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งานสารสนเทศและห้องสมุดสตางค์ มงคลสุข
คณะวิทยาศาสตร์ มหาวิทยาลัยมหิดล
29 พฤศจิกายน 2566

รายละเอียด

1. แนะนำกลุ่มคำ Thesaurus/Synonyms
2. Boolean Operators
3. แนะนำช่องทางการเข้าถึงวารสารและฐานข้อมูลอิเล็กทรอนิกส์
4. แนะนำการใช้งานฐานข้อมูล Scopus
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1. แนะนำกลุ่มคำ Thesaurus/Synonyms

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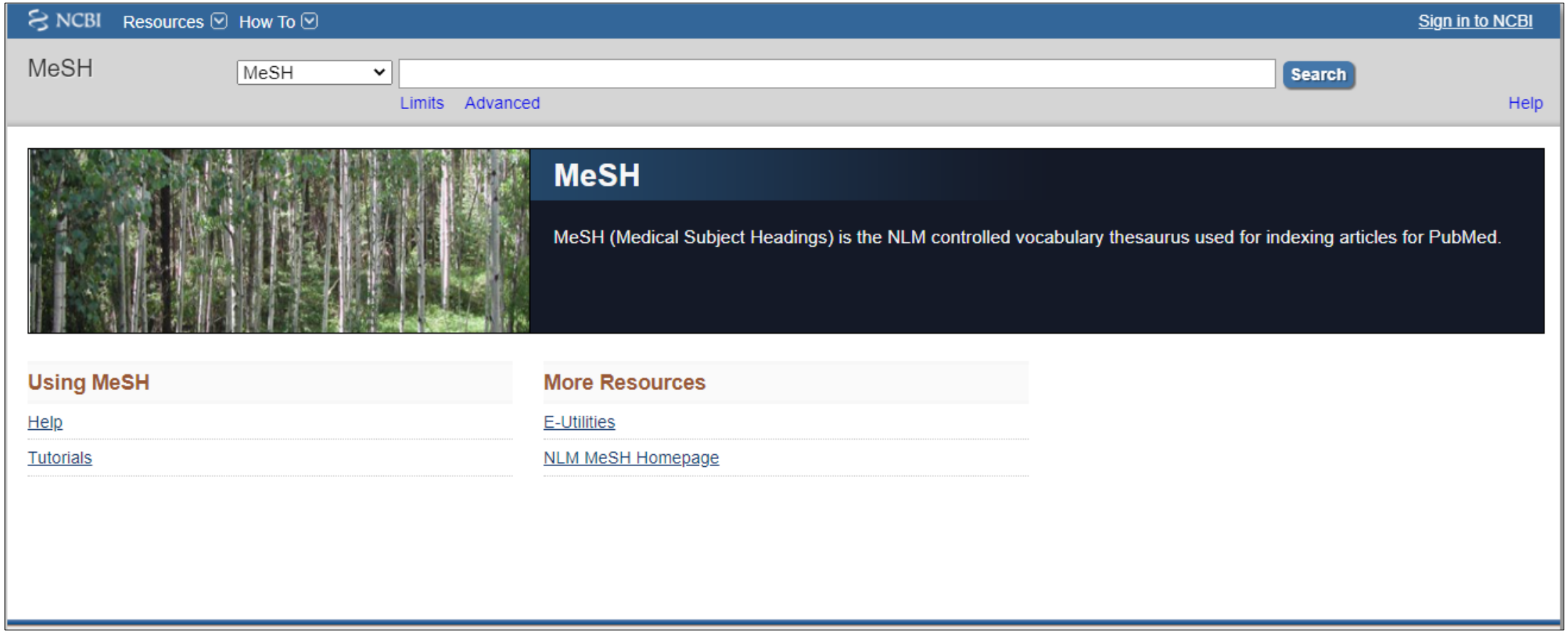

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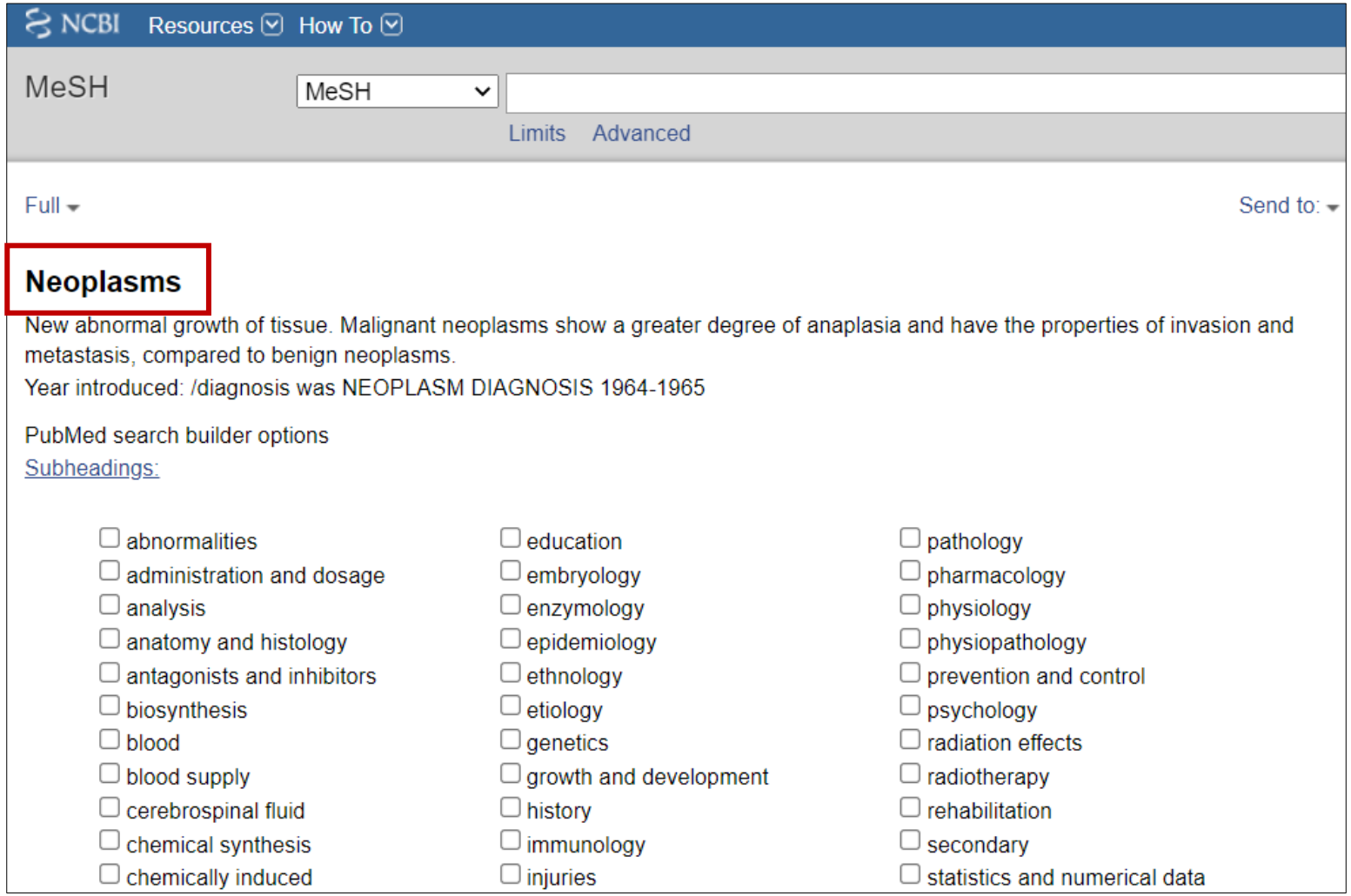
1. **Neoplasms**
   New abnormal growth of tissue. Malignant **neoplasms** show a greater degree of anaplasia and have the properties of invasion and metastasis, compared to benign **neoplasms**.
   Year introduced: /diagnosis was NEOPLASM DIAGNOSIS 1964-1965

2. Hereditary Breast and Ovarian **Cancer** Syndrome
   Autosomal dominant HEREDITARY **CANCER** SYNDROME in which a mutation most often in either BRCA1 or BRCA2 is associated with a significantly increased risk for breast and ovarian cancers.
   Year introduced: 2012

3. Early Detection of **Cancer**
   Methods to identify and characterize **cancer** in the early stages of disease and predict tumor behavior.
   Year introduced: 2009

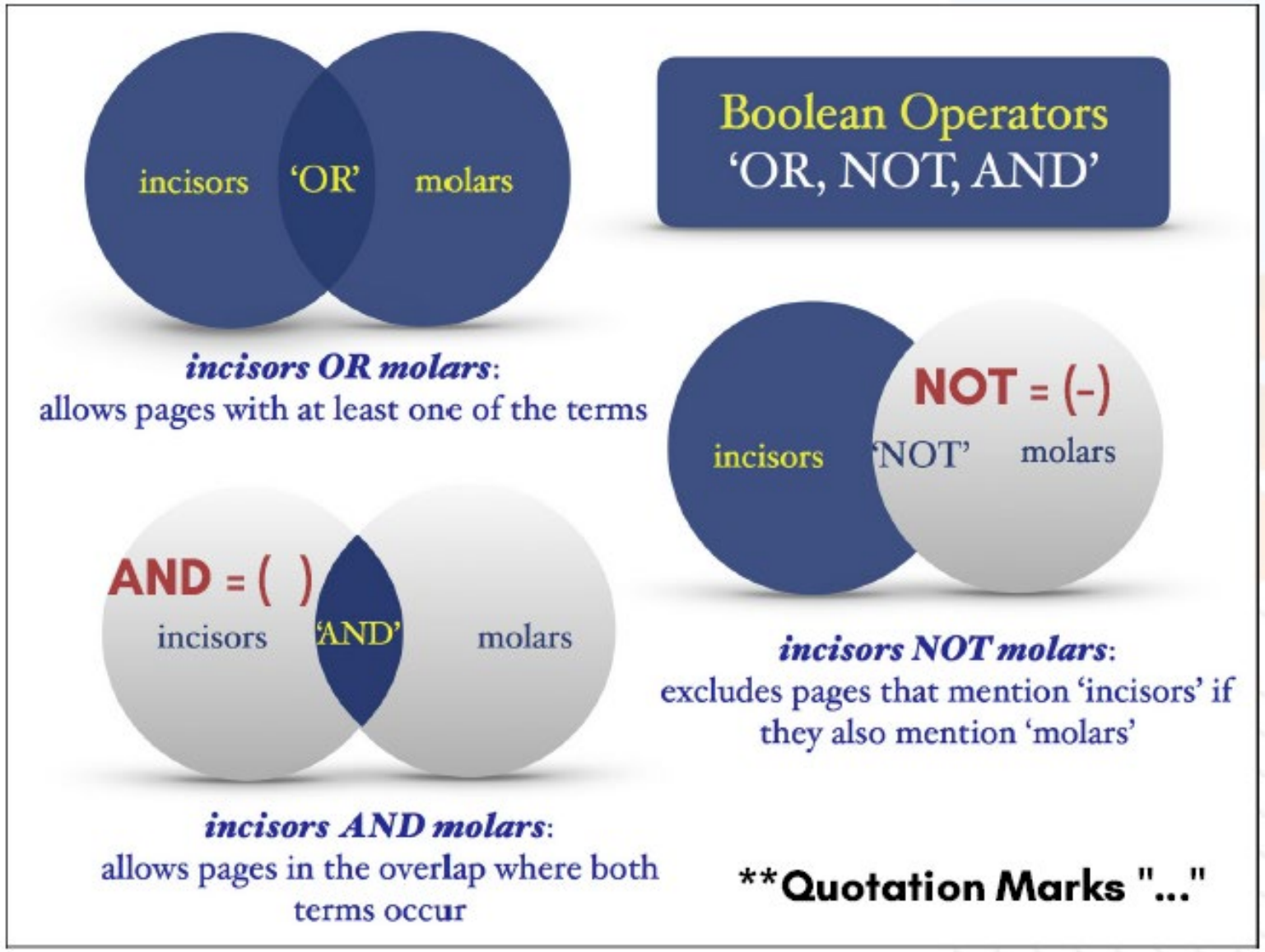


Tree Number(s): C04
MeSH Unique ID: D009369
Entry Terms:

- Neoplasia
- Neoplasias
- Neoplasm
- Tumors
- Tumor
- Cancer
- Cancers
- Malignancy
- Malignancies
- Malignant Neoplasms
- Malignant Neoplasm
- Neoplasm, Malignant
- Neoplasms, Malignant
- Benign Neoplasms
- Neoplasms, Benign
- Benign Neoplasm
- Neoplasm, Benign

2. แนะนำ Boolean Operators

Boolean Operators เป็นการสร้างความเชื่อมโยงของ keywords ตั้งแต่ 2 คำขึ้นไป



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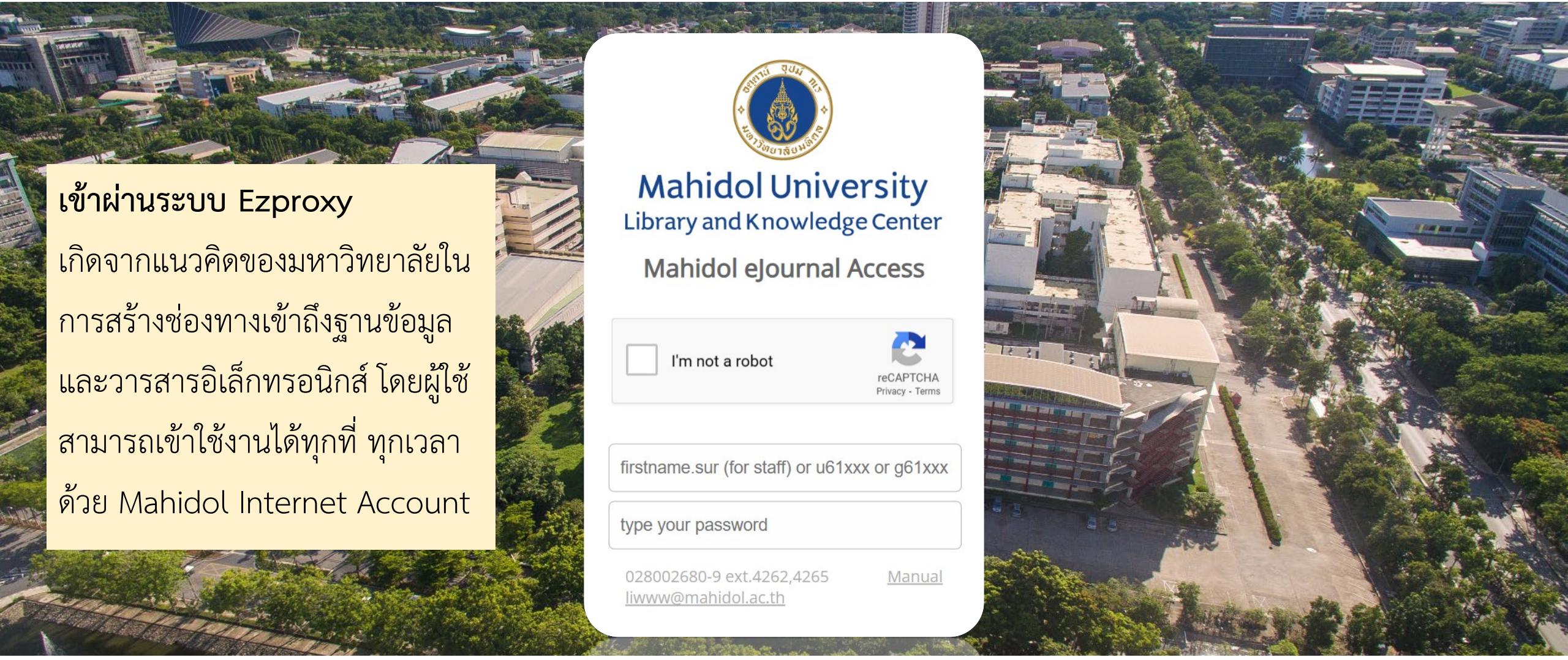

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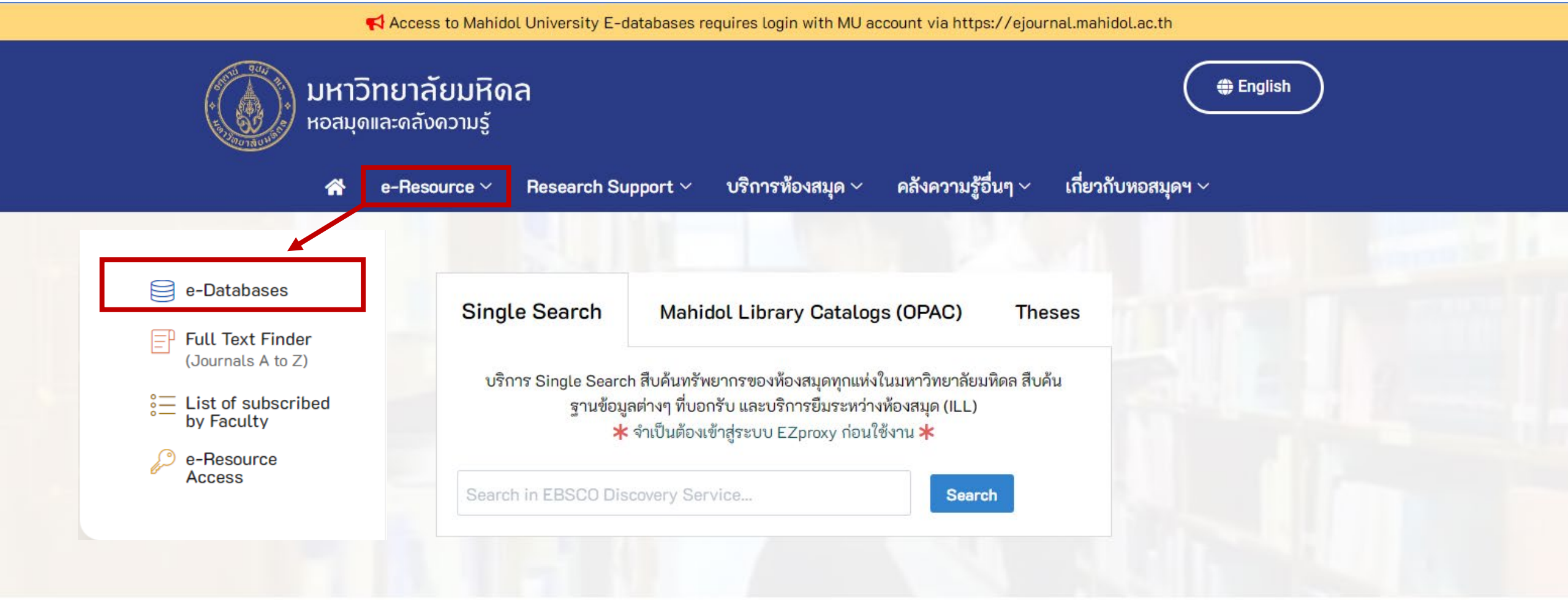
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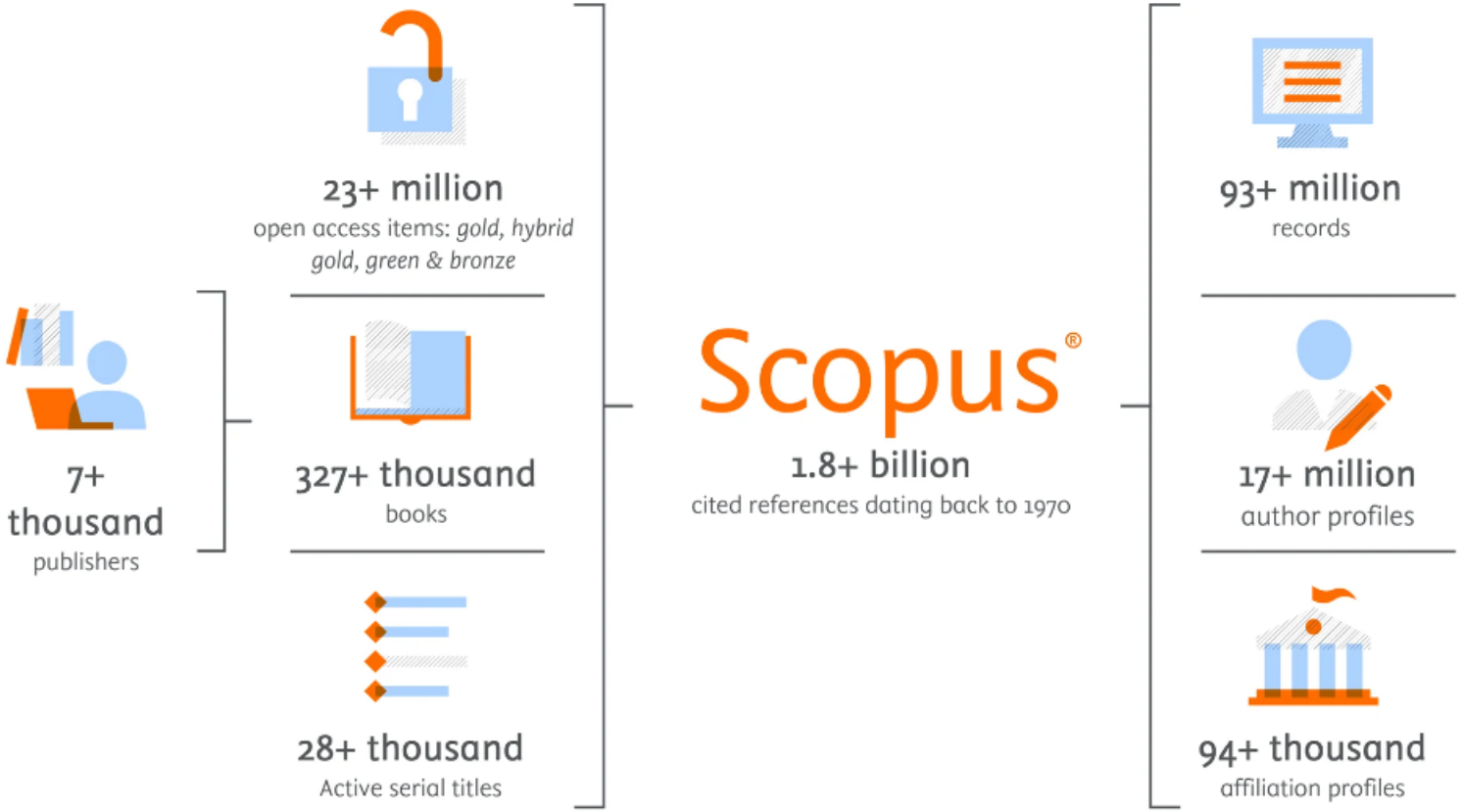

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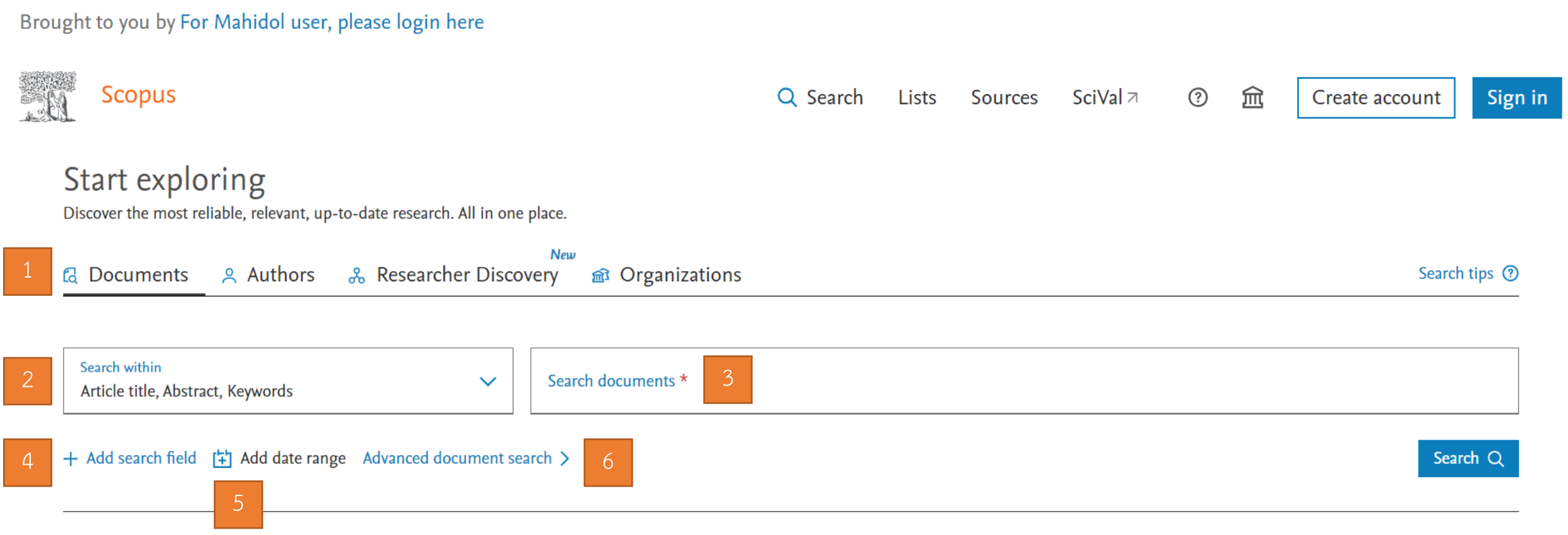

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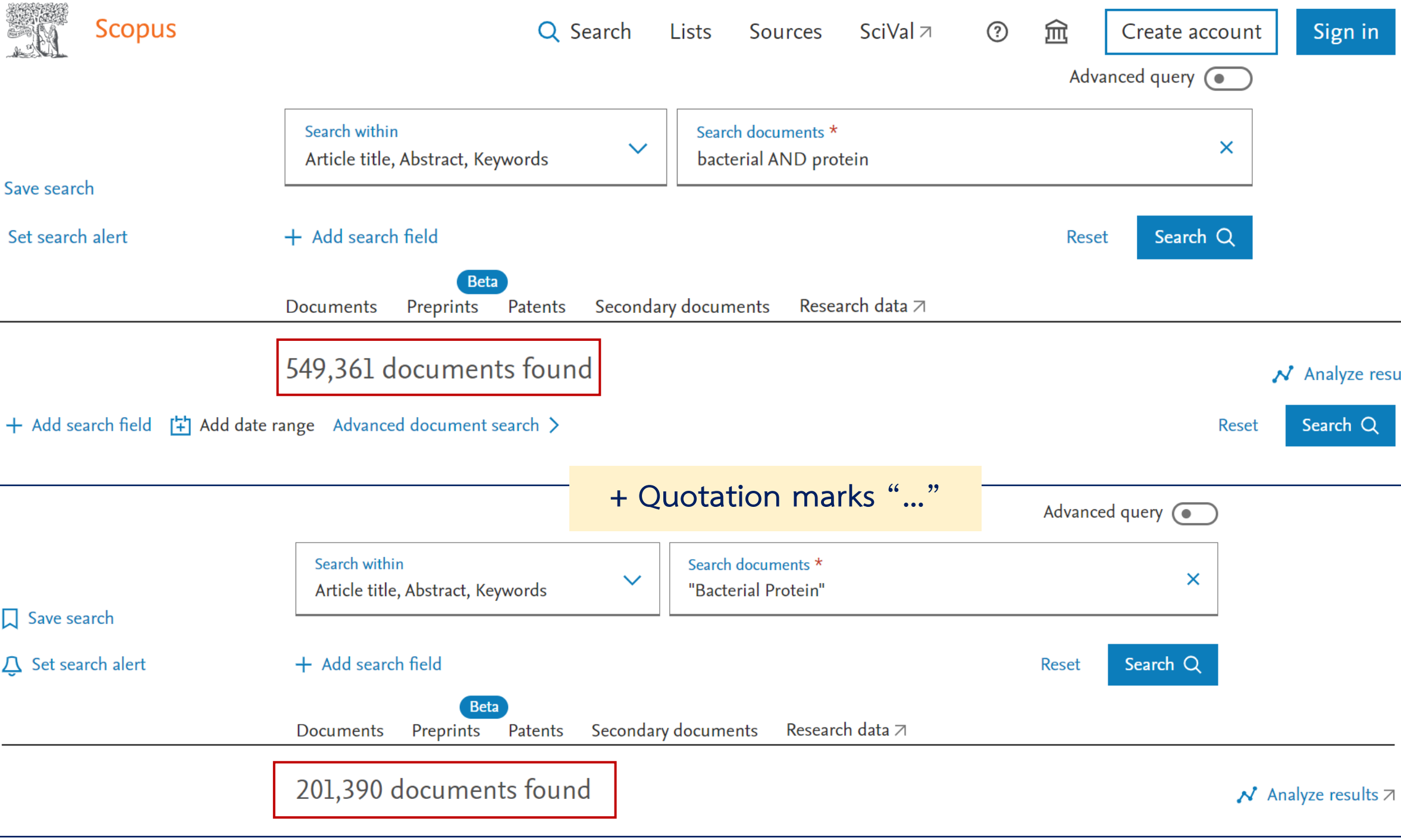
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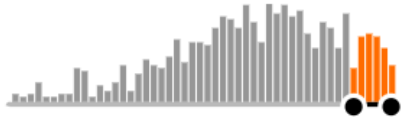

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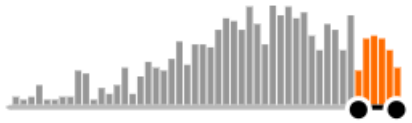

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Efflux pump activity potentiates the evolution of antibiotic resistance across S. aureus isolates

Papkou, Andrei[a, b] ; Hedge, Jessica[a]; Kapel, Natalia[a];
Young, Bernadette[c]; MacLean, R. Craig[a]
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[a] Department of Zoology, University of Oxford, 11a Mansfield Road, Oxford, OX1 3PS, United Kingdom
[b] Department of Evolutionary Biology and Environmental Studies, University of Zurich, Winterthurerstrasse 190, Zurich, CH-8057, Switzerland
[c] Nuffield Department of Clinical Medicine, John Radcliffe Hospital, University of Oxford, Oxford, OX3 9DU, United Kingdom

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The rise of antibiotic resistance in many bacterial pathogens has been driven by the spread of a few successful strains, suggesting that some bacteria are genetically pre-disposed to evolving resistance. Here, we test this hypothesis by challenging a diverse set of 222 isolates of Staphylococcus aureus with the antibiotic ciprofloxacin in a large-scale evolution experiment. We find that a single efflux pump, norA, causes widespread variation in evolvability across isolates. Elevated norA expression potentiates evolution by increasing the fitness benefit provided by DNA topoisomerase mutations under ciprofloxacin treatment. Amplification of norA provides a further mechanism of rapid evolution in isolates from the CC398 lineage. Crucially, chemical inhibition of NorA effectively prevents the evolution of resistance in all isolates. Our study shows that pre-existing genetic diversity plays a key role in shaping resistance evolution, and it may be possible to predict which strains are likely to evolve resistance and to optimize inhibitor use to prevent this outcome. © 2020, The Author(s).

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Efflux pump activity potentiates the evolution of antibiotic resistance across S. aureus isolates

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[a] Department of Zoology, University of Oxford, 11a Mansfield Road, Oxford, OX1 3PS, United Kingdom

[b] Department of Evolutionary Biology and Environmental Studies, University of Zurich, Winterthurerstrasse 190, Zurich, CH-8057, Switzerland

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Abstract

The rise of antibiotic resistance in many bacterial pathogens has been driven by the spread of a few successful strains, suggesting that some bacteria are genetically pre-disposed to evolving resistance. Here, we test this hypothesis by challenging a diverse set of 222 isolates of *Staphylococcus aureus* with the antibiotic ciprofloxacin in a large-scale evolution experiment. We find that a single efflux pump, *norA*, causes widespread variation in evolvability across isolates. Elevated *norA* expression potentiates evolution by increasing the fitness benefit provided by DNA topoisomerase mutations under ciprofloxacin treatment.

Nature Communications • *Open Access* • Volume 11, Issue 1 • 1 December 2020 • Article number 3970

Efflux pump activity potentiates the evolution of antibiotic resistance across S. aureus isolates

Papkou, Andrei[a, b] ; Hedge, Jessica[a]; Kapel, Natalia[a];
Young, Bernadette[c]; MacLean, R. Craig[a]
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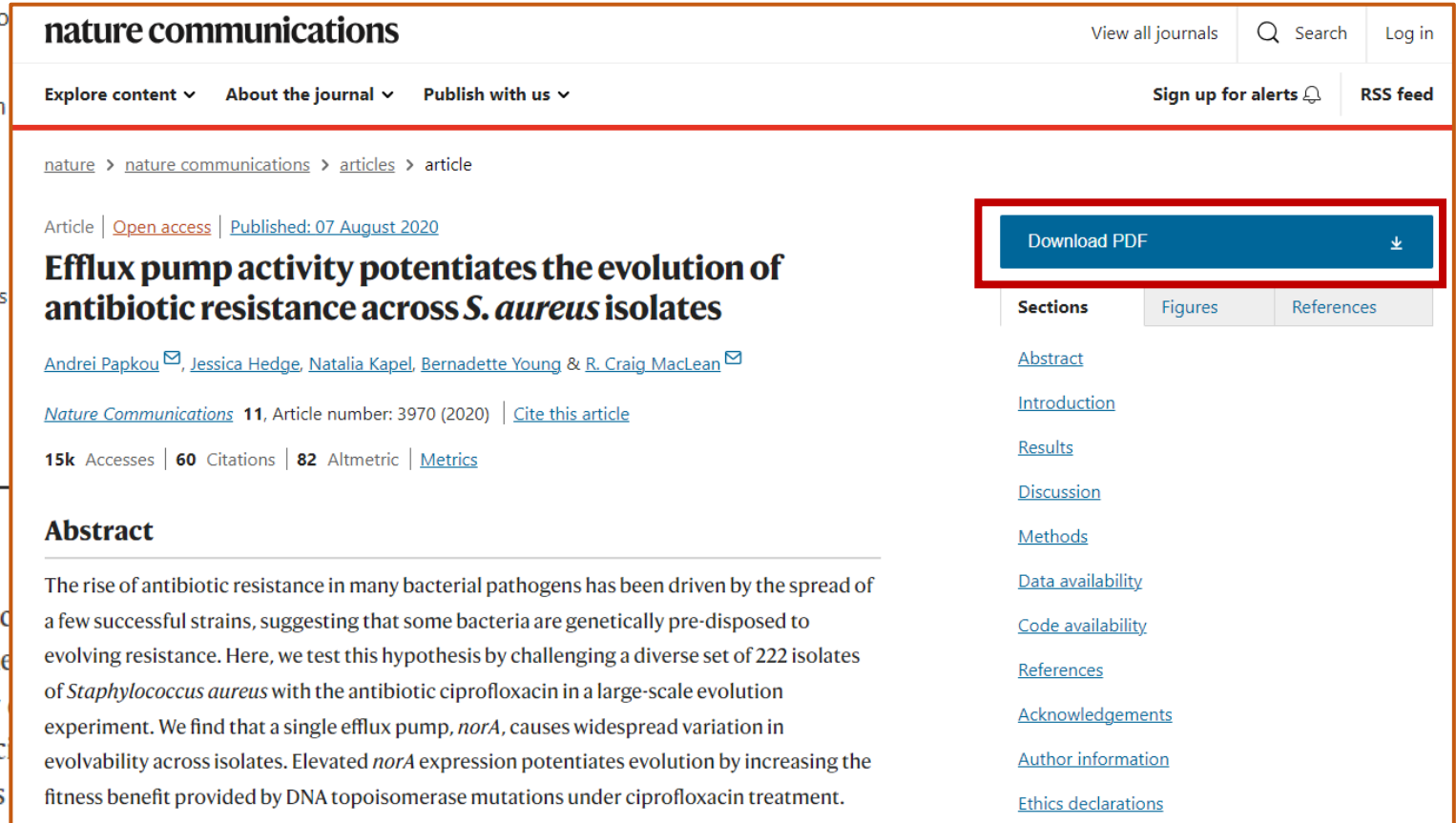

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Abstract

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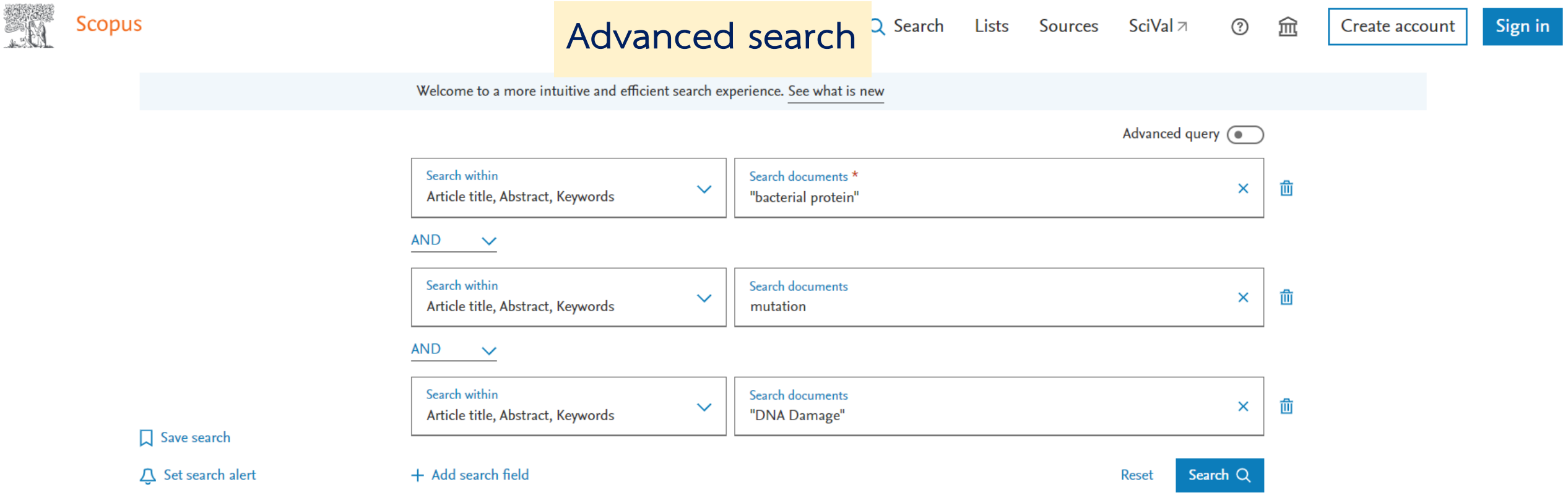

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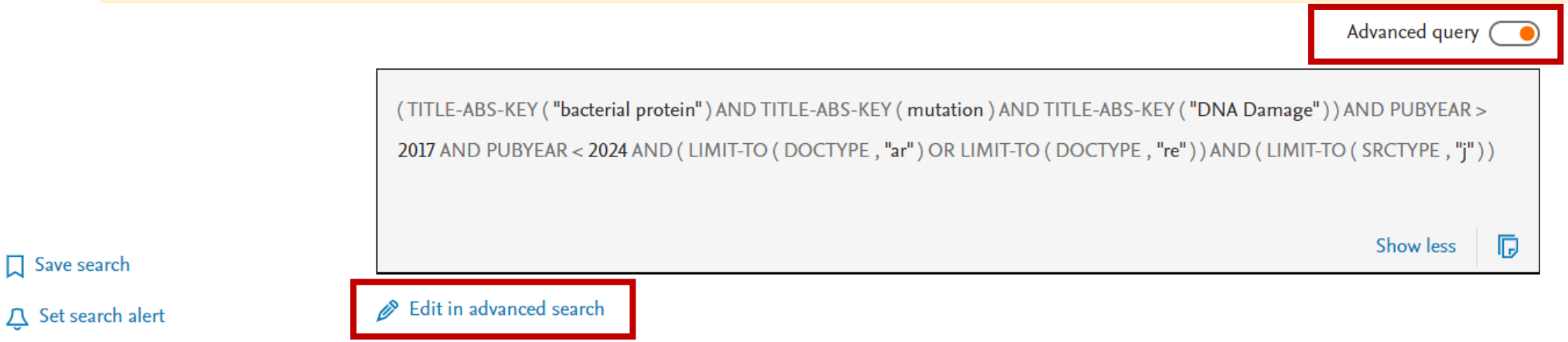

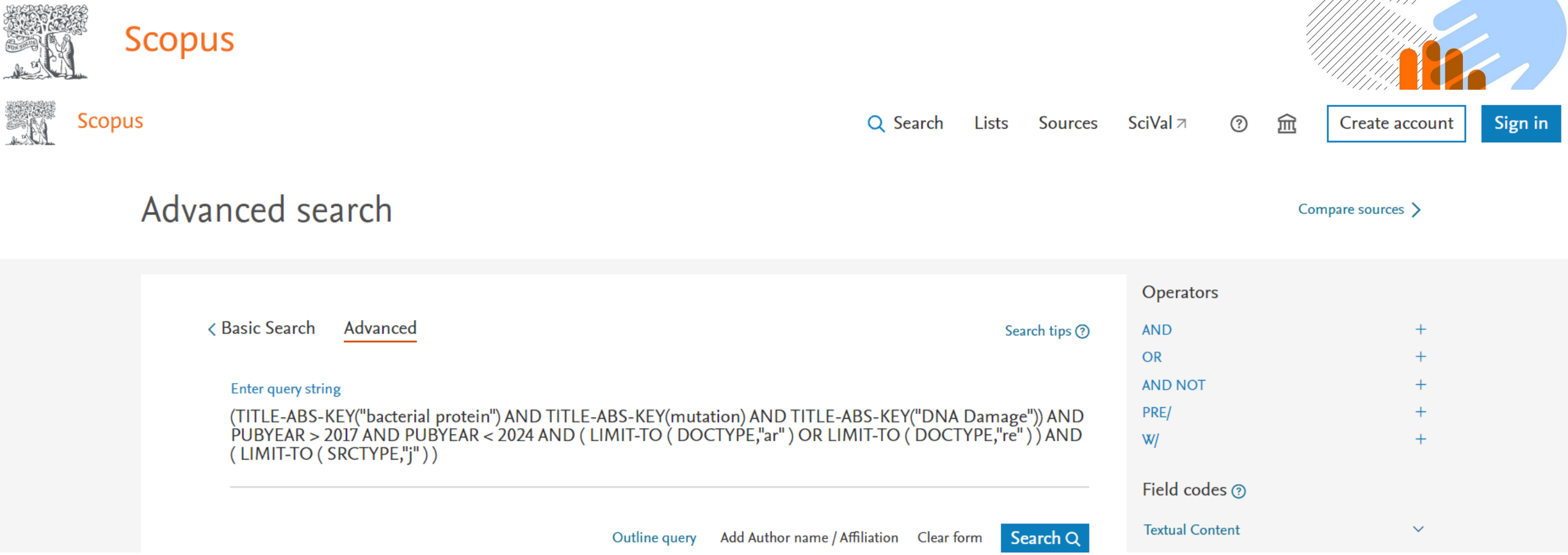

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Currently prescribed antibiotics target the catalytic sites of wild-type *bacterial proteins*; however, bacteria adopt *mutations* at this site, eventually leading to the emergence of resistance. Therefore, the identification of alternative drug binding sites is crucial, which requires knowledge of the dynamics of the mutant protein. Here, we set out to investigate the impact of a

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2	Article • *Open access* **Bacteria-to-Human Protein Networks Reveal Origins of Endogenous DNA Damage**	Xia, J., Chiu, L.-Y., Nehring, R.B., ...Miller, K.M., Rosenberg, S.M.	Cell, 176(1-2), pp. 127–143.e24	2019	57

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A large network of *bacterial proteins* promotes endogenous DNA damage and *mutations* when upregulated, acting like protein carcinogens, and has human homologs that form a cancer predictive network.

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3 **Recipes for Inducing Cold Denaturation in an Otherwise Stable Protein**

Bitonti, A., Puglisi, R., Meli, M., ...Temussi, P.A., Pastore, A.

Journal of the American Chemical Society, 144(16), pp. 7198–7207 2022 2

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Although cold denaturation is a fundamental phenomenon common to all proteins, it can only be observed in a handful of cases where it occurs at temperatures above the freezing point of water. Understanding the mechanisms that determine cold denaturation and the rules that permit its observation is an important challenge. A way to approach them is to be able to induce cold denaturation in an otherwise stable protein by means of *mutations*. Here, we studied CyaY, a relatively stable *bacterial protein* with no detectable cold denaturation and a high melting temperature of 54 °C. We have

Article • *Open access*

4 **Highly efficient generation of bacterial leaf blight-resistant and transgene-free rice using a genome editing and multiplexed selection system**

Yu, K., Liu, Z., Gui, H., ... Xu, J., Chen, X.

BMC Plant Biology, 21(1), 197 2021 15

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Background: Rice leaf blight, which is a devastating disease worldwide, is caused by the bacterium Xanthomonas oryzae pv. oryzae (Xoo). The upregulated by transcription activator-like 1 (UPT) effector box in the promoter region of the rice Xa13 gene plays a key role in Xoo pathogenicity. *Mutation* of a key *bacterial protein*-binding site in the UPT box of Xa13 to abolish PXO99-induced Xa13 expression is a way to improve rice resistance to bacteria. Highly efficient generation and selection of

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3	Article • *Open access* **LexR Positively Regulates the LexABC Efflux Pump Involved in Self-Resistance to the Antimicrobial Di-N-Oxide Phenazine in Lysobacter antibioticus** Show abstract | View at Publisher | Related documents	Zhao, Y., Xu, G., Xu, Z., Guo, B., Liu, F.	Microbiology Spectrum, 11(3)	2023	0
4	Article **FRETing about the details: Case studies in the use of a genetically encoded fluorescent amino acid for distance-dependent energy transfer**	Cory, M.B., Jones, C.M., Shaffer, K.D., ...Kohli, R.M., Petersson, E.J.	Protein Science, 32(5), e4633	2023	0

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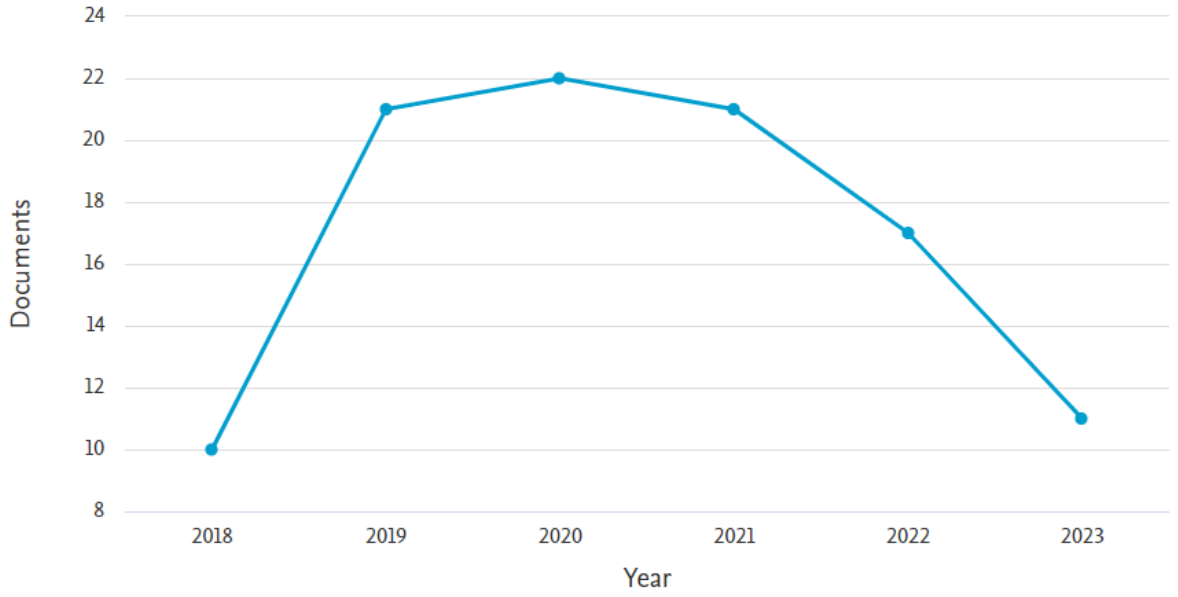

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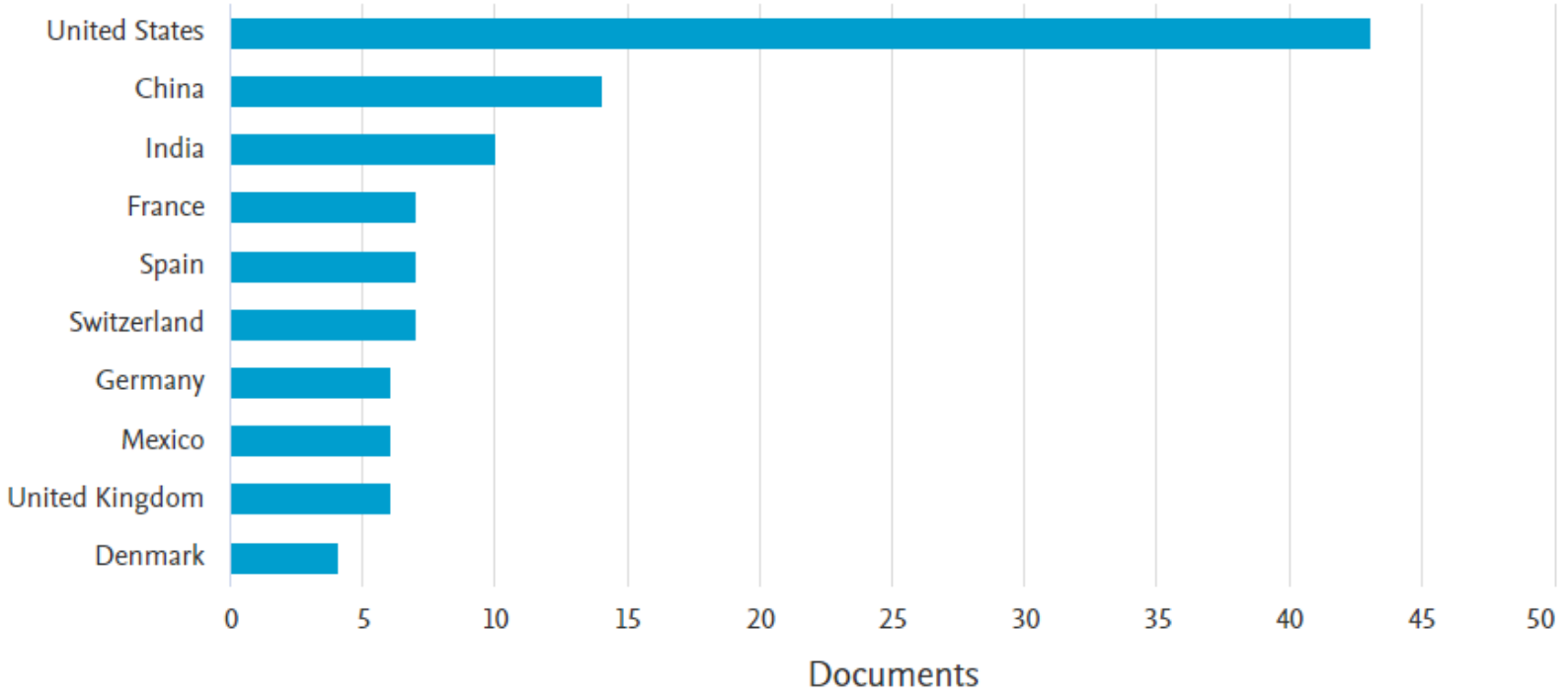

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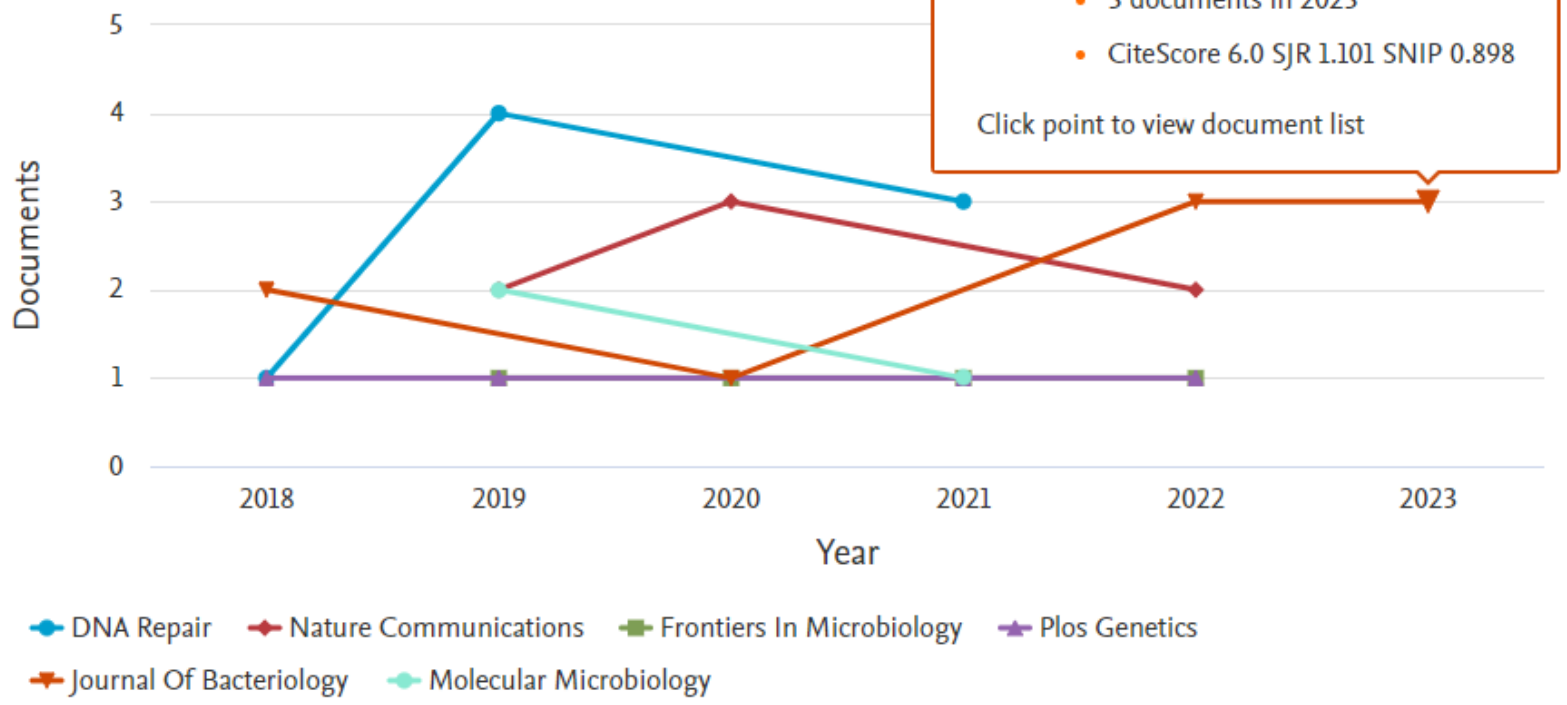

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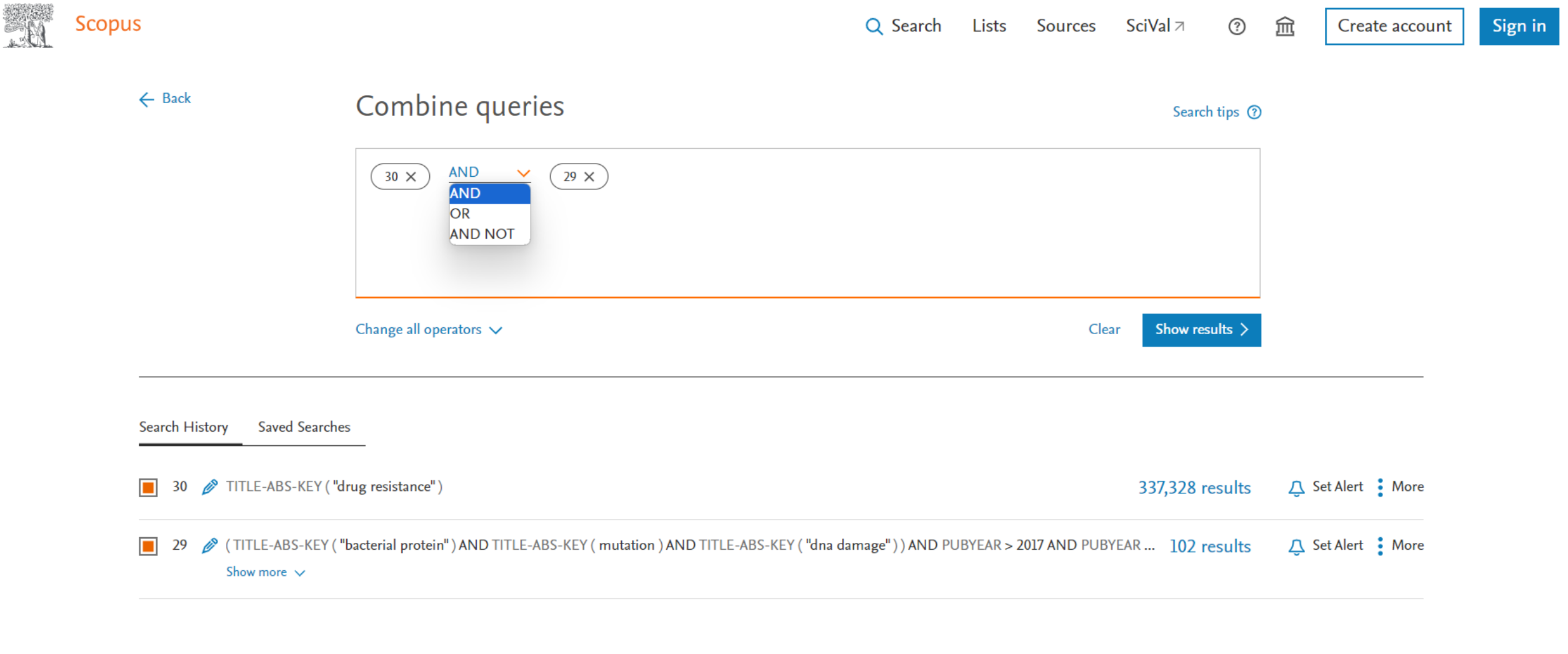

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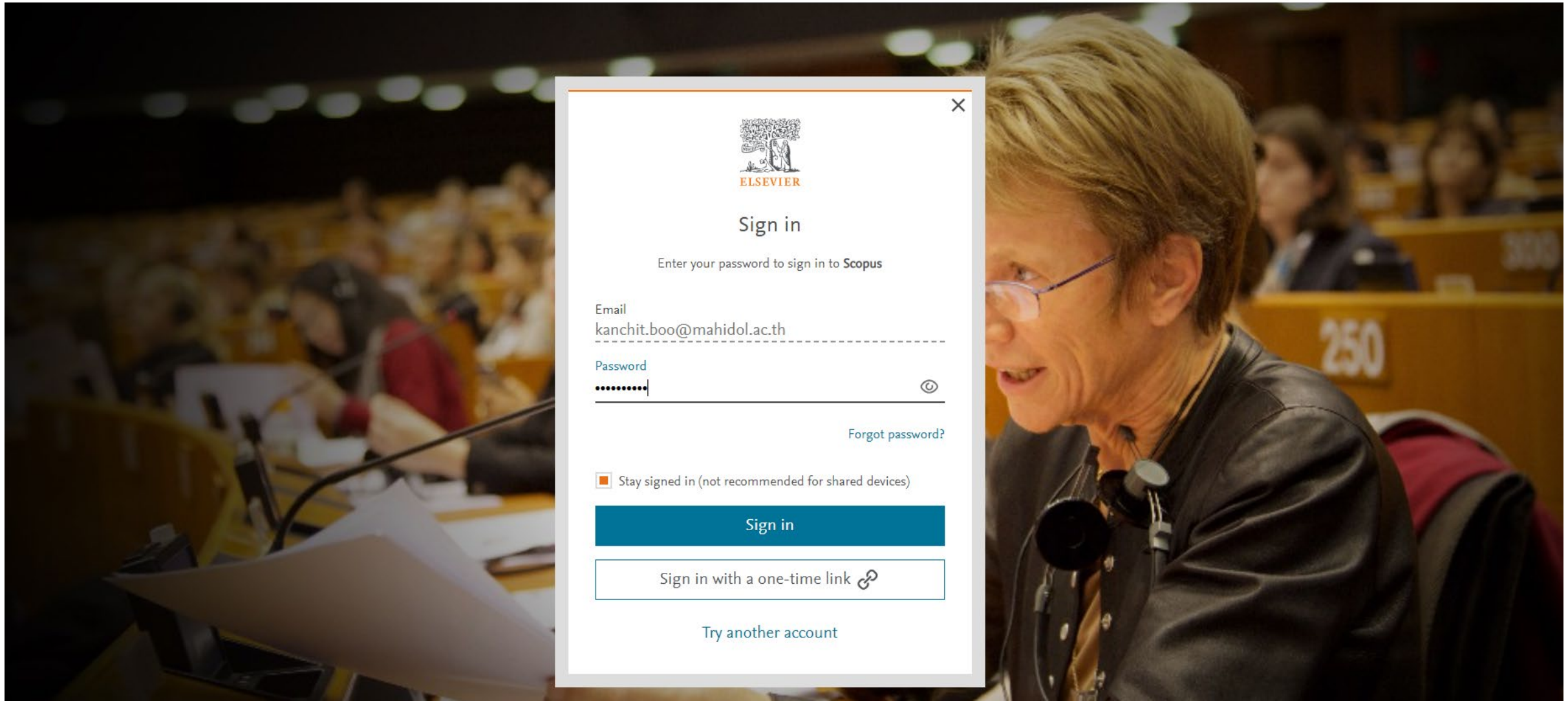

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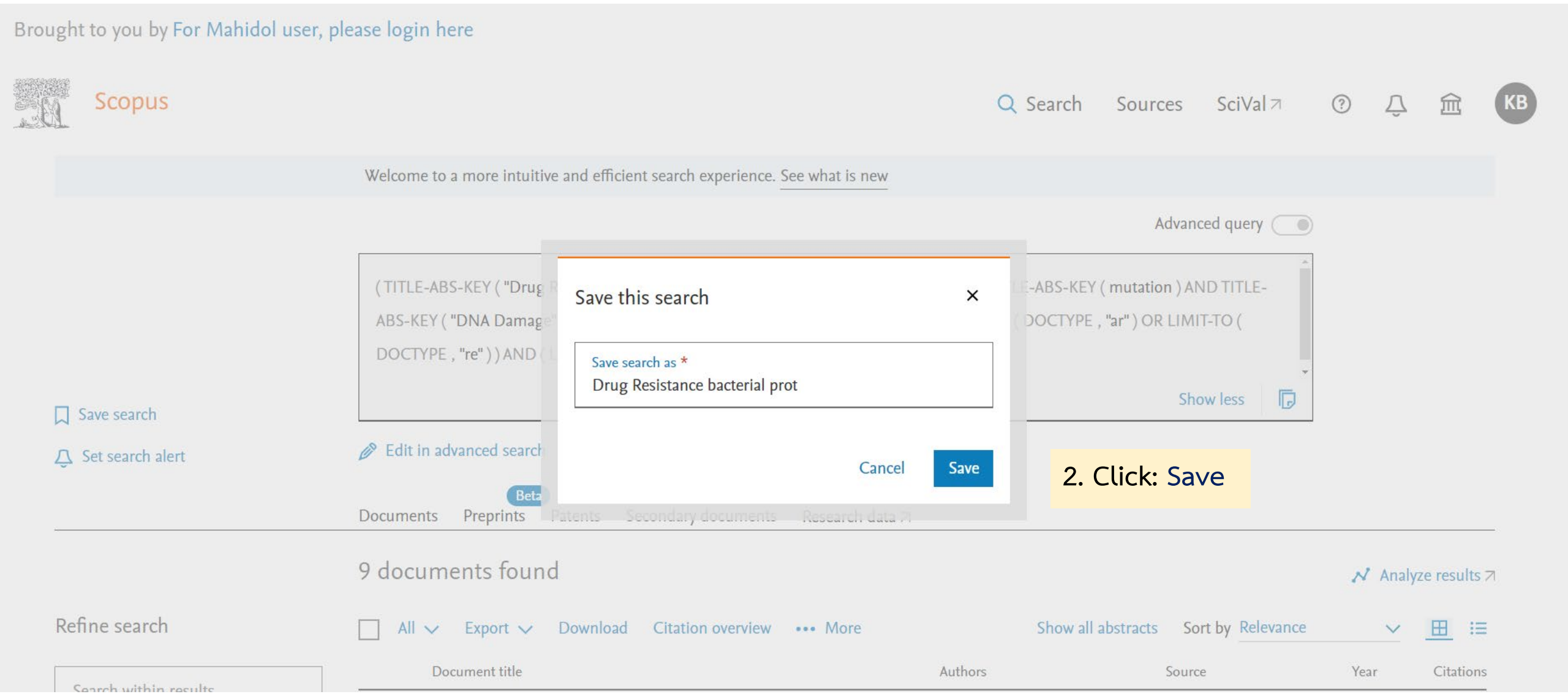

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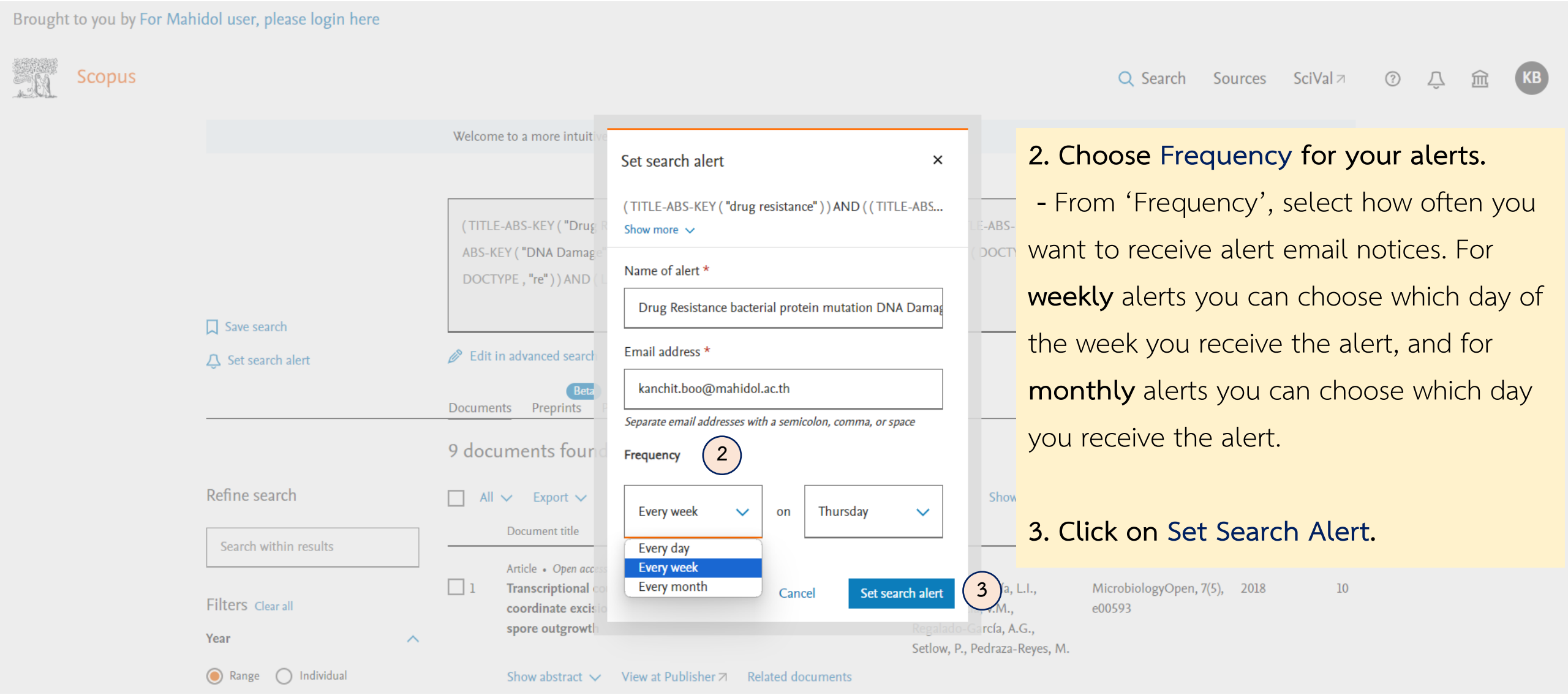

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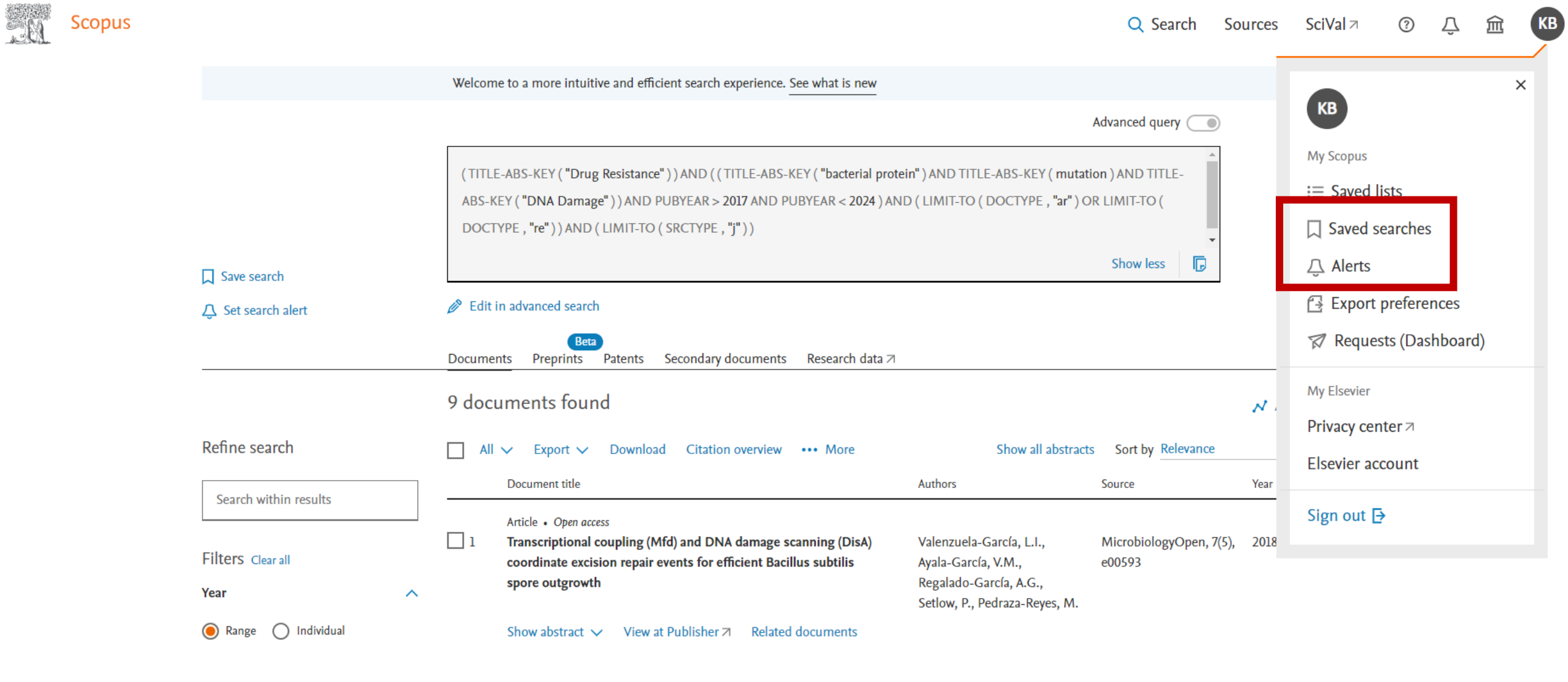

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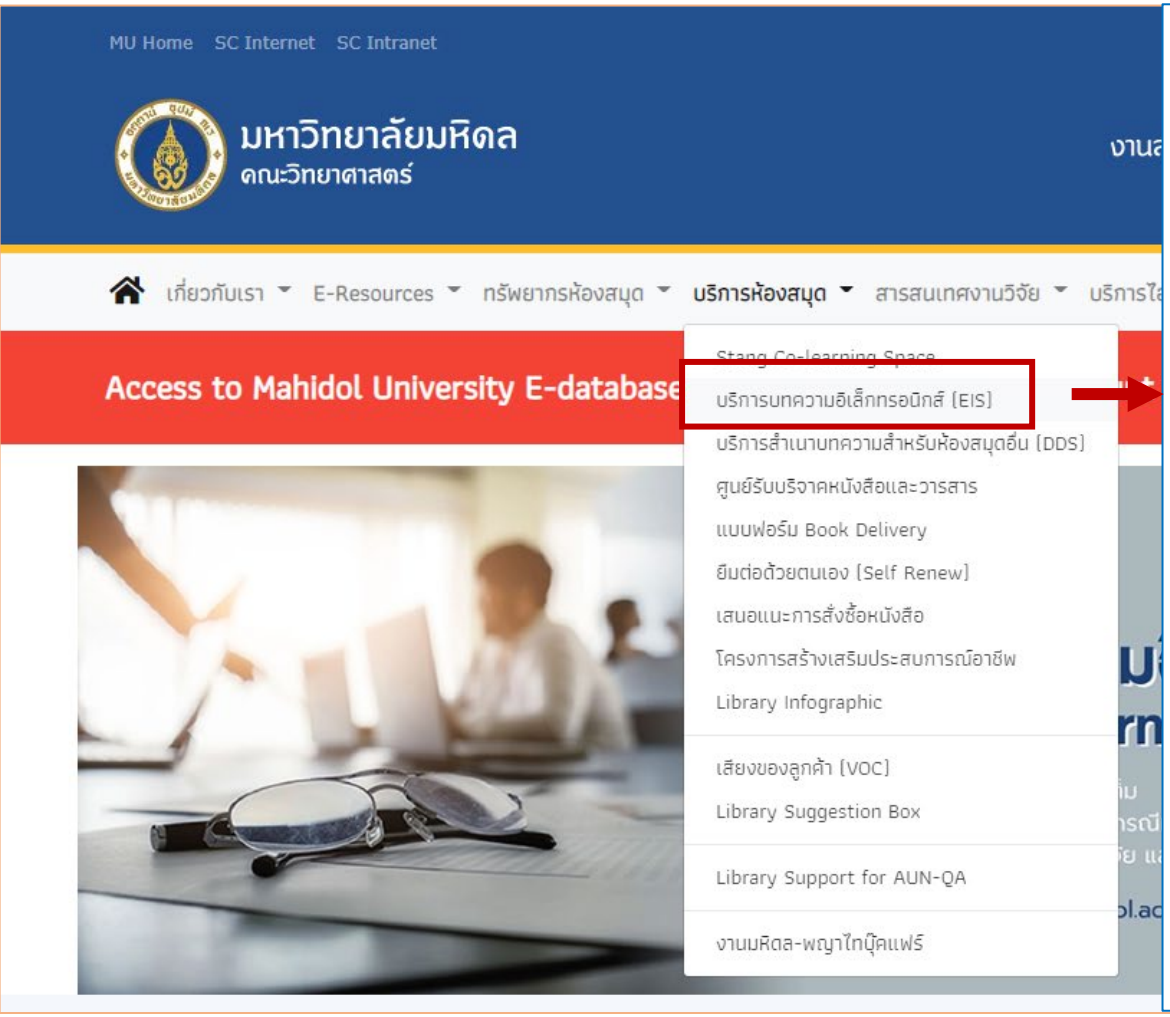

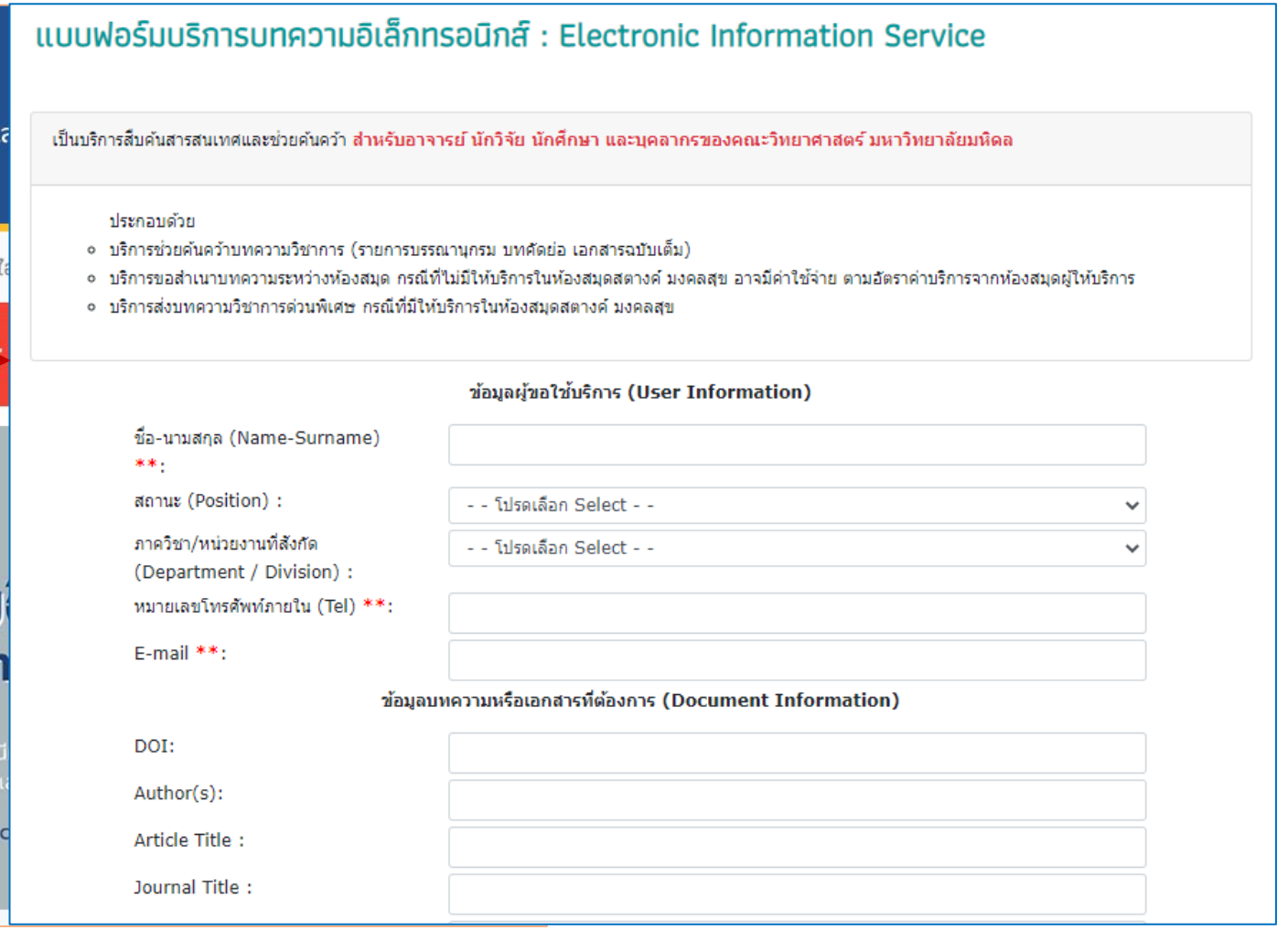

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20 December 2023 13:00-14:00

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