

# SPRINGER NATURE Link

Quick User Guide

May 2026

A hand is shown pointing towards a glowing, circular digital interface. The interface is composed of numerous overlapping, colorful particle trails in shades of blue, purple, and orange, creating a sense of motion and energy. The background is dark with scattered, colorful bokeh lights. The overall aesthetic is futuristic and scientific.

**SPRINGER NATURE**

# SPRINGER NATURE LINK 메인 화면

Home for all research

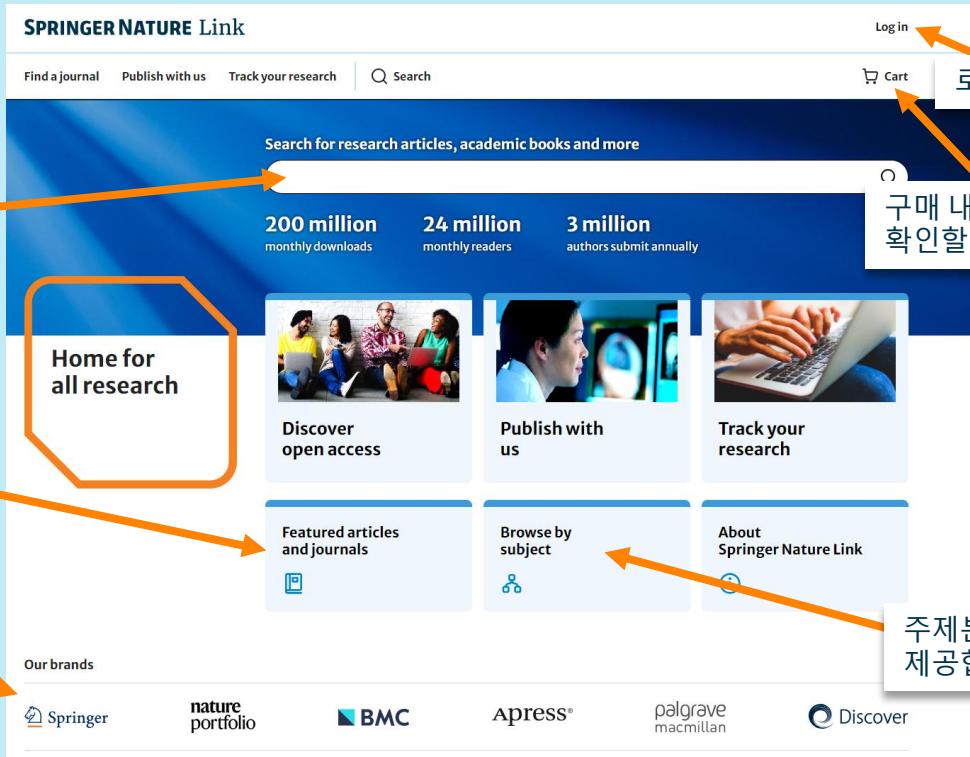
## 플랫폼 링크

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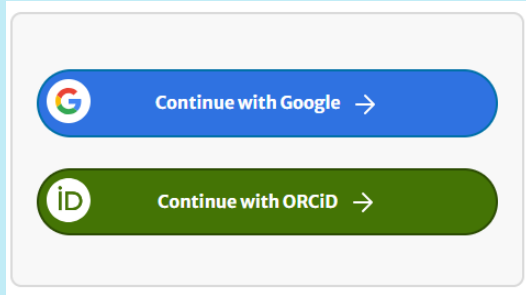
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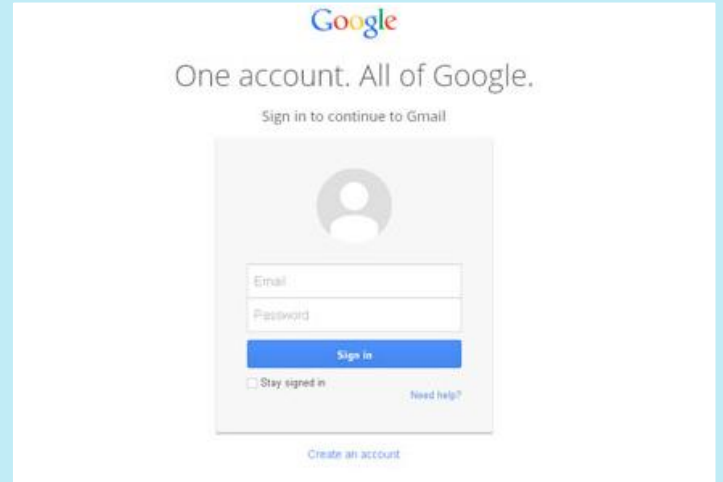
# 계정 생성하기

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1) [Continue with Google] 을  
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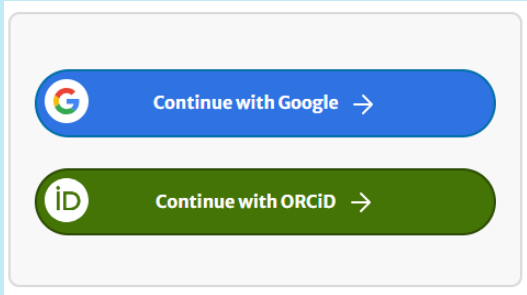
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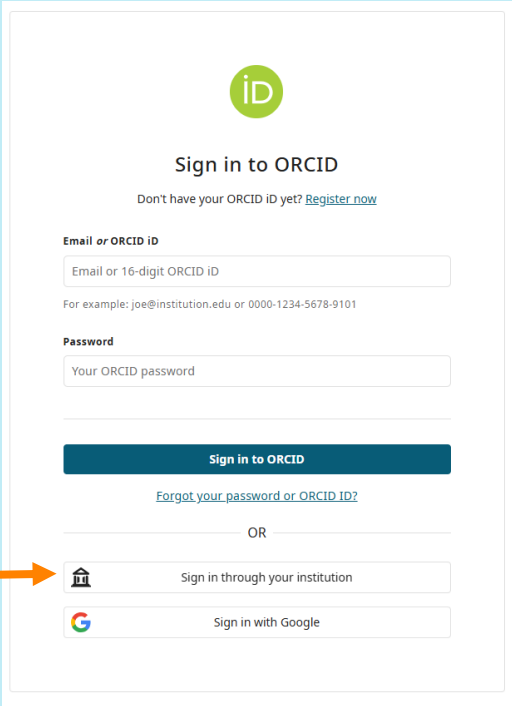
# 계정 생성하기

## 3. ORCID ID 활용

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**Content type**

- Article (191,336)
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- Review article (27,275)
- Reference work entry (6,071)
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- Last 24 months

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- English (256,041)
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**Chapter** Full access  
**Mitochondria and Ageing**  
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Mitochondria are central actors in diverse physiological phenomena ranging from energy metabolism to stress signaling and immune modulation...

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4) 게시 날짜 순서대로 재정렬할 수 있습니다.

The screenshot shows a search results page for 'mitochondria'. The search bar at the top contains 'mitochondria' and a search button. Below the search bar, there are filters for 'Research article', 'Last 3 months', 'English', and 'Life sciences'. A 'Sort by' dropdown menu is open, showing options: 'Relevance' (selected), 'Date published (new to old)', and 'Date published (old to new)'. The search results list three articles, each with a 'Full access' icon. The first article is 'Stress triggers gut dysbiosis via CRH-CRH1-mitochondria pathway'. The second is 'Mitochondria transfer-based therapies reduce the morbidity and mortality of Leigh syndrome'. The third is 'Mitochondria facilitate neuronal differentiation by metabolising nuclear-encoded RNA'. The interface includes a 'Showing 1-20 of 769 results' indicator, a 'Content type' filter (with 'Research article' selected), a 'Date published' filter (with 'Last 3 months' selected), and a 'Subjects' filter (with 'Mechanism of action' selected). There are 'Clear all' and 'Update results' buttons at the bottom.

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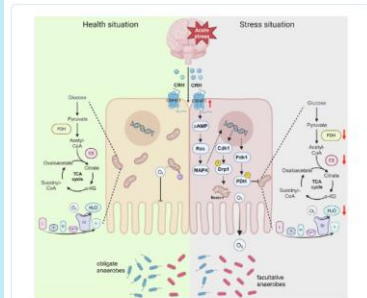
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The screenshot shows the article page for "Stress triggers gut dysbiosis via CRH-CRHR1-mitochondria pathway" in the journal *npj Biofilms and Microbiomes*. The page includes a navigation bar, a title section with a "Download PDF" button, an abstract, a list of authors, and a "Metrics" section. A diagram at the bottom illustrates the "Health situation" and "Stress situation" involving gut dysbiosis, CRH, CRHR1, and mitochondria. A sidebar on the right contains "Sections" (Abstract, Introduction, Methods, Result, Discussion, Data availability, References, Acknowledgements, Author information, Ethics declarations, Additional information, Supplementary information, Rights and permissions, About this article) and "Advertisements" (EXPLORE SMOLDERING NEUROINFLAMMATION).



The screenshot shows the article page for "Stress triggers gut dysbiosis via CRH-CRHR1-mitochondria pathway" in *npj Biofilms and Microbiomes*. The article is published on September 30, 2024, and is available as an open access article. The authors listed are Yiming Zhang, Xiaoyang Li, Siqi Lu, Hualin Guo, Zhuangyi Zhang, Haonan Zheng, Cunzhen Zhang, Jindong Zhang, Kun Wang, Fei Pei, and Liping Duan. The abstract discusses the role of stress in gut dysbiosis, specifically focusing on the CRH-CRHR1-mitochondria pathway. A diagram at the bottom illustrates the transition from a "Health situation" to a "Stress situation", showing how stress (via CRH) affects the gut microbiome and mitochondrial function, leading to dysbiosis and inflammation. The diagram shows that in a health situation, the gut has a balanced microbiome with both obligate anaerobes and facultative anaerobes. In a stress situation, CRH levels increase, leading to mitochondrial damage and dysfunction, which in turn leads to an overgrowth of facultative anaerobes and a decrease in obligate anaerobes, resulting in gut dysbiosis and inflammation.

1) [Cite this article] 을 클릭합니다.

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The screenshot shows the "Cite this article" section. It includes a "Check for updates" button, the article title "Stress triggers gut dysbiosis via CRH-CRHR1-mitochondria pathway", the journal name "npj Biofilms Microbiomes", the volume and issue information "Volume 10, article number 93, (2024)", and the DOI "https://doi.org/10.1038/s41522-024-00571-z". There are also buttons for "Download citation" and "Download PDF". The "Received" date is 13 May 2024, the "Accepted" date is 16 September 2024, and the "Published" date is 30 September 2024. The DOI is "https://doi.org/10.1038/s41522-024-00571-z". On the right side, there are links for "Data availability", "References", "Acknowledgements", "Author information", "Ethics declarations", "Additional information", "Supplementary information", "Rights and permissions", and "About this article".

# 참고문헌 (References)

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## Stress triggers gut dysbiosis via CRH-CRHR1-mitochondria pathway

Article | Open access | Published: 30 September 2024  
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Yiming Zhang, Xiaoyang Li, Siqi Lu, Huaiqin Guo, Zhuangqi Zhang, Haonan Zheng, Cunzhen Zhang, Jindong Zhang, Kun Wang, Fei Pei & Liping Duan

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### Abstract

Stress can lead to gut dysbiosis in brain-gut axis disordered diseases as irritable bowel syndrome (IBS), yet the mechanisms how stress transfer from the brain to the gut and disrupt gut microbiota remain elusive. Here we describe a stress-responsive brain-to-gut axis which impairs colonocytes' mitochondria to trigger gut dysbiosis. Patients with IBS exhibit significantly increased facultative anaerobes and decreased obligate anaerobes, related to increased serum corticotropin-releasing hormone (CRH) level and defected colonocytes' mitochondria ultrastructure. Mice exposed to acute stress experienced enhanced CRH-CRH receptor type 1 (CRHR1) signaling, which impaired mitochondria and epithelium hypoxia in the colon, subsequently triggered gut dysbiosis. Antagonizing CRHR1 expression to inhibit cAMP/Ras/MAPK signaling or activating mitochondria respiration conferred resilience against stress-induced mitochondria damaging and epithelium hypoxia impairment, ultimately improving gut dysbiosis. These results suggest that the CRH-CRHR1-mitochondria pathway plays a pivotal role in stress-induced gut dysbiosis that could be therapeutically targeted for stress-induced gastrointestinal diseases.

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sanofi

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Sections Figures **References**

1. Morais, L. H., Schreiber, H. L. T. & Mazmanian, S. K. The gut microbiota-brain axis in behaviour and brain disorders. *Nature reviews. Microbiology* **19**, 241–255, <https://doi.org/10.1038/s41579-020-00460-0> (2021).

[Article](#) [CAS](#) [PubMed](#) [Google Scholar](#)

2. Camilleri, M. Diagnosis and Treatment of Irritable Bowel Syndrome: A Review. *JAMA* **325**, 865–877, <https://doi.org/10.1001/jama.2020.22532> (2021).

[Article](#) [CAS](#) [PubMed](#) [Google Scholar](#)

3. Stewart Campbell, A. et al. Safety and target engagement of an oral small-molecule sequestrant in adolescents with autism spectrum disorder: an open-label phase 1b/2a trial. *Nat. Med* **28**, 528–534, <https://doi.org/10.1038/s41591-022-01683-9> (2022).

[Article](#) [CAS](#) [PubMed](#) [Google Scholar](#)

4. Dalile, B., Van Oudenhove, L., Vervliet, B. & Verbeke, K. The role of short-chain fatty acids in microbiota-gut-brain communication. *Nat. Rev. Gastroenterol. Hepatol.* **16**, 461–478, <https://doi.org/10.1038/s41575-019-0157-3> (2019).

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