

ScienceDirect AI 主要功能简介及操作说明

ScienceDirect AI (SD AI) 是爱思唯尔推出的基于全文文献的科研服务工具，旨在提升科研与知识发现的效率。其主要功能包括智能检索、文献管理、深度阅读助手和实验对比，帮助科研人员快速掌握前沿科技信息、精确总结文献内容、提取核心洞见，并支持多语种自然语言提问，生成专业综述。

SD AI 通过全文数据生成高质量的科研总结，节省 50% 以上的文献阅读时间和 80% 的信息筛选时间，极大提高科研工作效率。它还支持跨平台个性化分析，延伸至个人文献库，助力科研人员实现定制化深度分析。

SD AI 的特别价值在于其严格追溯全文内容、确保信息可信赖、结合高质量同行评审内容，提供可靠、透明的科研支持。它不仅覆盖自然科学、工程、医学等多学科，还能促进跨学科研究、加快创新步伐，为科研机构 and 科研人员提供全流程高效、精准的知识发现解决方案。

更多详情可以访问以下链接：[思唯学院 SD AI 介绍](#)

功能介绍：

一、ScienceDirect AI 智能检索——全文文章和书籍章节的检索与总结

用户可以使用自己的语言描述所需内容及检索目的，从 1400 万篇文章和书籍章节的全文内容中检索并获取答案。ScienceDirect AI 将在其逾千万篇文献中检索，提供带有参考文献的总结、每个参考文献的原文片段以及简短的相关洞察，同时链接回原始文献。

视频简介：<https://weixin.qq.com/sph/AZtCZSfK9>（微信链接）

访问方式：

1. 通过专属链接进入：<https://www.sciencedirect.com/ai>

在 ScienceDirect 的首页及各页面顶部均设有该链接入口（图 1）

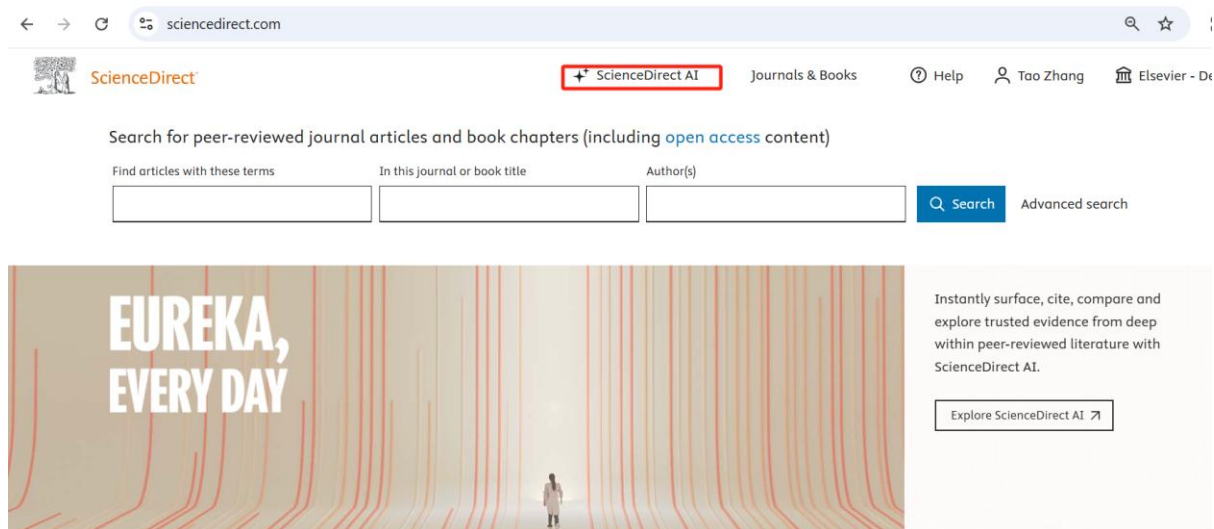


图 1

- 1) 问题输入：在页面输入框内输入需要提问的科学问题（支持中文提问）（图 2）

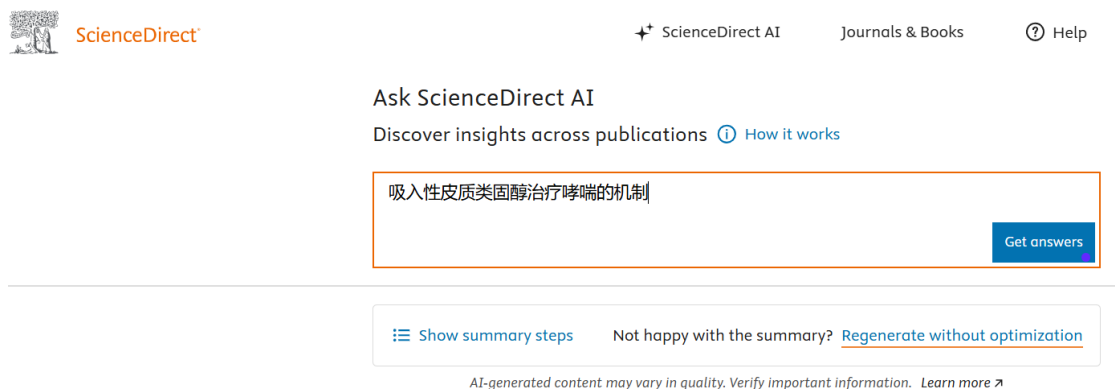


图 2

- 2) 查看参考文献：每一条答案均附带参考文献，点击参考文献链接即可查看文章基本信息及答案所在原文章节（不需要全文访问权即可查看）（图 3）。

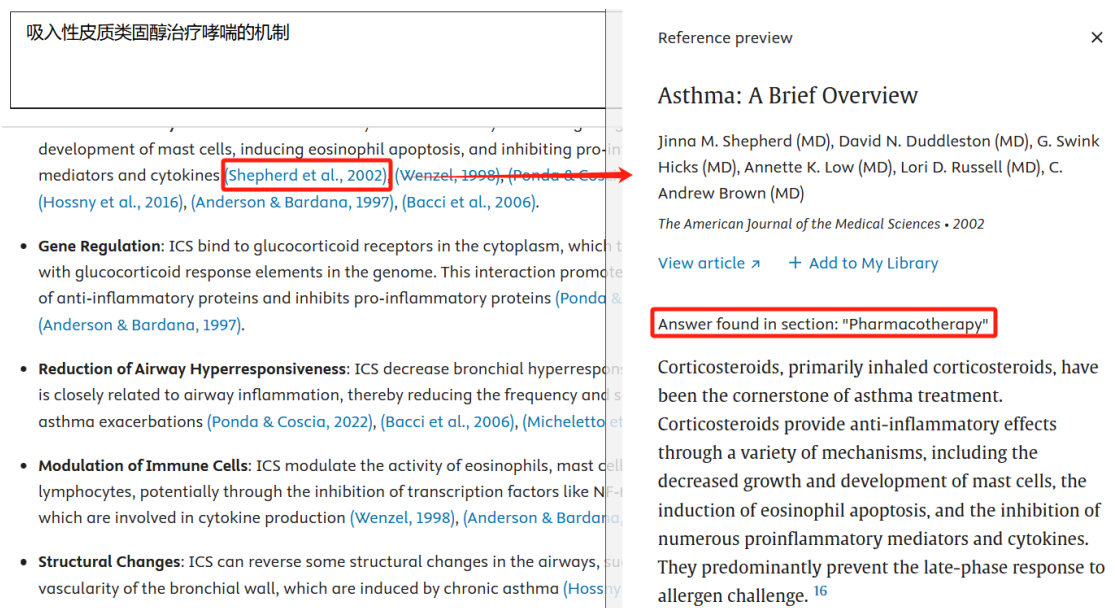


图 3

3) 推荐相关问题：在页面底部会自动推荐跟用户所问问题相关的 3 个问题（图 4）。

Ask another question:

- ↳ 吸入性皮质类固醇如何调节免疫反应以缓解哮喘症状 ➤
- ↳ 吸入性皮质类固醇对气道炎症的影响机制是什么 ➤
- ↳ 吸入性皮质类固醇在哮喘治疗中的作用与机制分析 ➤

图 4

2. 通过检索界面进入：在 SD 检索界面输入关键词检索，在检索结果页面，检索词的下方，会有 ScienceDirect AI 功能框，点击“Try it out”按钮，会自动将用户输入的关键词进行提问，并跳转到“问答助手”页面（图 5）。

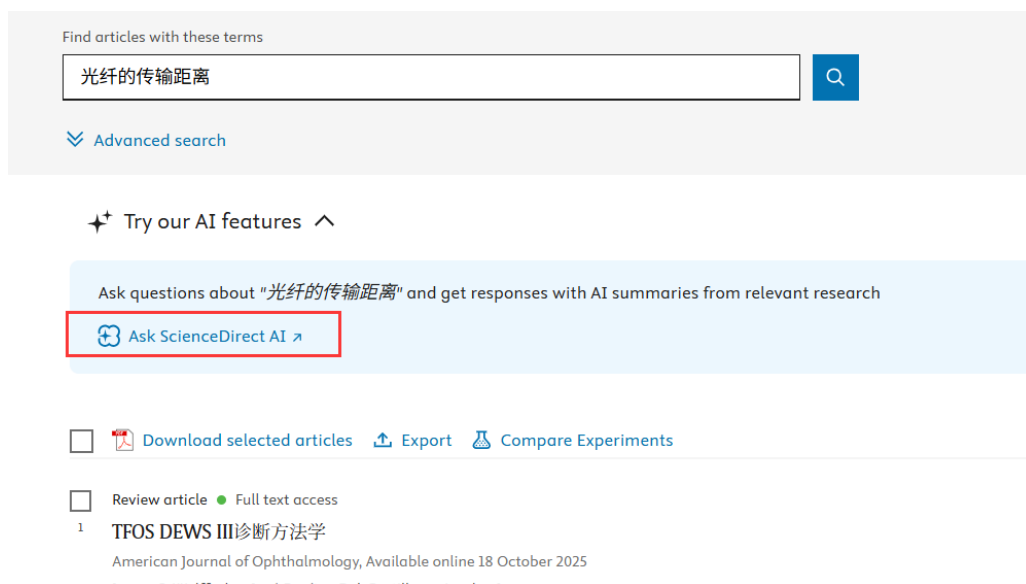


图 5

二、 阅读助手——与 ScienceDirect 中的文章对话

对话功能可帮助科研人员就特定研究论文或书籍章节进行深入问答。用户可以点击回答中的参考文献，跳转到答案来源的相关段落。该功能还会向科研人员建议合适的研究问题。

视频简介: <https://weixin.qq.com/sph/AwWjgoXn5> (微信链接)

访问方式:

1. 通过“问答助手”结果推荐参考文献进入: 如果“问答助手”推荐的答案文章为 ScienceDirect 文章, 且用户有文章访问权, 则可以点击“View article”链接进入原文页面, 阅读助手会自动在页面右侧弹出(图 6)。

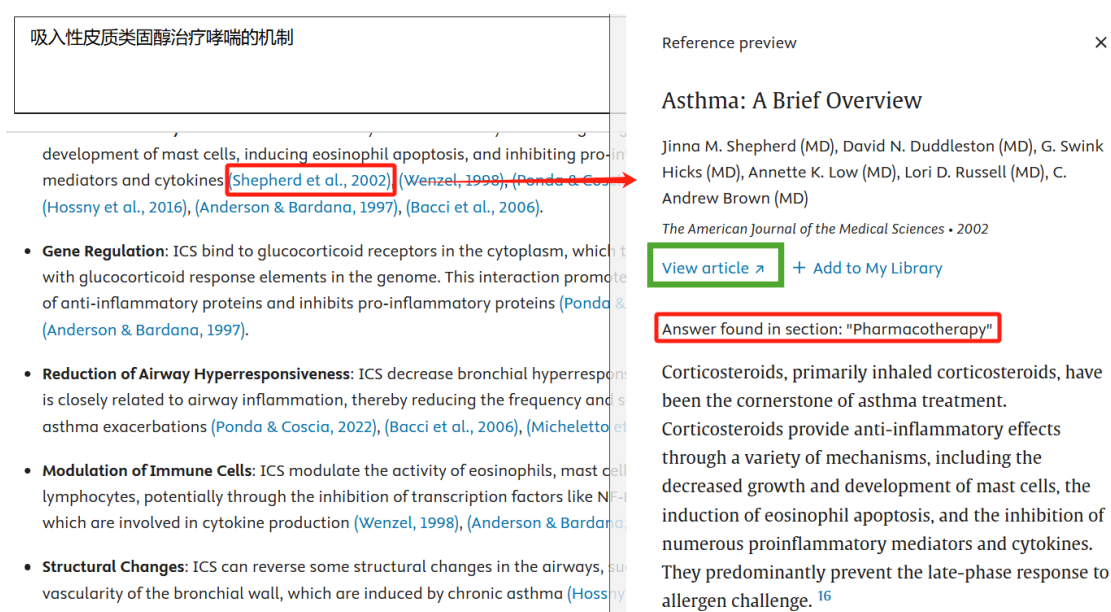


图 6

- 1) 通过该方式进入“阅读助手”，系统会将用户之前问的问题自动在该文章内再问一次，并基于该篇文章内容进行回答该问题（图7）。

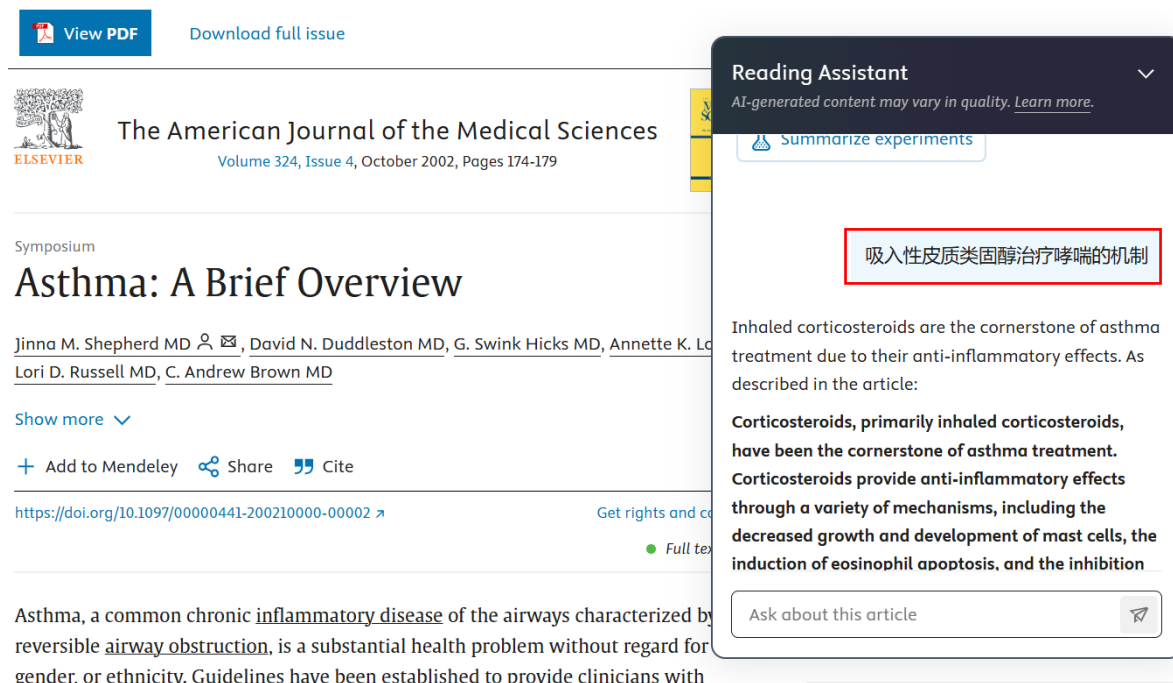


图 7

- 2) 同时，用户可以在“阅读助手”功能框内选择“Summarize this article”“Summarize experiments”，或者在下方的对话框中输入问题（图8）。

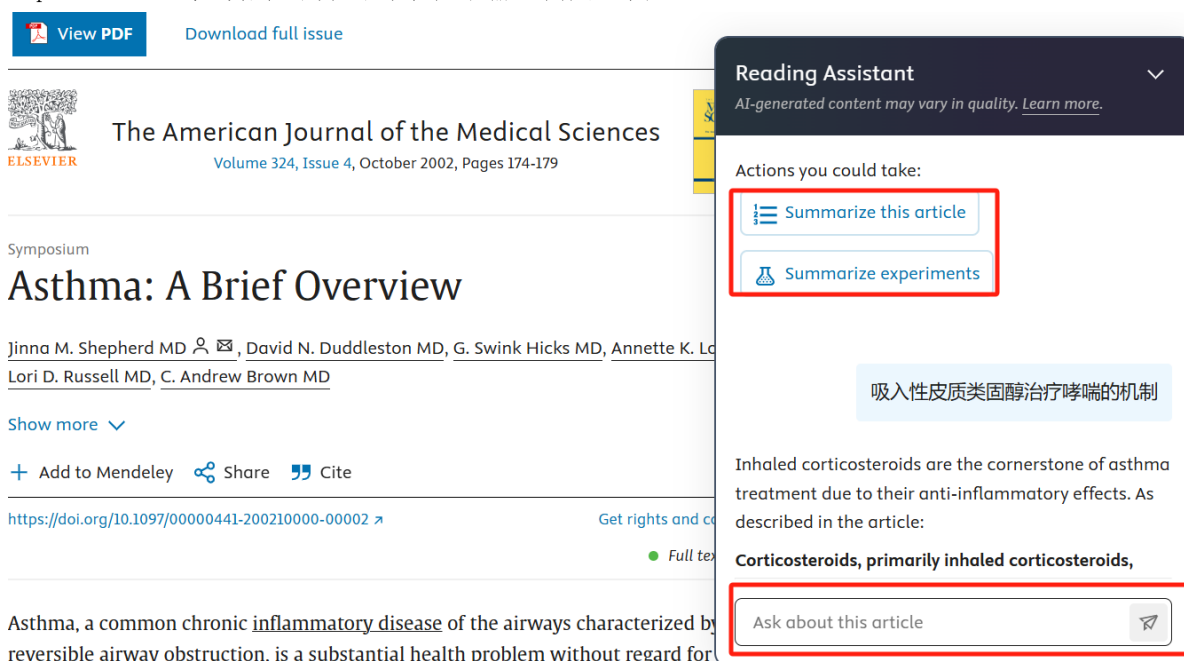


图 8

2. 通过 ScienceDirect 在线全文页面的快捷按钮访问：在线打开任意一篇 ScienceDirect 全文，在页面右下角会有“阅读助手”按钮，点击按钮即可唤出“阅读助手”（图 9）。



图 9

三、实验对比工具——实验总结表格

比较和整合文献这一工作非常耗时。ScienceDirect AI 独特的“实验对比”工具能够将一组文章汇总，并生成实验对比表格，分解每项实验，提取包括目标、方法、结果在内的关键点。

视频简介：<https://weixin.qq.com/sph/AcPqmejZJ>（微信链接）

访问方式：

1. 通过“问答助手”提问结果界面进入：在提问结果页面最下方，有“Compare experiments”按钮，点击可以进入实验结果对比页面。通过该方式进入，对比的研究（文章）来自“问答助手”推荐的参考文献（图 10）。
点击右上角的“Export table”可以将实验对比内容导出到 Excel 文件（图 11）。

吸入性皮质类固醇治疗哮喘的机制

Get answers

References from summary (6)

Related insights (4)

Other actions:

Compare experiments

Ask another question:

吸入性皮质类固醇如何调节免疫反应以缓解哮喘症状

吸入性皮质类固醇对气道炎症的影响机制是什么

吸入性皮质类固醇在哮喘治疗中的作用与机制分析

图 10

AI-generated content may vary in quality. Verify important information. Learn more

Export table (CSV)

ARTICLE	EXPERIMENT / STUDY	GOAL	MATERIALS	METHODS	RESULTS
Article Asthma: A Brief Overview » Jinna M. Shepherd (MD), David N. Duddleston (MD), ... C. Andrew Brown (MD) The American Journal of the Medical Sciences • Volume 324 • 2002 Export data (CSV)	Epidemiological study	To study the epidemiology of asthma, including its prevalence, morbidity, and mortality.	General population data on asthma prevalence, morbidity, and mortality in the United States and other countries.	Analyzed epidemiological data on asthma from various sources, including national surveys and health care utilization records.	Asthma affects approximately 10% of the population, with increasing prevalence over time. Asthma is a significant cause of morbidity, accounting for over 15 million days of restricted activity, 1.5 million emergency department visits, and 500,000 hospitalizations annually in the US. Asthma mortality rate increased during the 1970s and 1980s but has since stabilized at a level higher than in the 1970s.
	Review of diagnostic criteria	To define the key features used to diagnose asthma.	Criteria for asthma diagnosis as defined by the National Institutes of Health, including characteristic symptoms, reversible airflow obstruction, bronchial hyperresponsiveness, and chronic airway inflammation.	Summarized the diagnostic criteria for asthma based on clinical symptoms, lung function testing, and other diagnostic tests to rule out alternative conditions.	Asthma is diagnosed based on a combination of factors, including recurrent symptoms of wheezing, dyspnea, chest tightness, and cough; documentation of reversible airflow obstruction; evidence of bronchial hyperresponsiveness; and presence of chronic airway inflammation.

图 11

2. 通过 ScienceDirect 关键词检索界面选择所需文献进行实验对比。在检索结果页面勾选需要对比的文献，点击页面上方的“Compare experiments”链接，即可进入实验对比页面（图 12）。

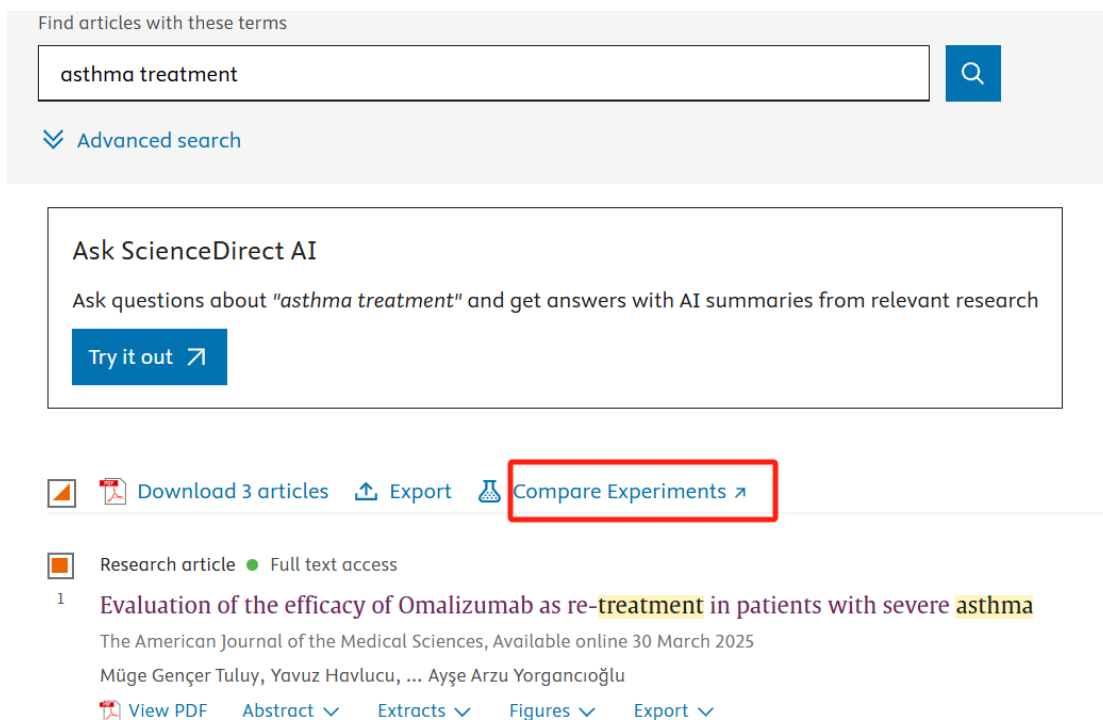


图 12

四、 定制化文献智能管理与分析——结合 [Mendeley AI 文献管理工具](#)

Mendeley 是爱思唯尔为科研学者提供的一款免费文献管理软件（[下载链接](#)）ScienceDirect AI 集成了 Mendeley AI 工具，核心在于突破“文献分析局限于单一平台”的传统壁垒——Mendeley AI 不仅能高效处理来自 ScienceDirect 平台的文献，更支持对用户个人文献库中所有 **自选文献** 进行智能比对分析，助力科研人员实现从“被动管理文献”到“主动挖掘洞见”的跨越，实现真正意义上的个性化检索与智能解读。

当您打开 SD AI 搜索框得到相关参考文献后，直接点击“Add to my library”可以直接将重点文献进行保存到个人 Library 文件夹，当您在 Mendeley reference manager 平台通过同一个账号登陆后，Library 文件夹也会与 Mendeley 自动同步，通过 Mendeley AI 进行文献的分析整理。

What is your research question?

☐ Include Scopus abstracts

What is known about how microRNAs are involved in neural plasticity?

Ask

Epigenetics and pervasive developmental disorders

Andrea L. Gropman

Elsevier • *Epigenetics in Psychiatry* • 2021

+ Add to My Library

Copy

MicroRNAs (miRNAs) are important for brain development and plasticity, with dysregulated profiles linked to neurodevelopmental disorders. Their role in neural development remains an area of ongoing research.

How relevant is this response? ☆ ☆ ☆

The Gene Silencing Transcription Factor REST Represses miR-132 Expression in Hippocampal Neurons Destined to Die

MicroRNAs play a pivotal role in synaptic plasticity and structural remodeling in neurons, regulating gene expression in an

Mendeley AI 提供三个主要功能：阅读助手（Reading Assistant）+实验对比（Compare Experiments）+ Ask My Library。Mendeley AI 将推出“Ask My Library”功能，用户可针对个人 Mendeley 文献库中存储的所有全文文献发起提问，AI 将跨文献整合关键信息，生成全面、系统的回答。

Compare Experiments						
This feature is in alpha release, and may be switched off in the future.						
TITLE	EXPERIMENT / STUDY	GOAL	MATERIALS	METHODS	RESULTS	CONCLUSION
A multidimensional taxonomy for human-robot interaction in construction	Computational investigation	To study the use of a taxonomy for human-robot interaction in construction, the authors used a classification model to detect changes in the worker's cognitive load levels during a building task.	Unmanned ground vehicle (UGV), electromechanical system (EMS) system from vendor	The robot received the worker's EEG signals wirelessly and used a classification model to detect changes in the worker's cognitive load levels. The robot then adjusted its behavior, such as the frequency of delivering bricks, to respond to these changes and minimize the adverse effects of high cognitive loads on the worker.	The robot was able to detect changes in the worker's cognitive load levels using the EEG signals and adjust its behavior accordingly to reduce the worker's cognitive demands during the task.	The proposed brain-computer interface approach can be used to develop collaborative robots that can dynamically adjust their behavior to support construction workers and minimize the adverse effects of cognitive loads during task execution.
A novel kinematic calibration method for robot based on the Levenberg-Marquardt and improved Marquardt-Predator algorithm	Kinematic error model development	To establish a kinematic error model that takes into account not only the DH parameters of the robot, but also the hand-eye and base-world parameters, in order to mitigate the influence of inaccuracies in the hand-eye and base-world parameters on robot calibration.	6-DOF serial robot, monocular camera, chessboard	1. Derived a kinematic error model that incorporates DH parameters, hand-eye parameters, and base-world parameters. 2. Analyzed the Jacobian matrix to identify and remove redundant error parameters.	The proposed kinematic error model effectively mitigates the influence of inaccuracies in hand-eye and base-world parameters on robot calibration, eliminating the need for additional hand-eye calibration. Compared to the error model without hand-eye and base-world parameters, the average absolute position error of the robot after calibration using the proposed error model is 0.3440 mm lower.	The proposed kinematic error model that includes hand-eye and base-world parameters can effectively reduce the influence of inaccuracies in these parameters on robot calibration, without requiring additional hand-eye calibration.
	Kinematic parameter identification algorithm	To develop a robust identification algorithm that combines the Levenberg-Marquardt (LM) algorithm and an improved Marquardt-Predator Algorithm (MPA) to accurately and quickly identify the kinematic parameters of the robot.	6-DOF serial robot, monocular camera, chessboard	1. Utilized the LM algorithm to obtain a sub-optimal solution for the kinematic parameters. 2. Employed the MPA algorithm, which incorporates a cross-entropy-based learning strategy and a logical operation-based learning strategy, to further refine the kinematic parameter.	Experiments show that the proposed LM-MPA algorithm exhibits superior convergence speed and accuracy compared to LM, MPA, Particle Swarm Optimization (PSO), and other algorithms.	The LM-MPA algorithm effectively addresses the low convergence accuracy of the LM algorithm when tackling high-order nonlinear problems, as well as the slow convergence speed of the MPA algorithm, and can accurately and quickly identify the kinematic