



Lecture 5:

Literature search: Techniques and search engines

Course 501

Writing and Communication Skills



AIMS

- Conduct literature research
- Learn about academic search engines and websites
- Identify recent published literature related to your research project or field of study.

A *de novo* 2.3 kb structural variant in *MITF* explains a novel splashed white phenotype in a Thoroughbred family

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Funding information

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Abstract

Splashed white in horses is characterized by extensive white patterning on the legs, face and abdomen and may be accompanied by deafness. To date, seven variants in *microphthalmia-associated transcription factor* (*MITF*) and two variants in *Paired Box 3* (*PAX3*) have been identified to explain this phenotype. A splashed white Thoroughbred stallion, whose sire and dam were not patterned, was hypothesized to have a *de novo* variant leading to his white coat pattern. A whole-genome sequencing candidate gene approach identified two single nucleotide variants (SNVs) in *SOX10*, four SNVs in *MITF* and a 2.3 kb deletion in *MITF* with the alternative allele present in this stallion but absent in the other 18 horses annotated as modifiers and were not further considered. A part of the helix–loop–helix domain required for *MITF* transcription factor activity was deleted. Whole-genome sequencing and parentage testing confirmed that this deletion was a *de novo* mutation of maternal origin. Consistent with the published nomenclature, we denote this likely causal variant as SW8. Genotyping three of this stallion's offspring identified SW8 only in the nearly all-white foal that was confirmed deaf by brainstem auditory evoked response testing. This foal was also a compound heterozygote for dominant white variants (W20/W22), but to date, W variants alone have not been connected to deafness. SW8 marks the fourth *de novo MITF* variant in horses reported to cause white patterning. The link between deafness and all *MITF* variants with and without other variants impacting melanocyte development and function needs to be further explored.

KEYWORDS

coat color, deafness, horse, pigmentation, white patterning

INTRODUCTION

Variation in white patterning has long fascinated animal enthusiasts and researchers alike. Moreover, some of these variations have a clinical connection and have similar counterparts in humans or other species. In horses, several different types of white patterning phenotypes

have been described including frame overo, tobiano, roan, leopard complex spotting, dominant white, sabino and splashed white (Sponenberg & Bellone, 2017). The molecular bases of many of these have been determined, with the first to be unraveled being the frame overo pattern in which white patterning is prevalent on the ventral aspects of the horse with the pigment 'framing' the

The title, abstract, and keywords are often the indexed items and are what you search for.

Google Scholar: A tool to collate and publicly display scholarly literature on the web.

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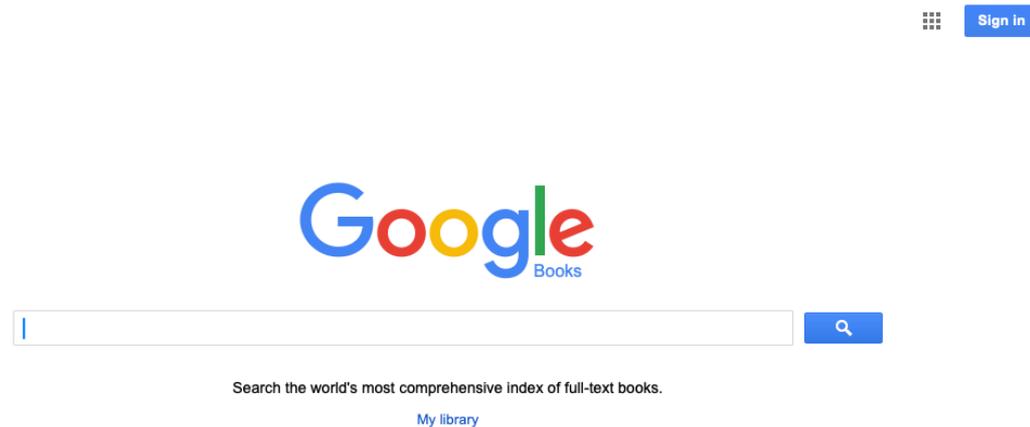
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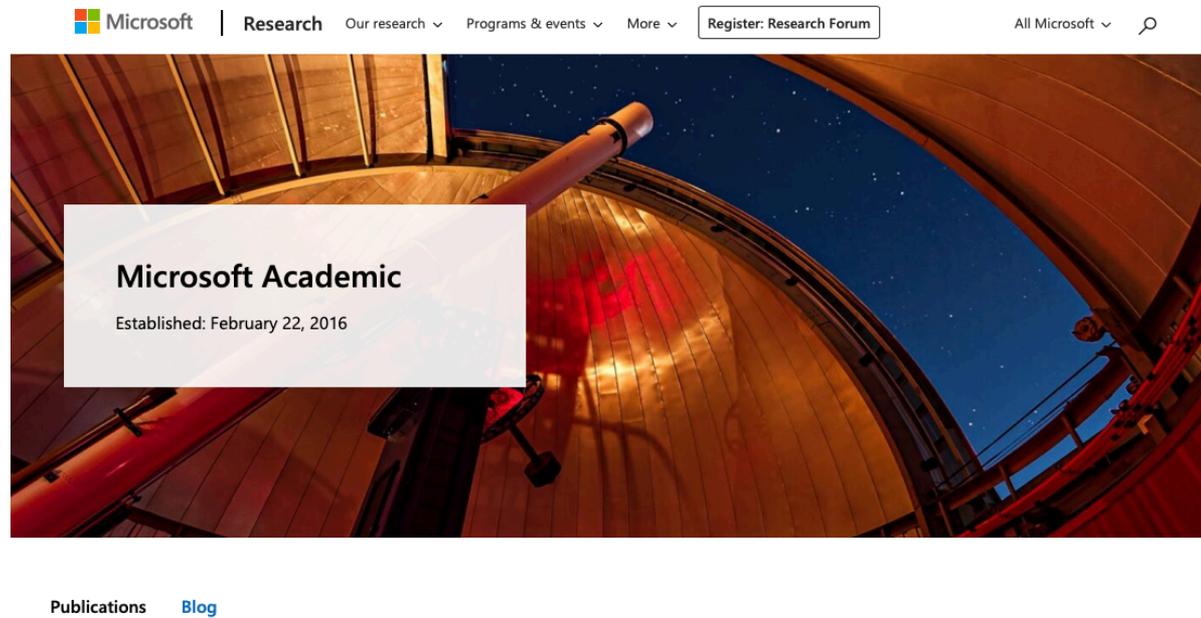
Articles Case law

Stand on the shoulders of giants

Google Books: A tool that allows web users to browse an index of thousands of books (Old and new) to find pages that include your search terms.



Microsoft Academic: A reliable and comprehensive tool. The search engine pulls content from over 120 million publications, including scientific papers, conferences and journals.



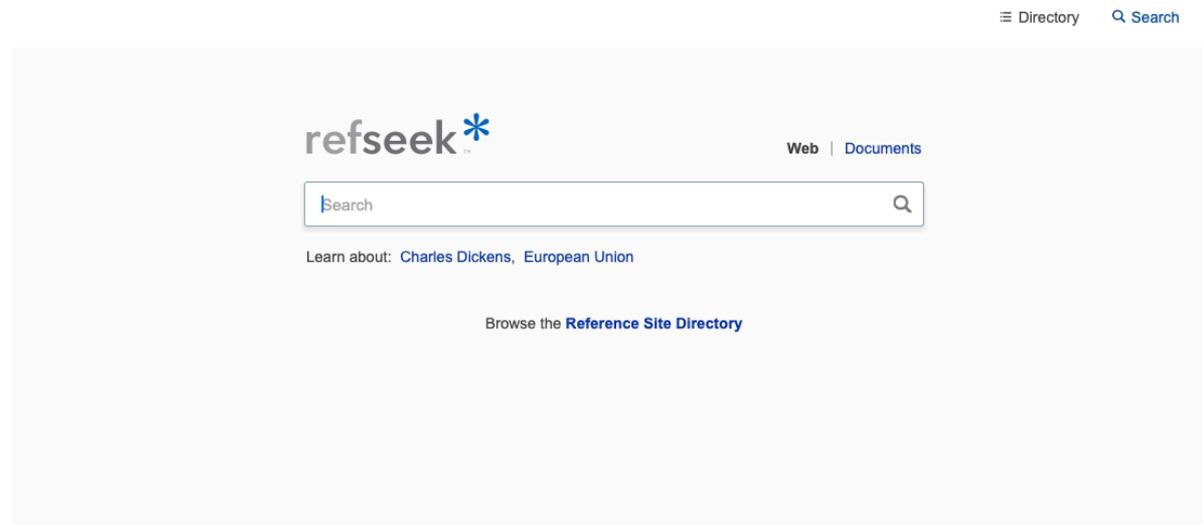


WorldWideScience: Refers to itself as “The Global Science Gateway”. A tool utilizes databases from over 70 countries and can provide hits from databases from all over the world. It will display both English and translated results from related journals resources.

Science.gov: A tool that can pull from over 60 databases, over 2,200 websites and 200 million pages of journals, documents and scientific data. Search results can be filtered by author, date, topic and format (text or multimedia).



Refseek: A tool that pulls from over one billion web pages, encyclopedias, journals and books. It is similar to Google in its functionality, except that it focuses more on scientific and academic results.



Educational Resources Information

Center (ERIC): A tool that is very useful for academic research with more than 1.3 million bibliographic records of articles and online materials.

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iSeek: A tool that is useful for students, teachers and administrators alike. “iSeek will pull from scholastic sources to find exactly what you are looking for. The search engine is safe, intelligent and timesaving and it draws from trusted resources from universities, government and established non-commercial sites.”

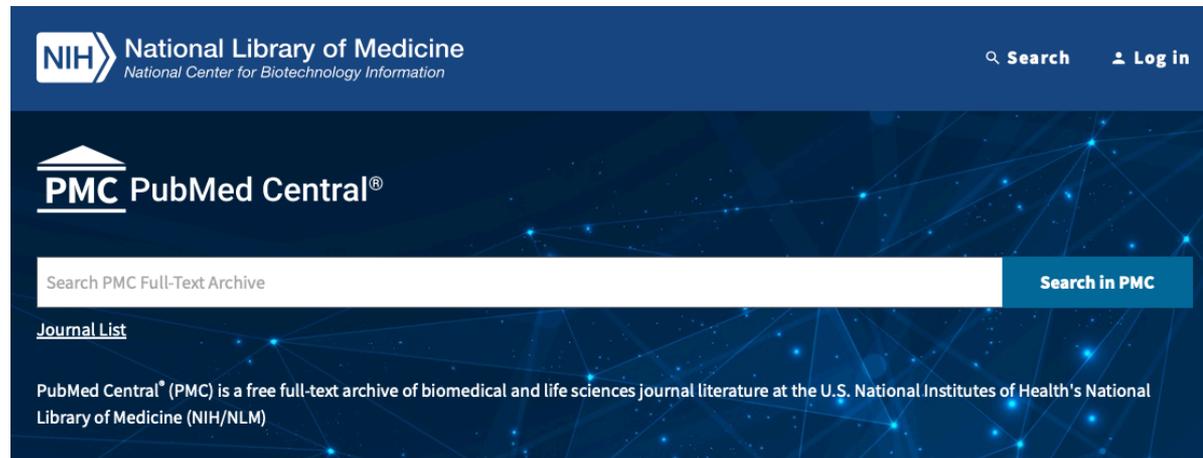
ResearchGate: A tool with a unique social networking site for scientists and researchers. “Over 11 million researchers submit their work, which totals more than 100 million publications, on the site for anyone to access.”

The screenshot shows the ResearchGate website interface. At the top, there is a navigation bar with 'ResearchGate' on the left, and 'Home', 'Questions', and 'Jobs' in the center. A search bar on the right contains the text 'Search for research'. To the right of the search bar are notification icons: a bell with a red '7', an envelope with a grey '12', and a speech bubble with a red '14'. A profile picture of a man and a blue 'Add new' button are also visible in the top right.

The main content area features a profile for 'Bader H. Alhajeri' with a dropdown arrow. Below the profile, it states 'authored this research' and displays the title of an article: 'Taterillus cranial shape variation is linked to allometry, geography, and climate (Gerbillinae, Rodentia)'. The article is categorized as 'Article' and dated 'September 2025 · 5 Reads'. It is associated with 'Mammal Research' and the author 'Bader H. Alhajeri'. At the bottom of the article section are buttons for 'Request full-text', 'Save', 'Follow', 'Recommend', and 'Share'.

On the right side of the page, there is a 'Research Spotlight' advertisement. It features a blue header with the text 'Research Spotlight' and a close button. The main text of the ad asks 'Want 4x more reads of your recent work?' and encourages users to showcase their work to get 4x more reads on average, with a 'Learn more' link. A blue 'Create Spotlight' button is located at the bottom of the ad.

PubMed Central: A tool that is operated by the National Center for Biotechnology Information, a division of the U.S. National Library of Medicine. The database contains more than 3 million full-text journal articles related to science and medicine.



The screenshot shows the PubMed Central website interface. At the top left, the NIH logo is displayed next to the text "National Library of Medicine" and "National Center for Biotechnology Information". To the right of this header are "Search" and "Log in" links. Below the header, the "PMC PubMed Central®" logo is prominently featured. A search bar with the placeholder text "Search PMC Full-Text Archive" is positioned below the logo, with a blue "Search in PMC" button to its right. Underneath the search bar is a link for "Journal List". At the bottom of the page, a descriptive paragraph states: "PubMed Central® (PMC) is a free full-text archive of biomedical and life sciences journal literature at the U.S. National Institutes of Health's National Library of Medicine (NIH/NLM)".



How to do the assignment?



Kuwait University
College of Graduate Studies
Scientific Writing & Communication
Skills spring 2024/2025

**Assignment 1: Techniques in literature search
and search engines**

Prof.
Student name:
Student ID:

Topic

The topic of our proposed thesis is: ‘The Effect of FDI on Unemployment Rate and Non-Oil GDP in the UAE’.

Keywords

FDI ¹
Unemployment rate
GDP ²
Growth
UAE ³

¹ FDI: Foreign Direct Investment.

² GDP: Gross Domestic Product.

³ UAE: United Arab Emirates.

1. Google Scholar ⁴

Keywords: FDI, Unemployment Rate, GDP

114,000 results

Modified keywords: FDI, Unemployment Rate, GDP, Growth, UAE

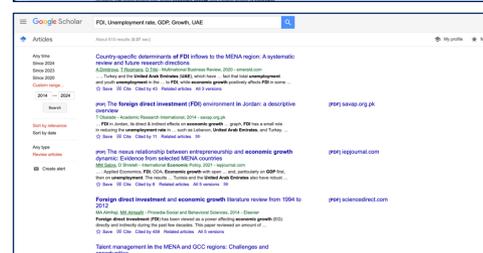
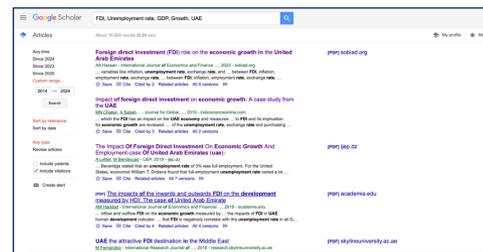
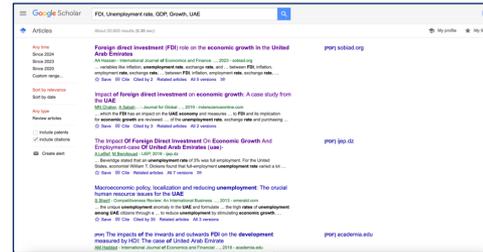
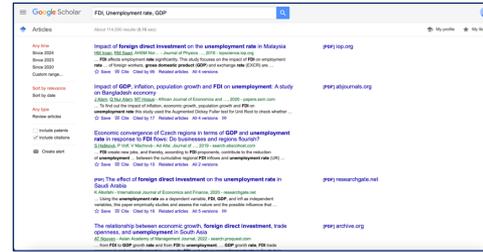
20,600 results

Filter by year (2014-2024)

16,900 results

Filter by article type (Review)

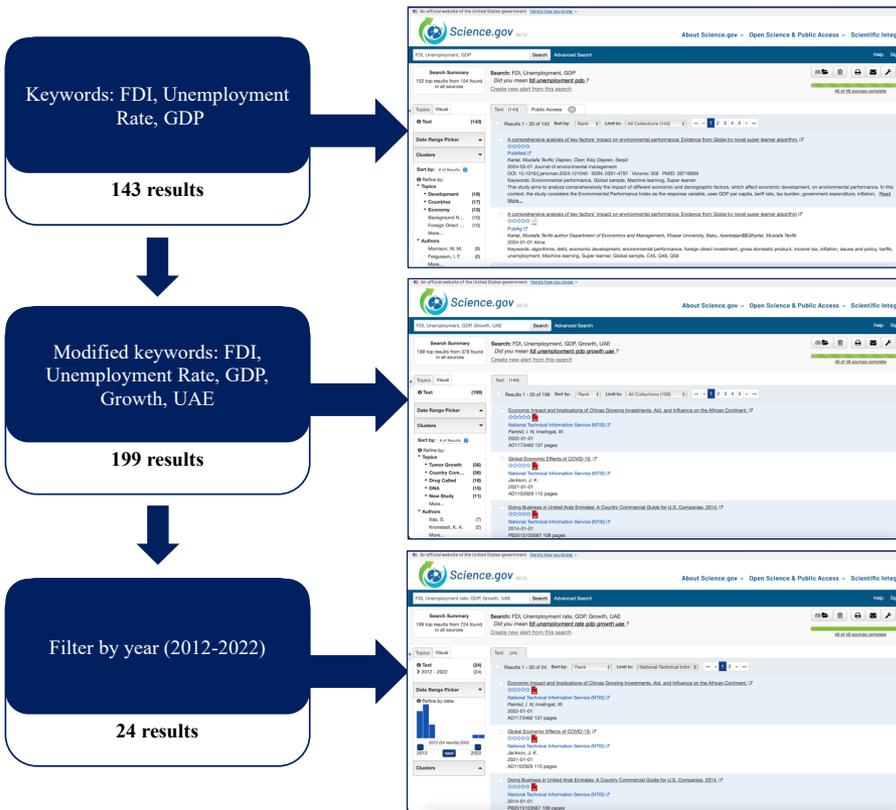
615 results



⁴ https://scholar.google.com/scholar?q=FDI+Unemployment+rate,+GDP,+Growth,+UAE&hl=en&as_sdt=0,5&as_ylo=2014&as_yhi=2024&as_r=1



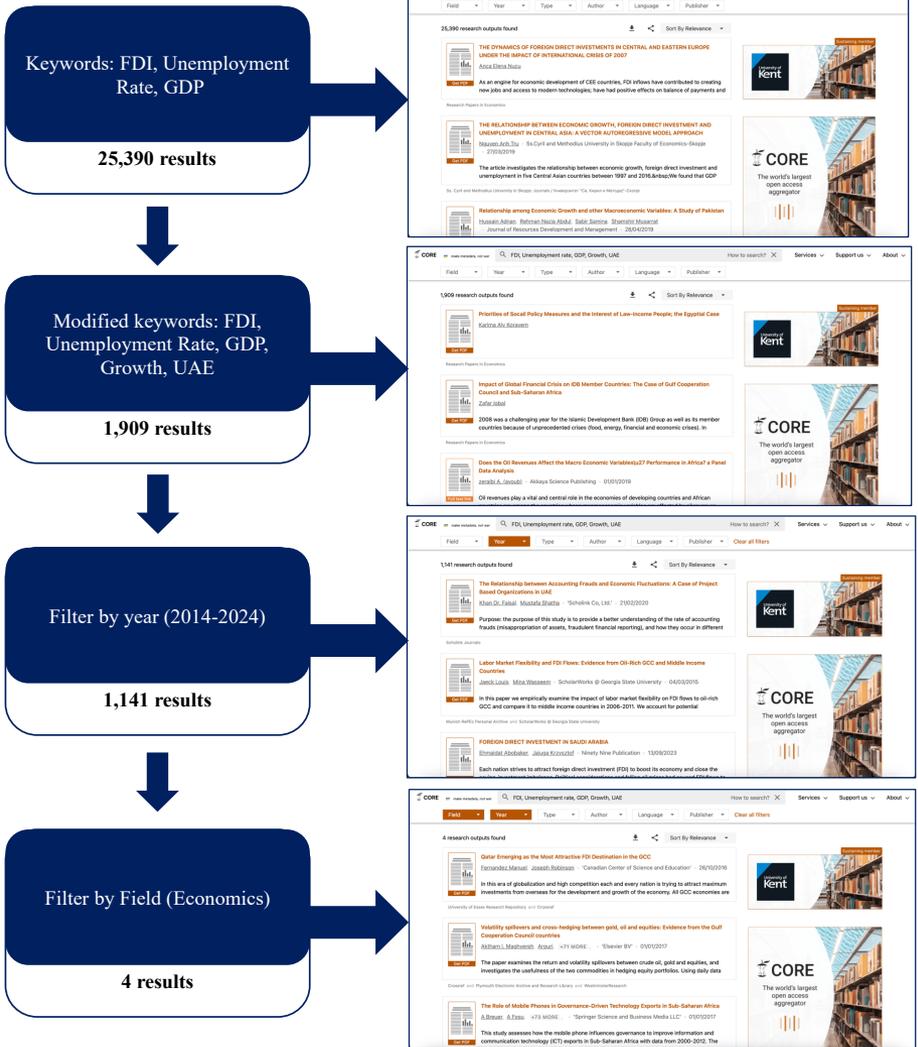
2. Science.gov⁵



Science.gov doesn't provide additional filters (like filter by article), although we were able to minimize the results by using the keywords and specifying the publish years.

⁵ <https://www.science.gov/scigov/desktop/en/results.html>

4. CORE ⁷



⁷<https://core.ac.uk/search/?q=FDI%2C+Unemployment+rate%2C+GDP%2C+Growth%2C+UAE+AND+%28yearPublished%3E%3D2014+AND+yearPublished%3C%3D2019%29&page=1>

The selected 10 topics as references for our research

1. **Foreign direct investments and natural resources : an empirical study on the Gulf Co-operation Council (GCC) by Mohamed M. Elheddad.**
2. **Determination of Foreign Direct Investment in the GCC Countries: A Socio-Political Study** by Mohd Naved Khan.
3. **Qatar Emerging as the Most Attractive FDI Destination in the GCC** by Manuel Fernandez & Robinson Joseph.
4. **Role of Foreign Trade and Foreign Direct Investment in the Process of Open Economy in the Emirate of Abu Dhabi** by Qais Saleh ALJunaibi & Sami Nizar Khasawneh.
5. **Foreign investment & growth in emerging economies: panel ARDL analysis** by Michael Appiah, Benjamin Korankye & Fanglin Li.
6. **Trade Openness, Foreign Direct Investment and Infrastructure Spending: A Comparative Analysis of Their Common Role in the Economic Development Between Selected Developed and Developing Economies** by Yasser M. Alwafi.
7. **Foreign Direct Investment: A Comparative Analysis between Iraq and the UAE** by Ghazwan Abdulhadi Sfayih Alabdalrahman, Haniff Ahamat, & Nabeel Mahdi Althabhawib.
8. **Economic Diversification Trends in the Gulf: the Case of Saudi Arabia** by Sarah Muhanna Al Naimi.
9. **Determinants of Foreign Direct Investment in Saudi Arabia: A Review** by Haga Elimam.
10. **Assessing the effect of foreign direct investment and foreign trade on the competitiveness of Arab economies: an econometric approach using panel data** by Mohamed Ismail.

Disclaimer

Figures, photos, and graphs in my lectures are collected using google searches. I do not claim to have personally produced the material (except for some). I do cite only articles or books used. I thank all owners of the visual aid that I use and apologize for not citing each individual item. If anybody finds the inclusion of their material in my lectures a violation of their copy rights, please contact me via email.

hhalhaddad@gmail.com