AI Powered Discovery: How LibKey is Enabling Next Generation Research Assistants

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INSTALLED IN

2,000+ libraries

USED IN

35+ countries

HIGHLY TRUSTED

99% renewal rate

COMPANY FOCUS

LibKey intelligent access

Article level data

+

Real-time intelligent link-building

=

Fastest, most reliable, informed linking

Article level intelligence

Article metadata

Library entitlements

Authentication

Open Access Availability

Aggregator availability

Available versions

Available formats

Scholarly integrity

The "best source"

Real time analysis of all available sources

Use AI expert system to determine the "best source"

Best source versus all sources approach improves overall linking reliability

OA VoR

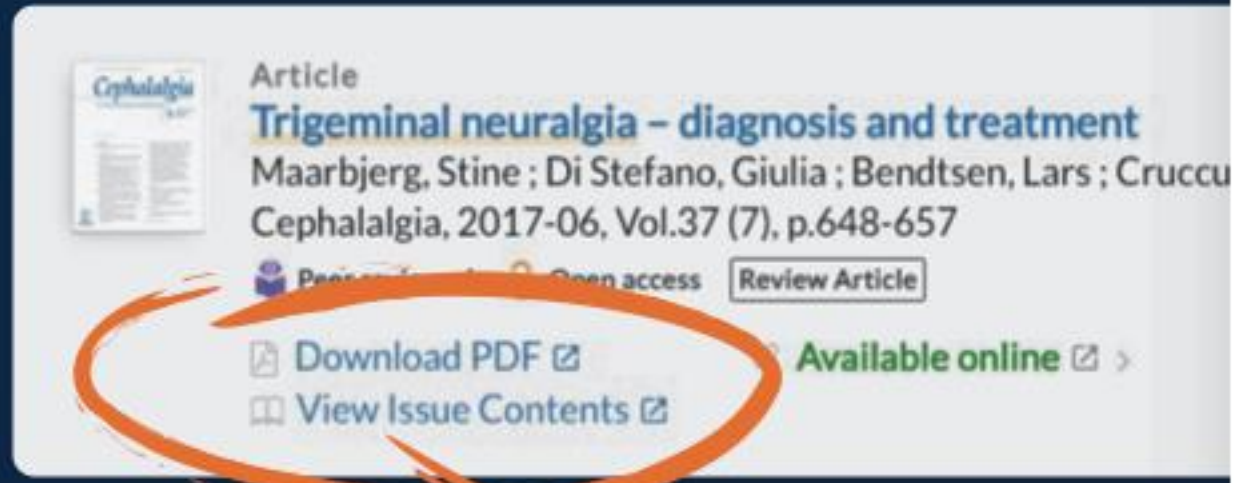
Subscribed Journal Publisher

Subscribed Journal Aggregator

Accepted Manuscripts

ILL/Document Delivery

LibKey experience



Cephalalgia

Review

Trigeminal neuralgia – diagnosis and treatment

Stine Maarbjerg[1], Giulia Di Stefano[2], Lars Bendtsen[1] and Giorgio Cruccu[2]

Abstract

Introduction: Trigeminal neuralgia (TN) is characterized by touch-evoked unilateral brief shock-like paroxysmal pain in one or more divisions of the trigeminal nerve. In addition to the paroxysmal pain, some patients also have continuous pain. TN is divided into classical TN (CTN) and secondary TN (STN).

Etiology and pathophysiology: Demyelination of primary sensory trigeminal afferents in the root entry zone is the predominant pathophysiological mechanism. Most likely, demyelination paves the way for generation of ectopic impulses and ephaptic crosstalk. In a significant proportion of the patients, the demyelination is caused by a neurovascular conflict with morphological changes such as compression of the trigeminal root. However, there are also other unknown etiological factors, as only half of the CTN patients have morphological changes. STN is caused by multiple sclerosis or a space-occupying lesion affecting the trigeminal nerve.

Differential diagnosis and treatment: Important differential diagnoses include trigeminal autonomic cephalalgias, posttraumatic or postherpetic pain and other facial pains. First line treatment is prophylactic medication with sodium channel blockers, and second line treatment is neurosurgical intervention.

Future perspectives: Future studies should focus on genetics, unexplored etiological factors, sensory function, the neurosurgical outcome and complications, combination and neuromodulation treatment as well as development of new drugs with better tolerability.

criteria, guidelines, treatment, etiology, pathophysiology

Date received: [illegible]; revised: 21 November 2016; accepted: 7 December 2016

Definition

According to the beta version of the 3rd edition of the International Classification of Headache Disorders (ICHD-3 Beta) (1) (Table 1), trigeminal neuralgia (TN) is defined by recurrent unilateral brief electric shock-like pain that is abrupt in onset and termination. The pain is restricted to one or more of the trigeminal divisions and is triggered by innocuous sensory stimuli. TN is divided into either classical TN (CTN) or secondary TN (STN) caused by multiple sclerosis or a space-

Symptomatology

In early descriptions of TN, the disorder was called tic douloureux (3), addressing the characteristic wince that TN patients may exhibit at a pain paroxysm; TN pain is not only extremely painful, it is also characteristic that the pain is sudden and unexpected, and short-lasting, hence the term pain paroxysm. The pain quality is stabbing, electrical shock-like, or shooting. Although one single


Open Web Searching
PubMed
WILEY
AI services and research tools
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Consensus
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Databases
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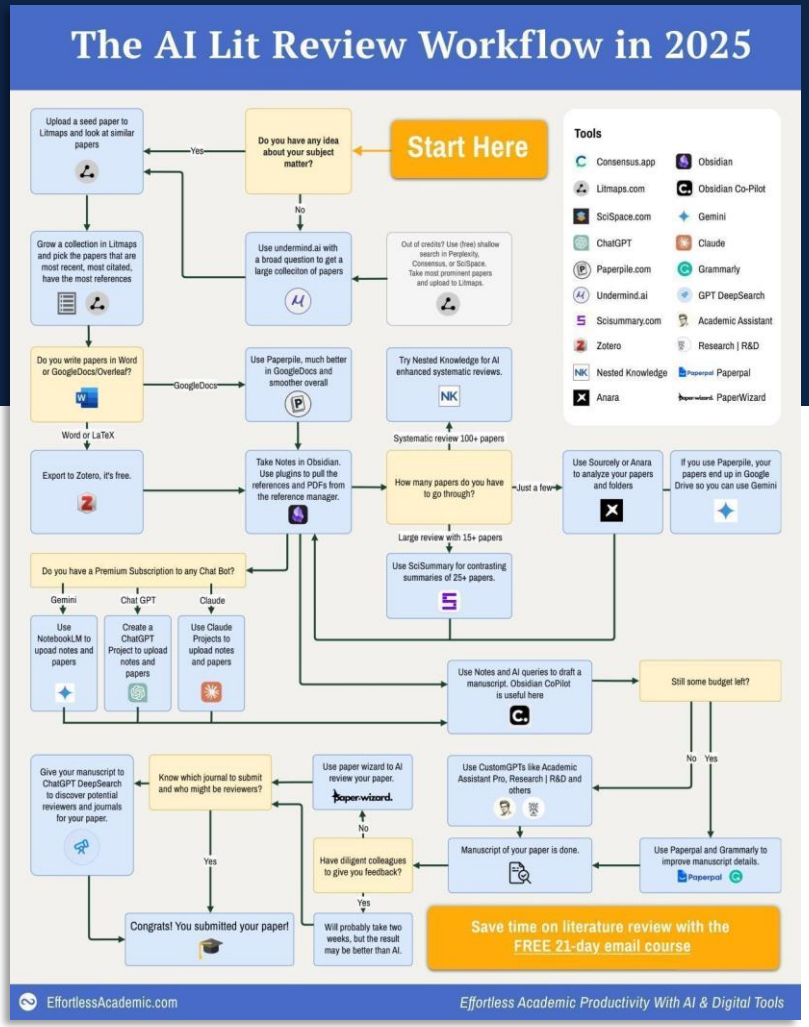
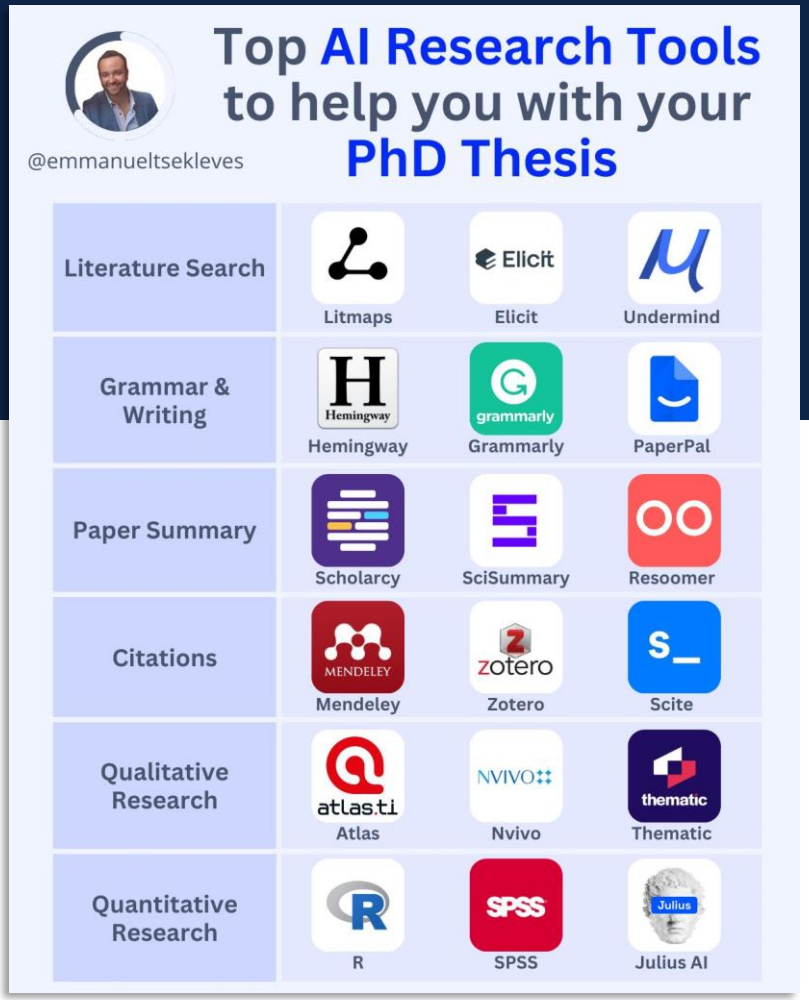
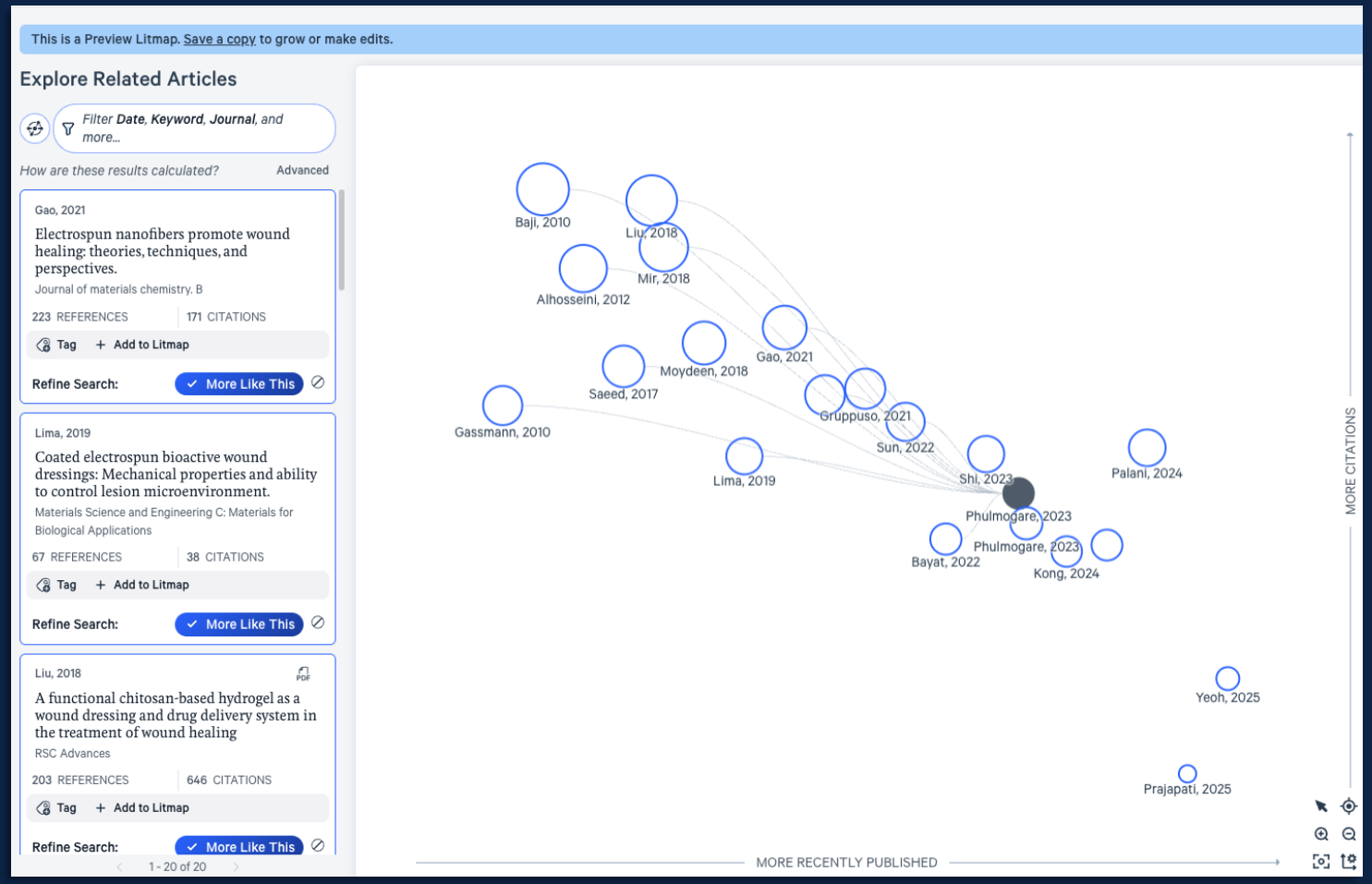
Discovery services
Primo
EBSCO
LibKey
Full Text

New AI research services





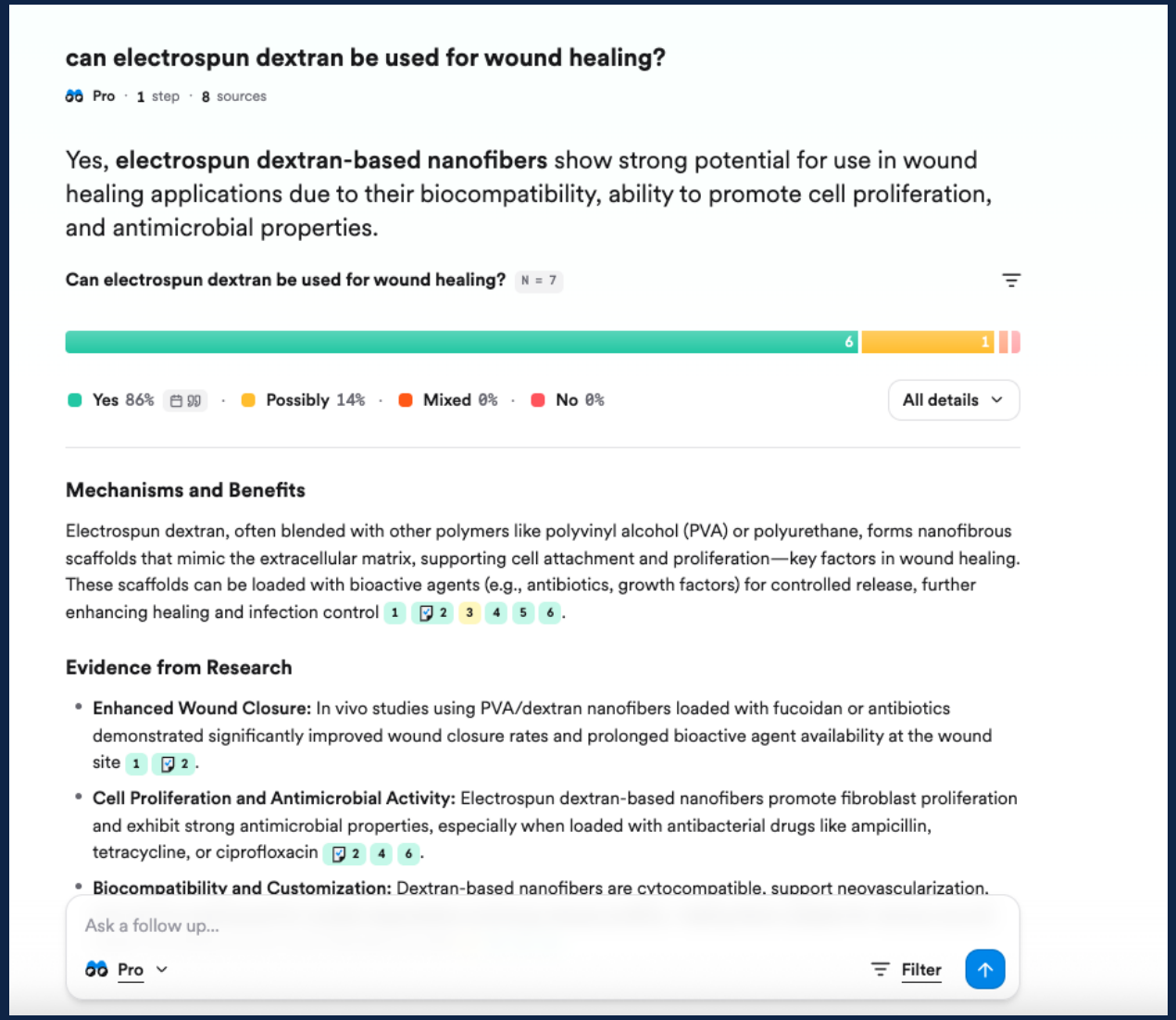
Litmaps



- Citation mapping service that visualizes citation networks to facilitate discovery, monitoring, organization and collaboration
- Launched 2021
- Raised $1MM (to acquire Research Rabbit)
- "Used by 350,000+ researchers worldwide"

Consensus

- Evidence synthesis, summarizing current state of researdch
- Launched 2022
- Raised $11.5MM
- "Over 5 million researchers, students, and clinicians trust Consensus”; ”7 million users, web traffic has surpassed WoS and Scopus”



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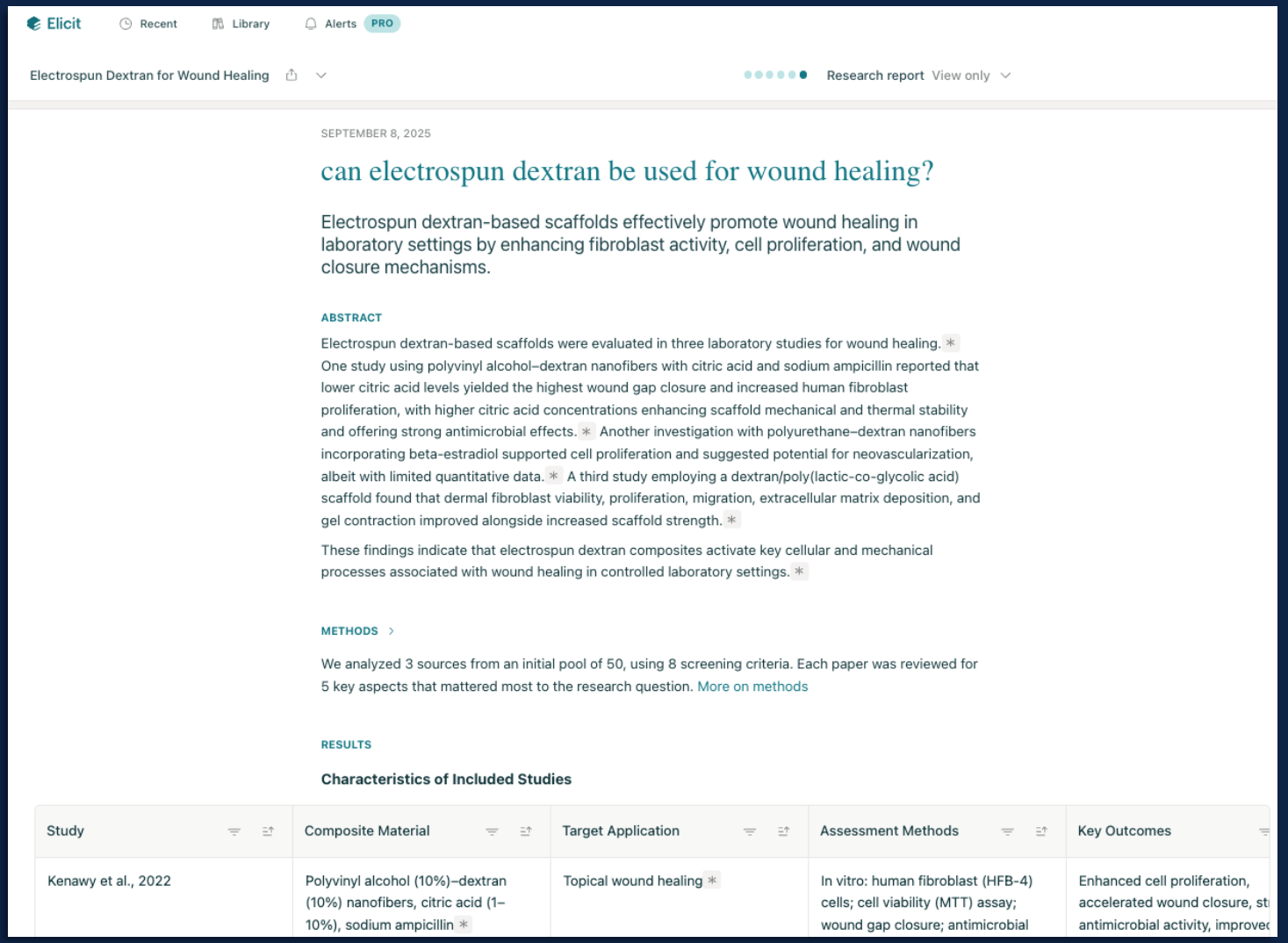
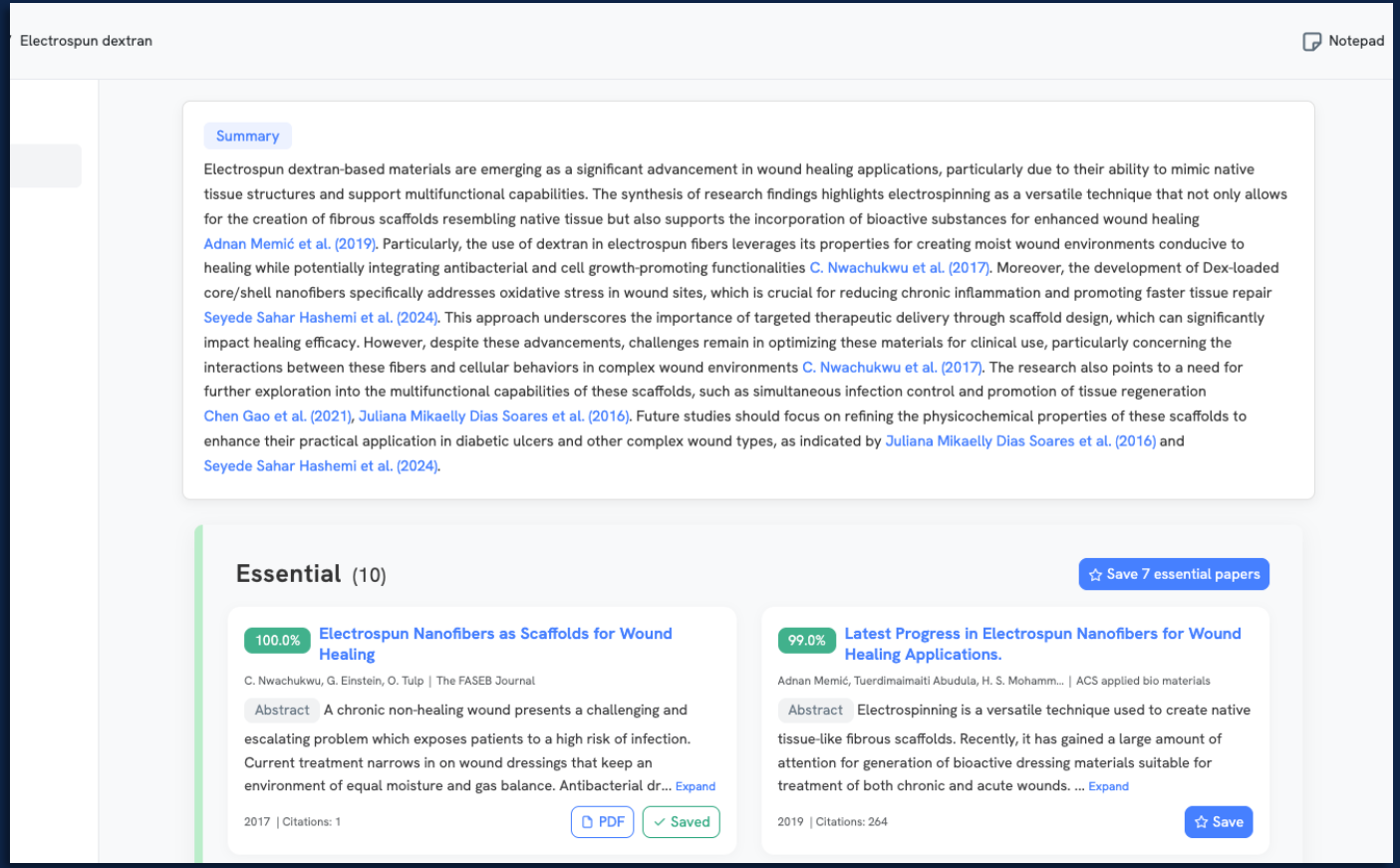


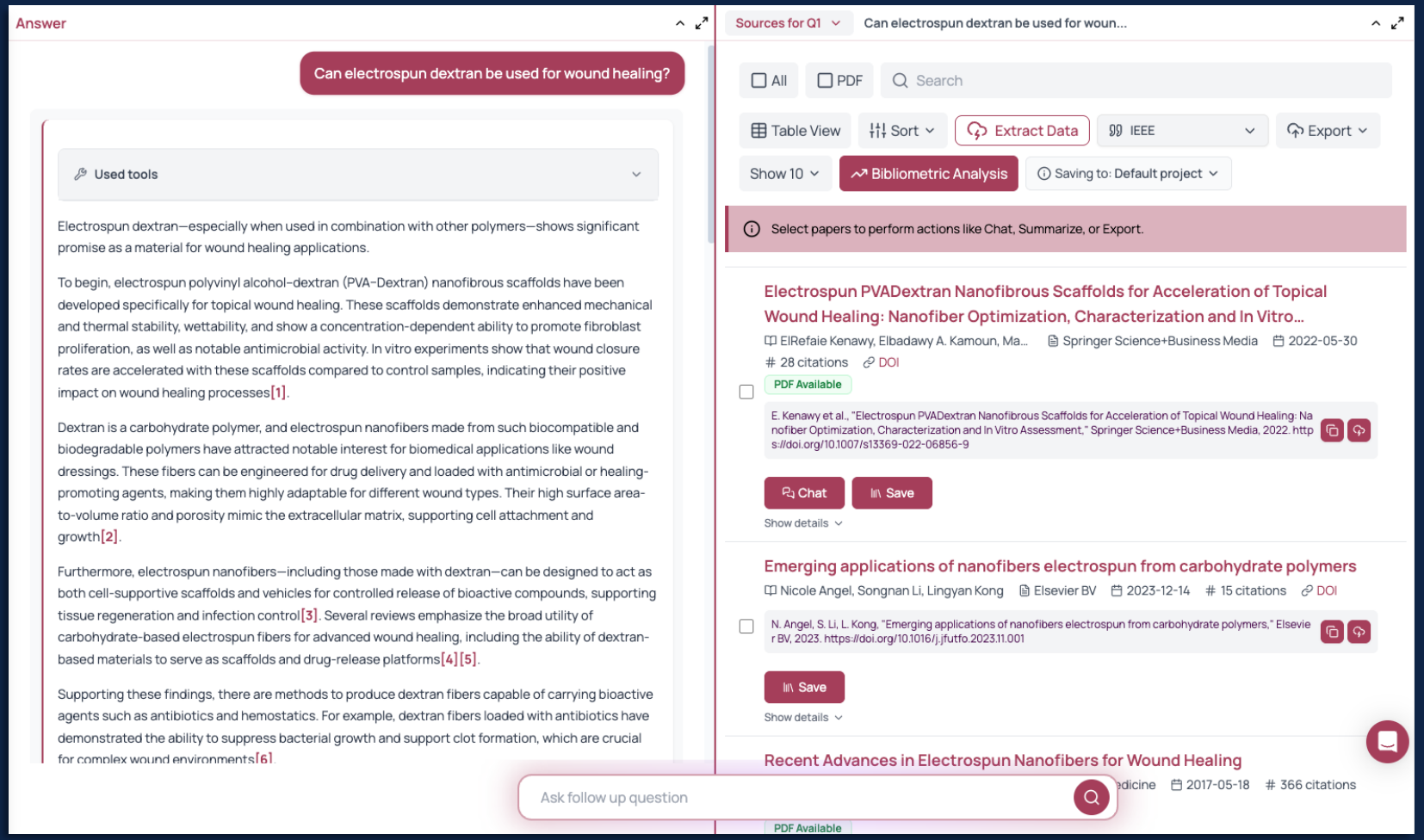
- Tailored to systematic reviews and automated extraction - ideal for rigorous literature synthesis
- Launched 2023
- Raised $22MM
- "Over 2 million researchers"

moara

- Highly integrated workflow tool, helping researchers from design, to discovery, to document creation
- Launched in 2025
- Undisclosed funding
- Promoting library “pilots” over number of users



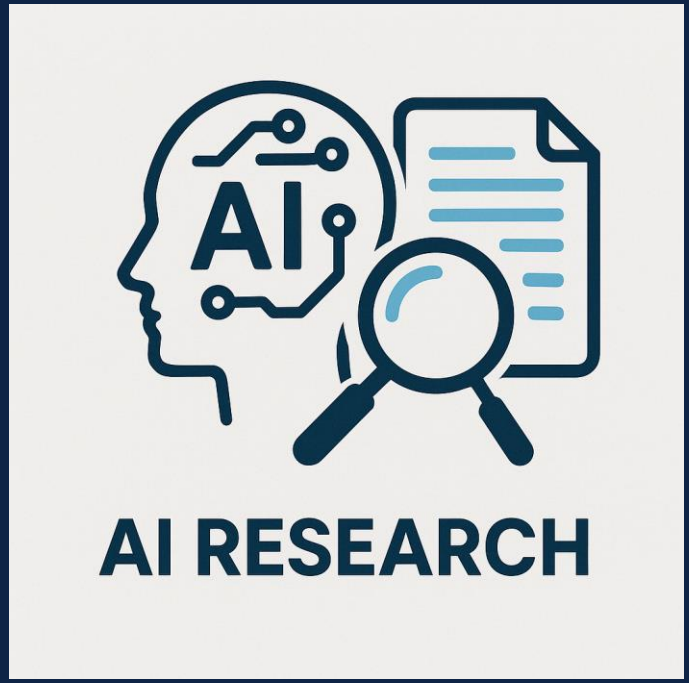
ANSWERTHIS



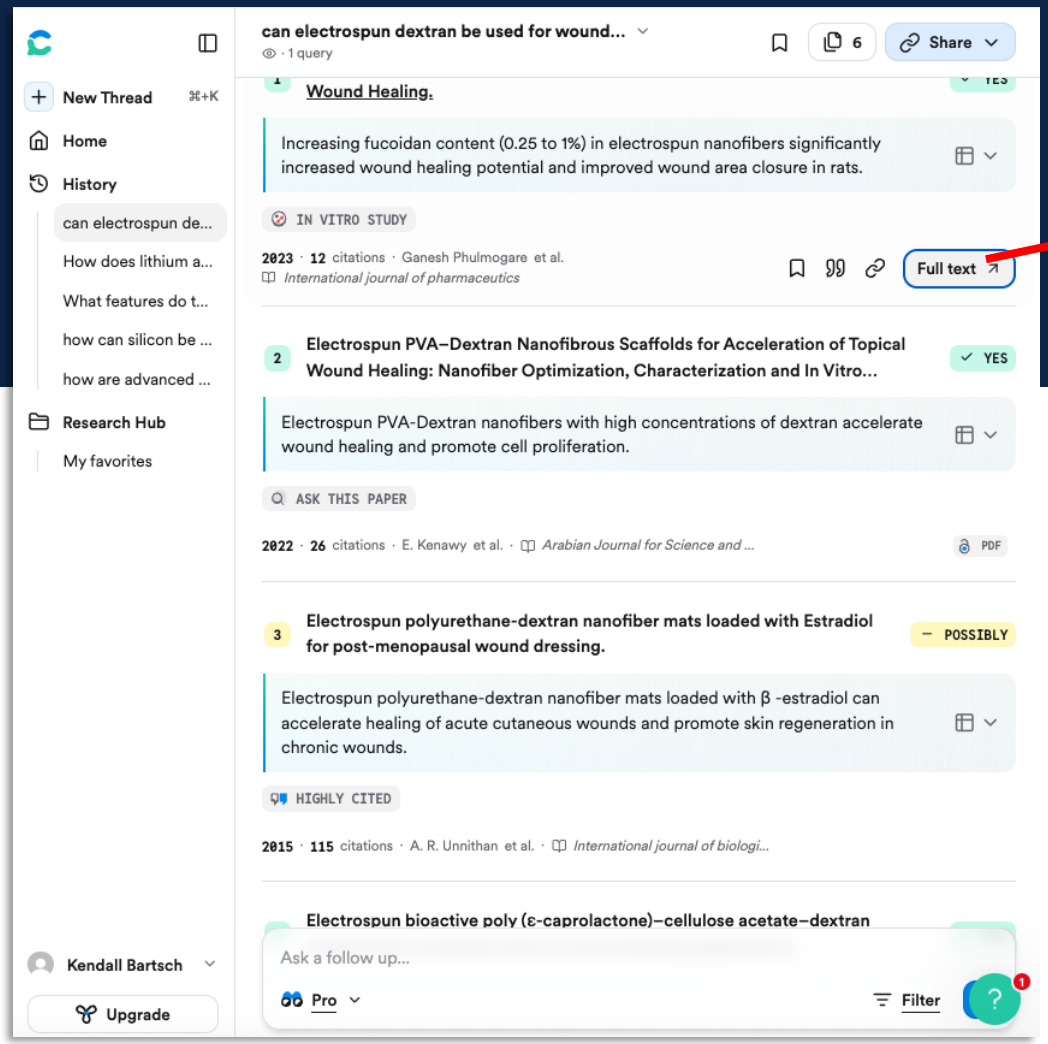
- AI assistant for research; finds and summarizes papers, helps identify research gaps, organizes findings
- **Launched in 2025**
- Part of the RIoT Accelerator Program
- "Trusted by over 100,000+ researchers"

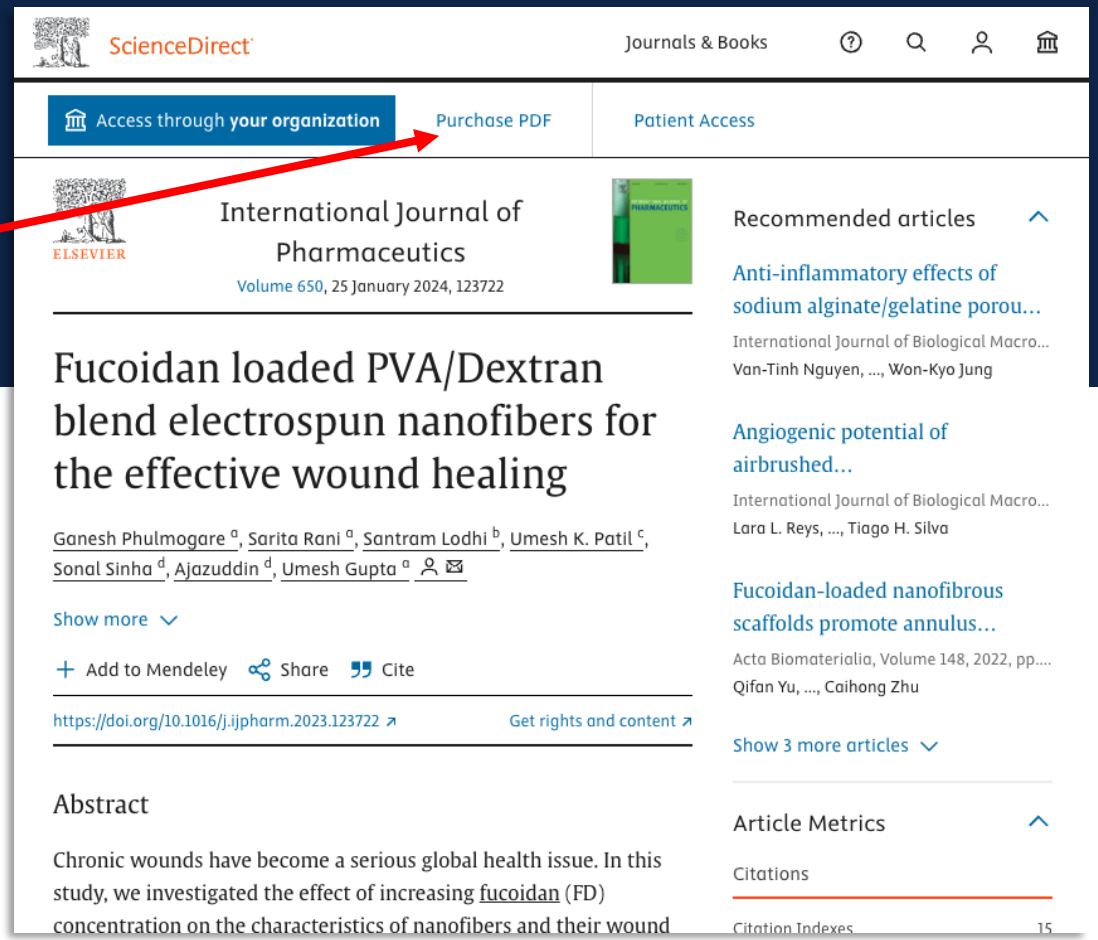
Summary of new services

- Emergent and evolving
- Funded
- Have both B2C and B2B revenue models
- Being used by lots of researchers
- Primarily use DOIs to connect to full text



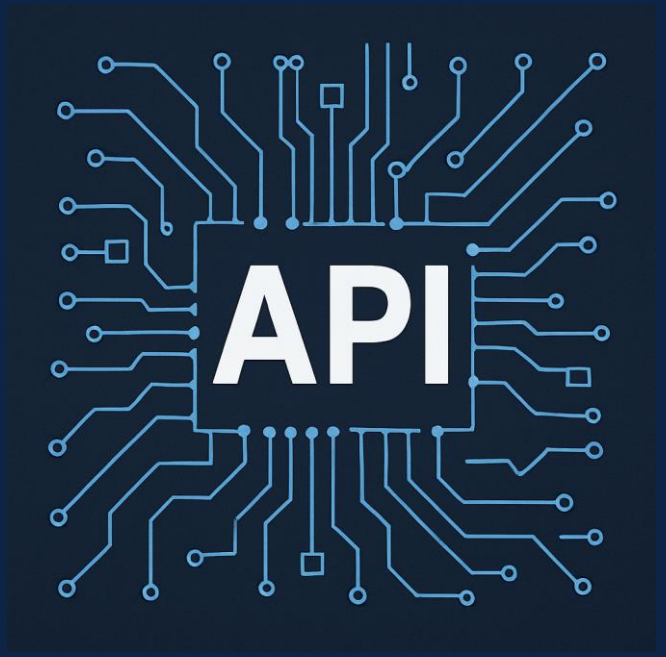
Uncertainty of access





LibKey: integrating Library Holdings and full-text access into AI Services

- New services are using LibKey to understand awareness of holdings and connect their users to library collections
- LibKey's patented signposting API helps researchers understand what experience to expect when retrieving full text as well as see article status (retraction, expression of concern, etc. in real time)
- Completes the research process with easy access to full text (publisher, aggregator, ILL and document delivery)
- Free for platforms to use, included with LibKey access for libraries



LibKey API logic

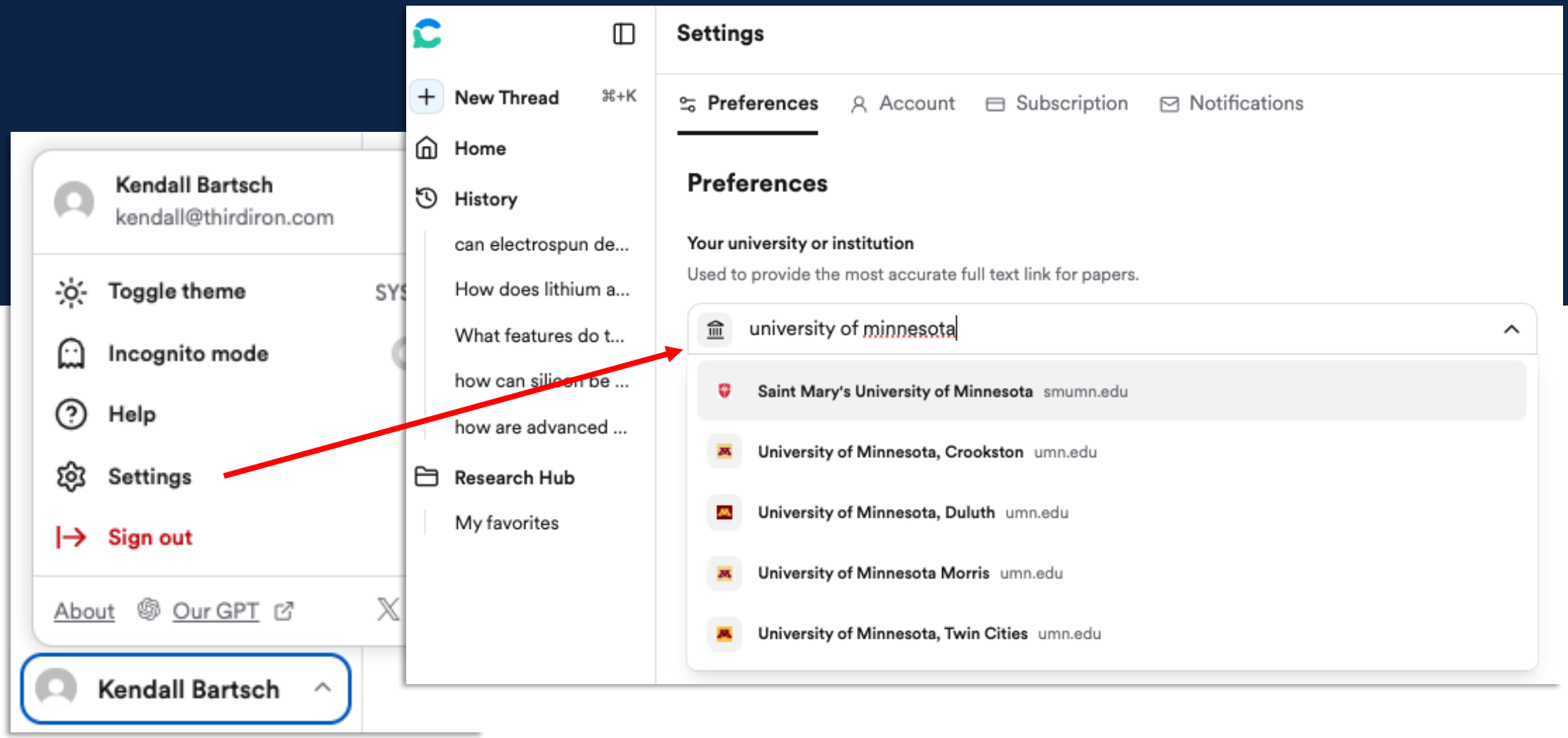
Article Lookup

- Issue a GET request to the Third Iron endpoint with:
  - DOI or PMID
  - Library ID
  - API key
- LibKey API returns:
  - “bestIntegratorLink” for the optimal URL for accessing the article
  - Open Access Status
  - Retraction status

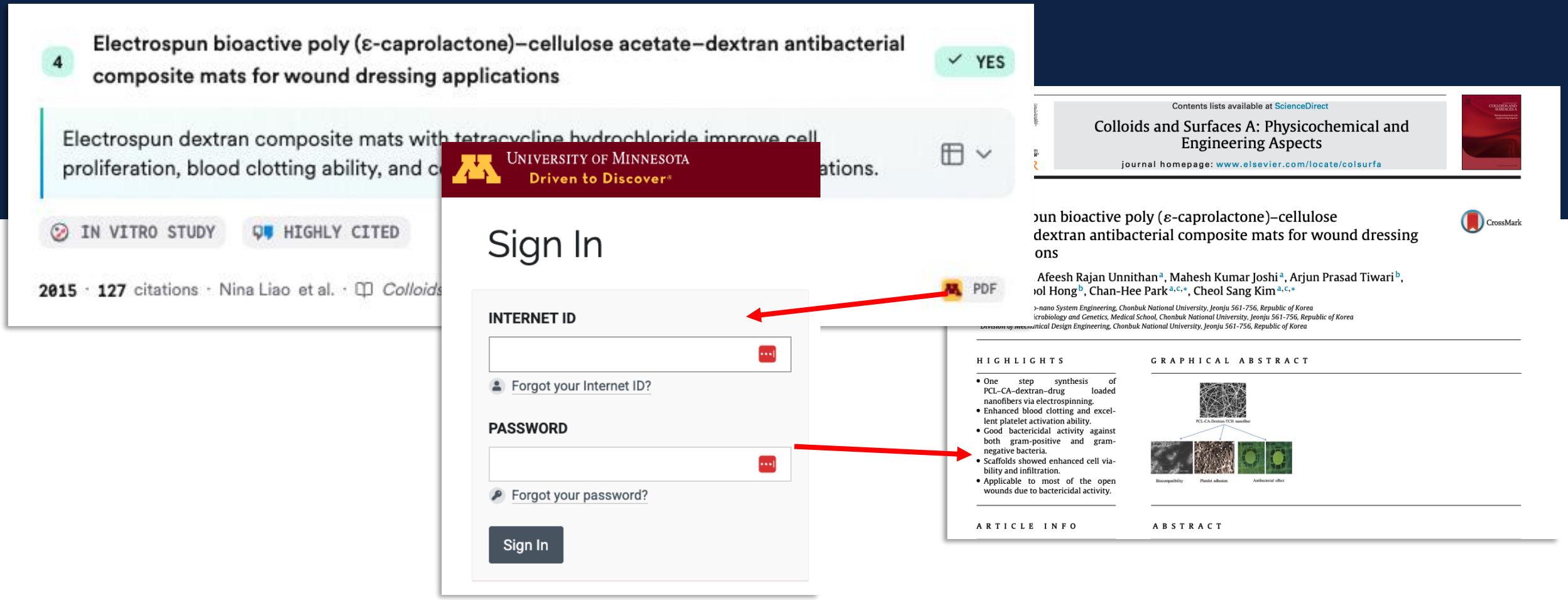
Library List Endpoint

- Provides a real-time catalog of all LibKey libraries

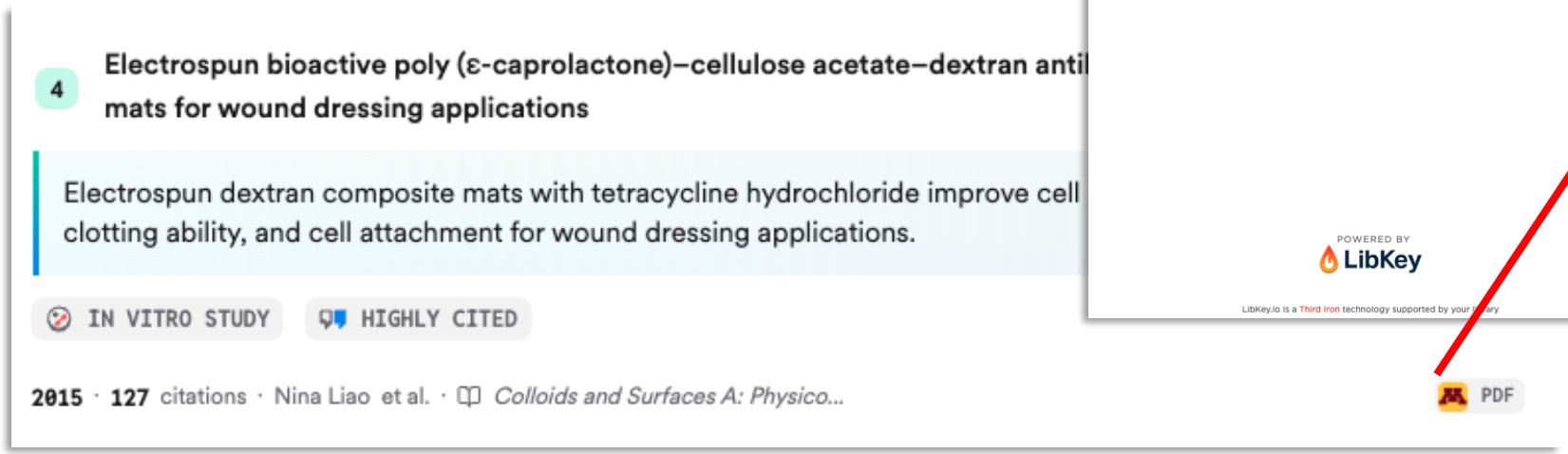
User affiliation in AI services

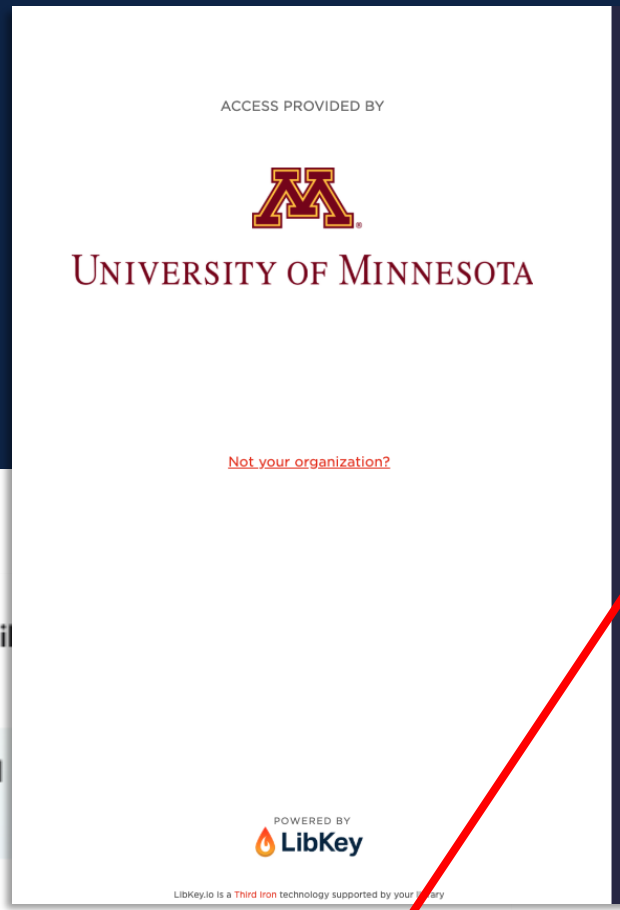


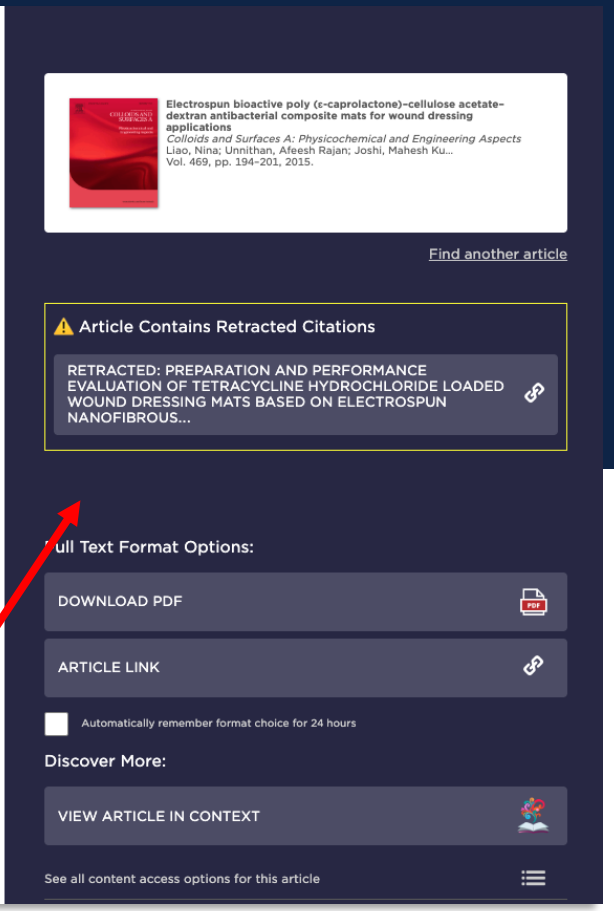
LibKey integration experience



Adds problematic article notification







LibKey integration benefits

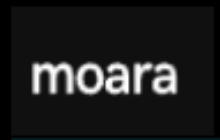
Users

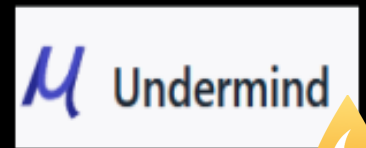
- Instant full-text access
- Streamlined workflow
- Safeguards research integrity

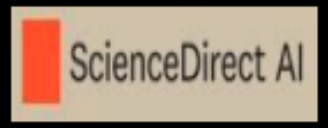
Libraries

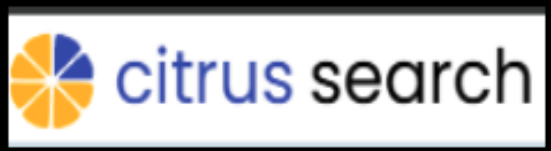
- Increased visibility of holdings and library services
- Increased usage of library resources
- Usage tracking and analytics*

AI assisted Literature Review tools









Primo Research Assistant

[My list of "innovative" literature review tools]

Looking ahead

CHATGPT EDU

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MODEL CONTEXT PROTOCOL

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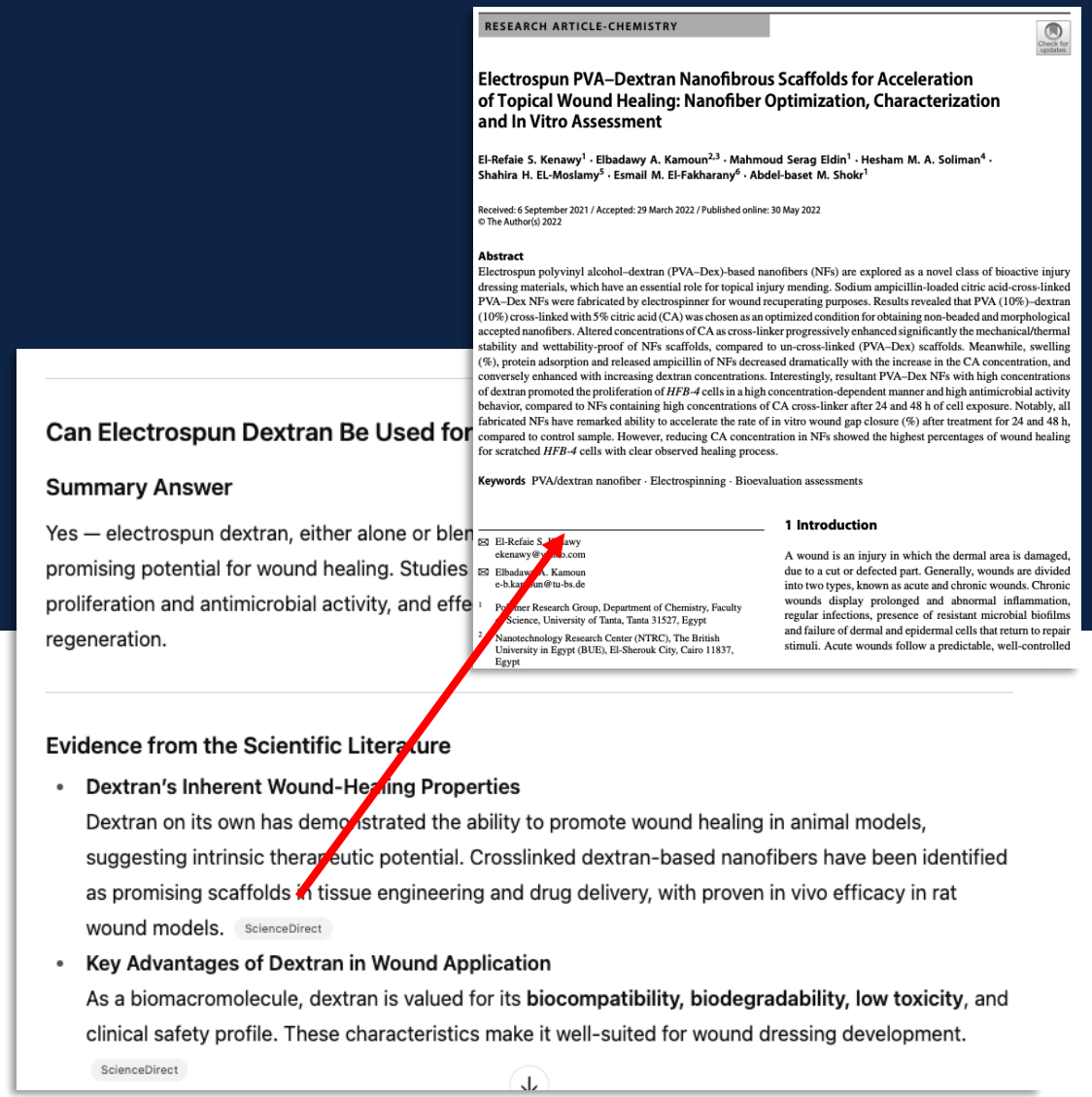

RESEARCH ARTICLE-CHEMISTRY

Electrospun PVA–Dextran Nanofibrous Scaffolds for Acceleration of Topical Wound Healing: Nanofiber Optimization, Characterization and In Vitro Assessment

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Received: 6 September 2021 / Accepted: 29 March 2022 / Published online: 30 May 2022
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Abstract
Electrospun polyvinyl alcohol–dextran (PVA–Dex)-based nanofibers (NFs) are explored as a novel class of bioactive injury dressing materials, which have an essential role for topical injury mending. Sodium ampicillin-loaded citric acid-cross-linked PVA–Dex NFs were fabricated by electrospinner for wound recuperating purposes. Results revealed that PVA (10%)–dextran (10%) cross-linked with 5% citric acid (CA) was chosen as an optimized condition for obtaining non-beaded and morphological accepted nanofibers. Altered concentrations of CA as cross-linker progressively enhanced significantly the mechanical/thermal stability and wettability-proof of NFs scaffolds, compared to un-cross-linked (PVA–Dex) scaffolds. Meanwhile, swelling (%), protein adsorption and released ampicillin of NFs decreased dramatically with the increase in the CA concentration, and conversely enhanced with increasing dextran concentrations. Interestingly, resultant PVA–Dex NFs with high concentrations of dextran promoted the proliferation of *HFB-4* cells in a high concentration-dependent manner and high antimicrobial activity behavior, compared to NFs containing high concentrations of CA cross-linker after 24 and 48 h of cell exposure. Notably, all fabricated NFs have remarked ability to accelerate the rate of in vitro wound gap closure (%) after treatment for 24 and 48 h, compared to control sample. However, reducing CA concentration in NFs showed the highest percentages of wound healing for scratched *HFB-4* cells with clear observed healing process.

Keywords PVA/dextran nanofiber · Electrospinning · Bioevaluation assessments

1 Introduction

A wound is an injury in which the dermal area is damaged, due to a cut or defected part. Generally, wounds are divided into two types, known as acute and chronic wounds. Chronic wounds display prolonged and abnormal inflammation, regular infections, presence of resistant microbial biofilms and failure of dermal and epidermal cells that return to repair stimuli. Acute wounds follow a predictable, well-controlled

Can Electrospun Dextran Be Used for

Summary Answer

Yes — electrospun dextran, either alone or blen
promising potential for wound healing. Studies
proliferation and antimicrobial activity, and effe
regeneration.

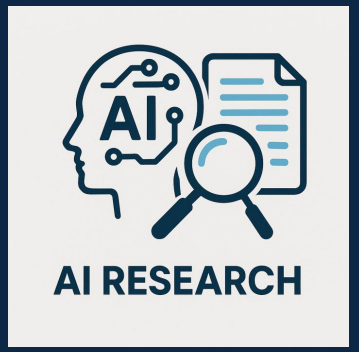
Evidence from the Scientific Literature

- **Dextran's Inherent Wound-Healing Properties**
  Dextran on its own has demonstrated the ability to promote wound healing in animal models, suggesting intrinsic therapeutic potential. Crosslinked dextran-based nanofibers have been identified as promising scaffolds in tissue engineering and drug delivery, with proven in vivo efficacy in rat wound models. ScienceDirect
- **Key Advantages of Dextran in Wound Application**
  As a biomacromolecule, dextran is valued for its **biocompatibility, biodegradability, low toxicity**, and clinical safety profile. These characteristics make it well-suited for wound dressing development.
  ScienceDirect

LibKey

Integrating LibKey into AI service access infrastructure

Bridge to access



- Enables users reliably connect with more Open Access content, especially that published in hybrid journals
- Helps preserve scholarly integrity
- Prevents the spread of misinformation
- Ensures reliable research output

Thank you!

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