovacic, Melinda Herrera-Moyano, Emilia Ballew, Bari J. López-Dóriga, Adriana Green, Allison M. 🖁 Thompson, David C. Linka, Rene M. Yu. Rui Wang, Youjin DeFor, Todd E. Srivastava, Mrinal Hou, Wen Ameziane, Najim Best, Ana F. Miller, Adam S. Wang, Hong Zierhut, H. Sondale Samuel B Myers, Kasiani C. Mehta, Parinda A. Webber, Beau R. Zhang, Xichen Shen, Xi Moreau, Lisa Sauter, Sharon Tian, Yanyan Zhang, Xue Oostra, Anneke B. Veigaard, Christopher B. Quintana, Luciana G. Ceccaldi, Raphael Adair, Jennifer E. Rhieu, Byung Han Huang, Yaling Ohashi, Shinya Gadalla, Shahinaz M. Dong, Hongbin Kovacic, Melinda Butsch Ebens, Christen L. Amanuma, Yusuke Ahmed, Syed Osman
- Based on in-field publications in the last 5 years
- Name size proportional to number of publications
- Colour represents number of in-field citations (more blue = more citations)



Funding Sources for Rising Star publications

Foundation for the National Institutes of Health
National Basic Research Program of China (973 Program) Doris Duke Charitable Foundation
Amsterdam/VUmc Institute for Cancer and Immunology Ministry of Health and Welfare
Health Resources and Services Administration Universitair Medisch Centrum Utrecht
National Center for Research Resources National Heart Lung and Blood Institute Ministerio de Economía y Competitividad
VU University Medical Center Generalitat de Catalunya Japan Society for the Promotion of Science
Israel Science Foundation Worldwide Cancer Research Türkiye Bilimsel ve Teknolojik Araştırma Kurumu

Division of Cancer Epidemiology and Genetics Rocket

Oulun Yliopisto Fanconi Anemia Research Fund

National Institutes of Health

National Institute on Aging National Cancer Institute Kræftens Bekæmpelse Wellcome Trust National Cancer Institute Consiglio Nazionale delle Ricerche

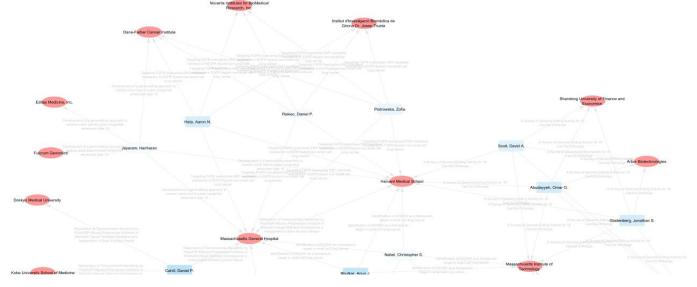
GlaxoSmithKline Sidney Kimmel Comprehensive Cancer Center Institut National Du Cancer
China Scholarship Council National Comprehensive Cancer Network Chinese Academy of Sciences
Fundación Científica Asociación Española Contra el Cáncer Cancer Research UK
BT Japan Agency for Medical Research and Development Breast Cancer Research Foundation
Department of Clinical Genetics and the Cancer Center

Agencia Estatal de Investigación National Research Foundation Singapore Allos Therapeutics Institució Catalana de Recerca i Estudis Avançats American Lebanese Syrian Associated Charities



Further extensions: collaboration graph

 Graph the collaborative network to understand who is collaborating with other companies or university research centers





Analytic Services

- Collaborative process to develop query that creates a corpus of publications for the field of your interest
 - We provide sample sets to ensure that the set incorporates the correct papers
 - Typically 1 to 2 rounds of refinement to finalize the query
- Customize search filters and parameters for your needs
 - Date ranges, definitions of "top" authors
 - Custom analytics



Questions?



- Can also be asked via e-mail: <u>f.broek@elsevier.com</u>
- LinkedIn: https://www.linkedin.com/in/frederik-van-den-broek/

