

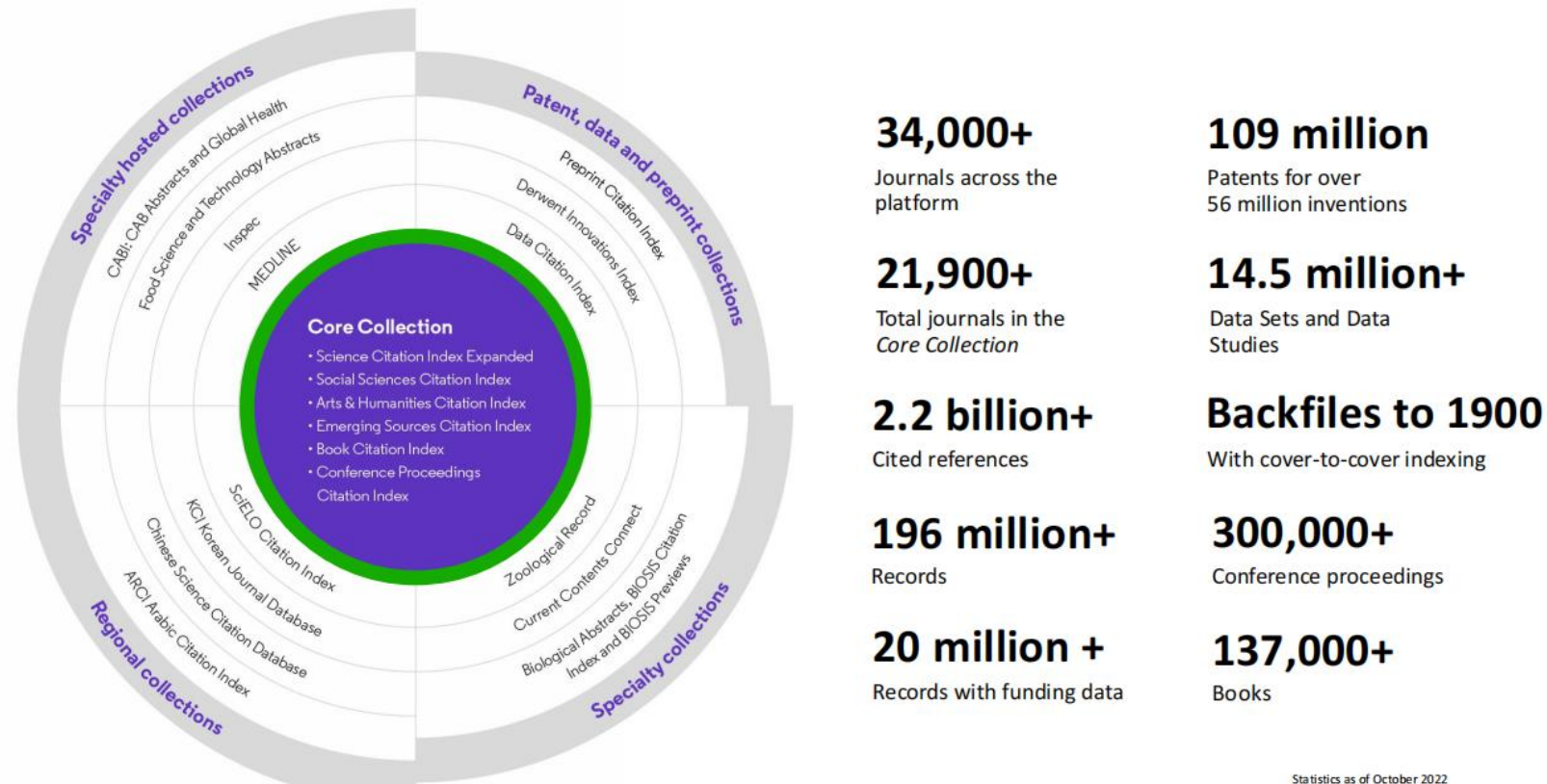
Web of Science

<https://www.webofscience.com/>

2025

Web of Science is a scientific platform that includes search databases across various fields and provides efficient access, analysis, and evaluation of research materials.

Web of Science: Platform - Scope and Figures



Core Collection

Web of Science Core Collection is the main resource on the platform and a reliable citation database for scientific research.

It includes:

- An archive from 1900 to the present.
- Over 21000 peer-reviewed, high-quality scientific journals published worldwide (including open-access journals).
- More than 300000 conference proceedings.
- Over 137000 books.

Access to the Resource

- <https://www.webofscience.com>
- When creating your personal account with an institutional email, you will also receive remote access.

Registration on Web of Science

Clarivate English ▾ Products

Web of Science™ Search Sign In ▾ **Register**

MENU

DOCUMENTS RESEARCHERS

Search in: Web of Science Core Collection ▾ Editions: All ▾

DOCUMENTS CITED REFERENCES

All Fields ▾ Example: liver disease india singh

+ Add row + Add date range Advanced search

× Clear Search

18 ?

Registration on Web of Science

Clarivate

English ▾

Web of Science™

Register for a FREE Web of Science Profile

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Password *

👁

Re-enter password *

👁

First Name *

Last Name *

Avb2e

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Captcha *

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Save your searches or create customized marked lists to organize your research.



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Find new content faster
View recommended content in your search results and directly on your personalized homepage.



Stay up to date
Receive alerts for new search results, citing articles, and journal content in your research area.

Sign in



English ▼

Web of Science™

Welcome!

Sign in to continue with Web of Science

Sign in

Register

Email address *

Please enter a valid email address.

Password *

Please enter a password

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Sign in

Register to personalize your Web of Science experience

With your institution's access, you can register for an account to unlock more Web of Science features:



Save work

Save your searches or create customized marked lists to



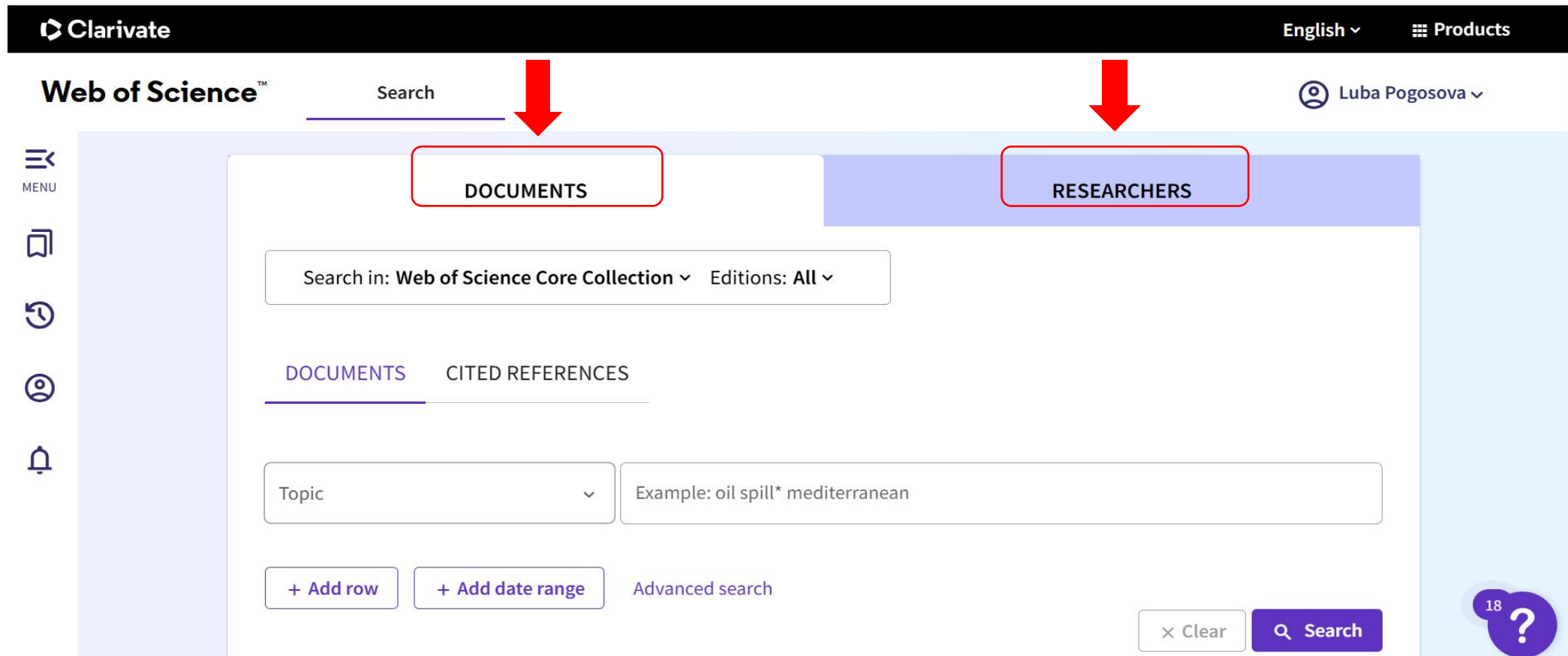
Connect to more products

Export to your EndNote library with one click and stay signed in

Main Search Sections:

Documents – Search for scientific publications and research papers.

Researchers – Search for researcher profiles and their citation history.



The screenshot shows the Web of Science search interface. At the top, there is a black header with the Clarivate logo, language settings (English), and a Products menu. Below this is a white header with the Web of Science logo, a Search tab, and a user profile (Luba Pogossova). The main content area has a light blue background. On the left, there is a vertical menu with icons for MENU, a document, a clock, a person, and a bell. The main search area has two tabs: DOCUMENTS and RESEARCHERS. Both tabs are highlighted with red boxes and red arrows pointing to them from above. Below the tabs, there is a search bar with the text "Search in: Web of Science Core Collection" and "Editions: All". Below the search bar, there are two tabs: DOCUMENTS and CITED REFERENCES. Below these tabs, there is a search input field with the placeholder text "Topic" and a dropdown arrow. To the right of the input field is a text box containing the example search query "Example: oil spill* mediterranean". Below the input field, there are two buttons: "+ Add row" and "+ Add date range". To the right of these buttons is a link for "Advanced search". At the bottom right, there are two buttons: "x Clear" and "Q Search". In the bottom right corner, there is a blue circular icon with a question mark and the number 18.

Clarivate English Products

Web of Science™ Search

Luba Pogossova

MENU

DOCUMENTS RESEARCHERS

Search in: Web of Science Core Collection Editions: All

DOCUMENTS CITED REFERENCES

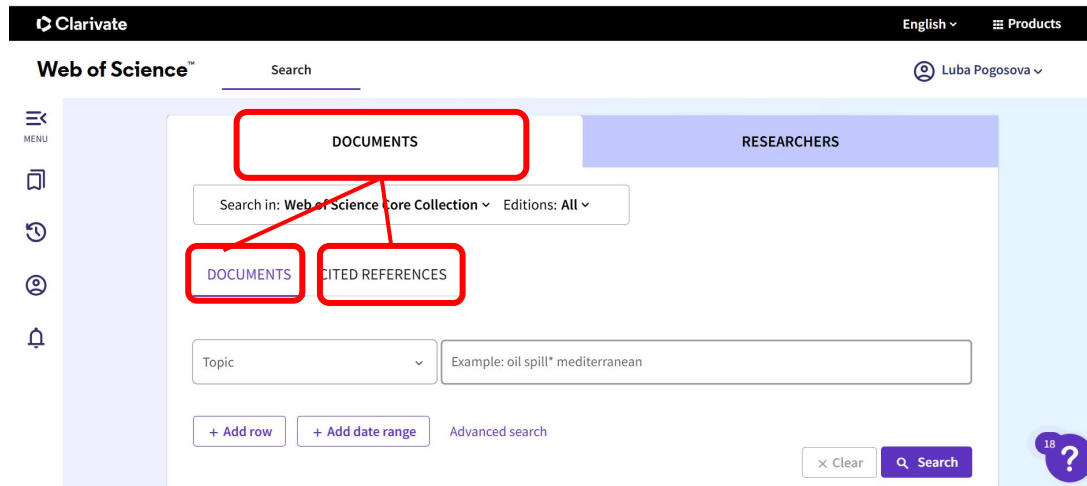
Topic Example: oil spill* mediterranean

+ Add row + Add date range Advanced search

x Clear Q Search

18 ?

Search Options in “Documents” Section



- **Documents**

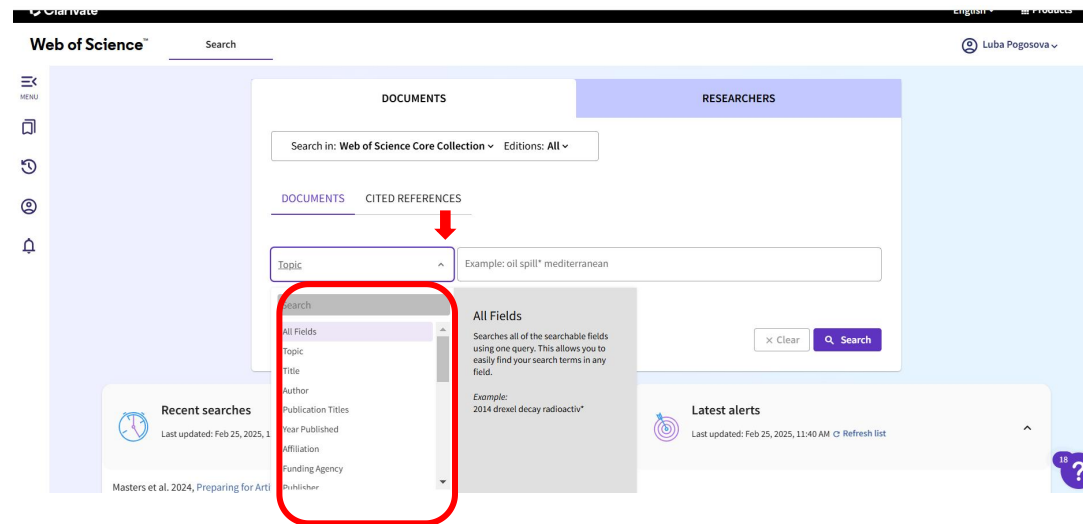
Search for scientific publications, articles, and research papers.

- **Cited Referenced**

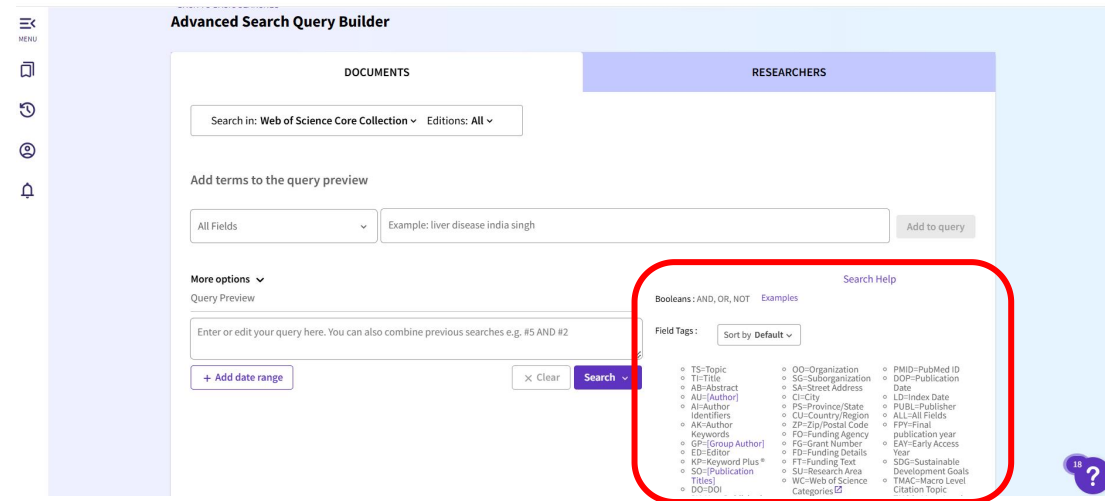
Search relevant sources and impact based on the citation of specific works.

Methods of Document Search

Basic Search



Advanced Search



The Main Boolean Operators

- **AND** – Publications that include both terms.
- **OR** – Publications that include either term.
- **NOT** – Excludes a specific term.
- **NEAR/x** – Terms that are close to each other in the text.
- **SAME** – Terms in the same field.

Special characters:

- **"..."** – Exact phrase.
- ***** – Root word search.
- **?** – Replaces a single character.

Filtering Results

After searching for documents, filtering the results will help you quickly find the most relevant materials for your needs.

The screenshot displays a research database interface with 4,589 documents. The left sidebar contains a 'Refine results' section with a search bar and several filter categories: Quick Filters, Publication Years, Document Types, and Researcher Profiles. The main area shows a list of search results, each with a title, author, year, and citation count. The results are sorted by relevance, and the first result is 'ADVANCES IN IMMUNOLOGY Tumor Immunology PREFACE' by Schreiber, RD, published in 2016. The second result is 'Immunology' by Saari, S; Näreaho, A and Nikander, S, published in 2019. The third result is 'Immunology' by Gintsburg, AI; Gabibov, AG; (...); Ataulakhov, RI, published in Sep-oct 2021. The fourth result is 'Immunology' by Lafon, M, published in 2013. The interface also includes buttons for 'Analyze Results', 'Citation Report', and 'Create Alert' at the top right.

Refine results **Export Refine**

Search within results...

Quick Filters

- ☐ Highly Cited Papers 62
- ☐ Hot Papers 2
- ☐ Review Article 1,018
- ☐ Early Access 23
- ☐ Open Access 2,190
- ☐ Enriched Cited References 232
- ☐ Open publisher-invited reviews 17

Publication Years

☐ Show Final Publication Year

- ☐ 2025 34
- ☐ 2024 405
- ☐ 2023 402
- ☐ 2022 408
- ☐ 2021 418

[See all >](#)

Document Types

- ☐ Article 1,296
- ☐ Editorial Material 1,085
- ☐ Review Article 1,018
- ☐ Meeting Abstract 684
- ☐ Book Chapters 286

[See all >](#)

Researcher Profiles

☒ Show Researcher Profiles

- ☐ Sika-Paotonu, Dianne 29
- ☐ Klimek, Ludger 27
- ☐ Akdis, Cezmi 19

0/4,589 **Add To Marked List** **Export**

Relevance < 1 of 92 >

1 **ADVANCES IN IMMUNOLOGY Tumor Immunology PREFACE**

Schreiber, RD
2016 | TUMOR IMMUNOLOGY 130, pp.XI-XIII
0 References
[View full text](#)

2 **Immunology**

Saari, S; Näreaho, A and Nikander, S
2019 | CANINE PARASITES AND PARASITIC DISEASES, pp.255-258
8 References
[View full text](#)

3 **Immunology**

Gintsburg, AI; Gabibov, AG; (...); Ataulakhov, RI
Sep-oct 2021 | INFECTSIYA I IMMUNITET 11 (5), pp.994-996
1 Reference
[View full text](#)

4 **Immunology**

Lafon, M
2013 | RABIES: SCIENTIFIC BASIS OF THE DISEASE AND ITS MANAGEMENT, 3RD EDITION, pp.387-408
7 Citations
125 References
[View full text](#)

18 **?**

Sorting Results

The screenshot displays a research database interface with the following components:

- Top Navigation:** Includes a menu icon, a search bar with the text "4,589 Documents", and a list of keywords: "immunology education", "translational immunology", "allergy immunology", "immunology", and "immunology teaching".
- Left Sidebar:** Contains a "Refine results" section with a search bar and a list of filters. Below this is a "Quick Filters" section with checkboxes for "Highly Cited Papers", "Hot Papers", "Review Article", "Early Access", "Open Access", "Enriched Cited References", and "Open publisher-invited reviews". At the bottom is a "Publication Years" section with a toggle for "Show Final Publication Year" and checkboxes for "2025" and "2024".
- Main Content Area:** Displays a list of documents. The first document is "Oncology Meets Immunology: The Cancer-Immunity Cycle" by Chen, DS and Mellman, I, published in IMMUNITY in 2013. The second document is "Immunology of COVID-19: Current State of the Science" by Vabret, N; Britton, GJ; (...) Samstein, RM, published in IMMUNITY in 2020.
- Right Sidebar:** Shows statistics for the selected documents, including "4,760 Citations", "84 References", and "1,135 Citations", "359 References".
- Sorting Menu:** A dropdown menu is open, showing various sorting options. The current selection is "Background: Highest first". The menu options include: Relevance, Recently added, Citation class, Date: newest first, Date: oldest first, Citations: highest first, Citations: lowest first, Usage (all time): most first, Usage (last 180 days): most first, Conference title: A to Z, Conference title: Z to A, First author name: A to Z, First author name: Z to A, Publication title: A to Z, and Publication title: Z to A.

Article Profile

≡
MENU

📖

🕒

🔍

🔔

Free Full Text from Publisher

Export ▾Add To Marked List ▾

< 1 of 4,589 >

Metabolic heterogeneity in tumor cells impacts immunology in lung squamous cell carcinoma

By

Are you this author?

Source

Article Number

Published

Indexed

Document Type

Jump to

Abstract

Keywords

Wang, Q (Wang, Qian)^[1]; Sun, N (Sun, Na)^[1]; Zhang, CY (Zhang, Chaoyang)^[1]; Kunzke, T (Kunzke, Thomas)^[1]; Zens, P (Zens, Philipp)^[2],^[3]; Feuchtinger, A (Feuchtinger, Annette)^[1]; Berezowska, S (Berezowska, Sabina)^[2],^[4],^[5]; Walch, A (Walch, Axel)^[1]

ONCOIMMUNOLOGY ▾

Volume: 14 Issue: 1

DOI: 10.1080/2162402X.2025.2457797

2457797

DEC 31 2025

2025-02-15

Article

↓ Enriched Cited References

Metabolic processes are crucial in immune regulation, yet the impact of metabolic heterogeneity on immunological functions remains unclear. Integrating metabolomics into immunology allows the exploration of the interactions of multilayered features in the biological system and the molecular regulatory mechanism of these features. To elucidate such insight in lung squamous cell carcinoma (LUSC), we analyzed 106 LUSC tumor tissues. We performed high-resolution matrix-assisted laser desorption/ionization (MALDI) mass spectrometry imaging (MSI) to obtain spatial metabolic profiles, and immunohistochemistry to detect tumor-infiltrating T lymphocytes (TILs). Unsupervised k-means clustering and Simpson's diversity index were employed to assess metabolic heterogeneity, identifying five distinct metabolic tumor subpopulations. Our findings revealed that TILs are specifically associated with metabolite distributions, not randomly distributed. Integrating a validation cohort, we found that heterogeneity-correlated metabolites interact with CD8⁺ TIL-associated genes, affecting survival. High metabolic heterogeneity was linked to worse survival and lower TIL levels. Pathway enrichment analyses highlighted distinct metabolic pathways in each subpopulation and their potential responses to chemotherapy. This study uncovers the significant impact of metabolic heterogeneity on immune functions in LUSC, providing a foundation for tailoring therapeutic strategies.

Author Keywords: Spatial metabolomics; metabolic heterogeneity; Immunology; lung cancer; metabolic tumor subpopulation

Citation Network

In Web of Science Core Collection

0 Citations [Create citation alert](#)

57 Cited References [View Related Records](#)

How does this document's citation performance compare to peers?

[Open comparison metrics panel](#) **New**

Data is from InCites Benchmarking & Analytics

Use in Web of Science

1 Last 180 Days

1 Since 2013

[Learn more →](#)

This record is from:

Web of Science Core Collection

Science Citation Index Expanded (SCI-EXPANDED)

View PDF

EN

18 ?

Information Available on the Article Profile

- **Title** – The title of the article.
- **Authors** – List of authors and their affiliations.
- **Abstract** – A brief summary of the article's content.
- **Keywords** – Key terms related to the article.
- **Cited By** – Number of citations the article has received.
- **References** – List of sources cited in the article.
- **Journal Information** – Details about the journal, including volume, issue, and publication date.
- **DOI (Digital Object Identifier)** – A unique identifier for the article.
- **Full Text Access** – Links to the full article, if available.
- **Metrics** – Data on article views, downloads, or other engagement statistics.

In the Reearchers section
you can search by the author's first and last name, identification
number, and affiliation.

The screenshot displays the Clarivate Web of Science interface. At the top, the Clarivate logo is on the left, and 'English' and 'Products' are on the right. Below the header, 'Web of Science' and 'Search' are visible. A sidebar on the left contains icons for menu, documents, history, profile, and notifications. The main content area has two tabs: 'DOCUMENTS' and 'RESEARCHERS', with the latter highlighted by a red box. Below the 'RESEARCHERS' tab, there are three search options: 'Name Search', 'Author Identifiers', and 'Organization'. The 'Author Identifiers' option is highlighted by a red box, and a red line connects it to the 'RESEARCHERS' tab. A modal window titled 'Author Identifiers' is open, providing instructions on how to find an author record using their Web of Science ResearcherID or ORCID ID. It includes examples of IDs and a note about potential issues. The modal also has a 'Clear' button and a 'Search' button. At the bottom of the interface, there are sections for 'Recent searches' and 'alerts'. A notification bubble in the bottom right corner shows the number '18' and a question mark.

Clarivate

English Products

Web of Science™ Search

Luba Pogossova

MENU

DOCUMENTS

RESEARCHERS

Name Search

Name Search

Author Identifiers

Organization

Author Identifiers

Find an author record using the author's Web of Science ResearcherID or ORCID ID.

Examples:
A-1009-2008
0000-0003-3768-1316

NOTE: Some Web of Science ResearcherIDs and ORCID IDs may not be associated with an author record. Try using the name search instead.

× Clear Search

Recent searches

Last updated: Feb 28, 2025, 1

LANCET GLOBAL HEALTH (Publication Titles)

in Web of Science Core Collection | Session: February 28, 2025

alerts

ated: Feb 28, 2025, 10:32 AM Refresh list

18 ?

For more information, please contact us

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- Minadar Muladze

library@tma.edu.ge