



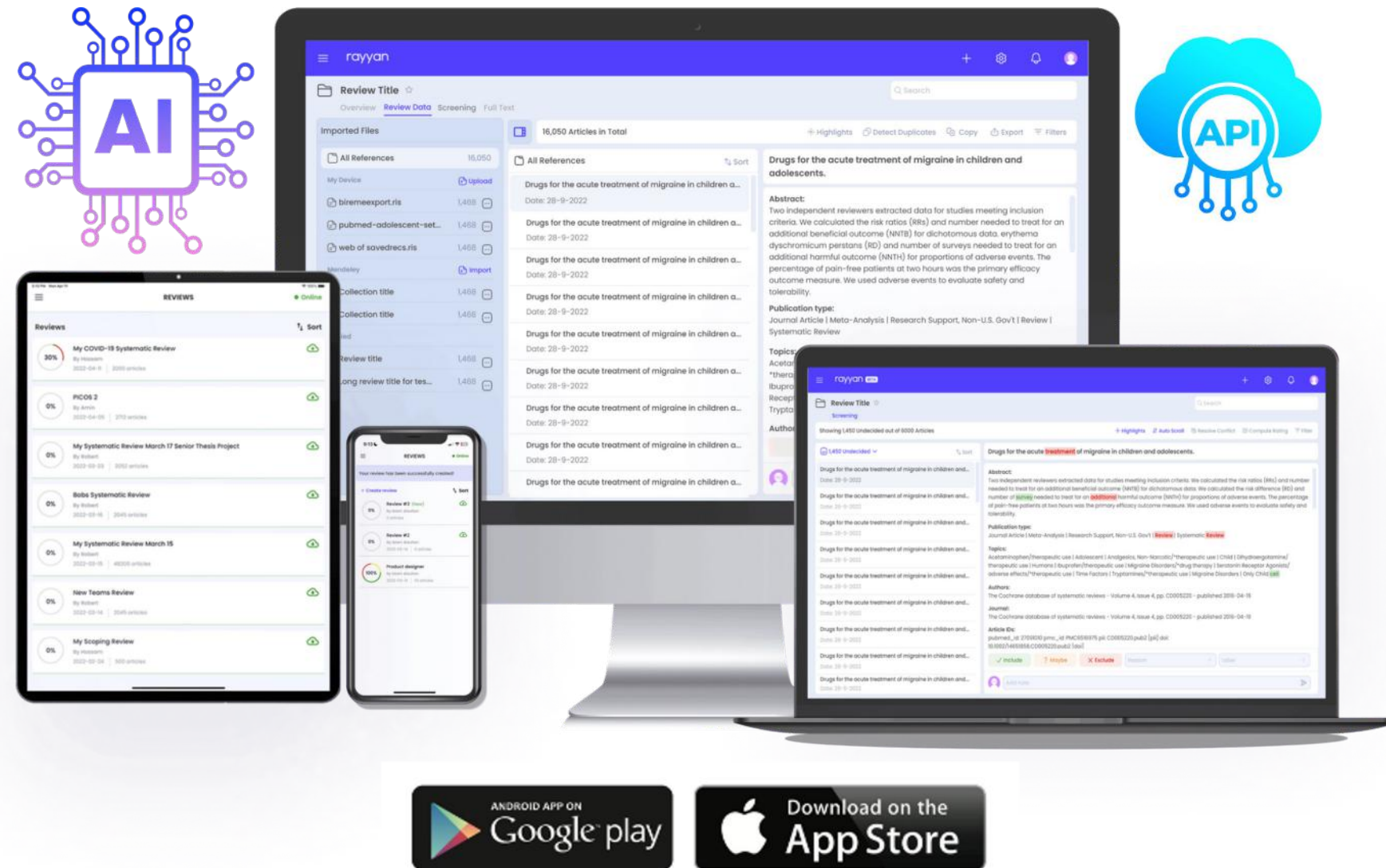
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THE PIONEER OF AI ASSISTED SYSTEMATIC REVIEW
EST. 2014

www.rayyan.ai

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Introducing Rayyan



Rayyan is the pioneering **AI-powered** platform redefining evidence-based research & decision-making.

Vision and Mission

rayyan

We envision a world guided by the best available evidence.

Our mission is to accelerate evidence-based decision-making.

Rayyan's Growing Impact on Research

1 Billion+
References
Reviewed



600,000+
researchers



20,000+
organizations



190+
Countries



Over one million evidence-based research projects have been conducted using Rayyan.

Global Challenges to Evidence-Based Research



Daunting Volumes of Information
+2.5 Million New Articles Per Year

Key Challenges

- Commit teams of researchers for 12-24 months
 - Adhere to a proper protocol
 - Exhaustively search for evidence
 - Eliminate duplicate data
 - Work collaboratively and systematically
 - Consistently determine what is relevant
 - Mitigate against sources of bias & poor quality
 - Report reliable & trustworthy evidence
 - Provide transparency & reproducibility
 - Ensure reporting is up-to-date
- and be first...***

Rayyan Provides Unmatched Speed with Integrity with a Purpose

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Be First

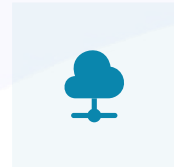


Being first makes all the difference when you want to **publish, patent, commercialize** or **fund** new research.

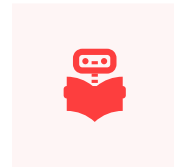
In the fast-paced world of research, the ability to swiftly and accurately sift through millions of articles is no longer just an advantage—it's a **necessity**.

Because no one cares about second place.

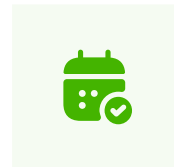
Researchers Report Time Savings of 50–90%, Reducing Months & Weeks to Days



AI Assisted Workflow Saves Time



Instantly Organizes Unstructured Datasets



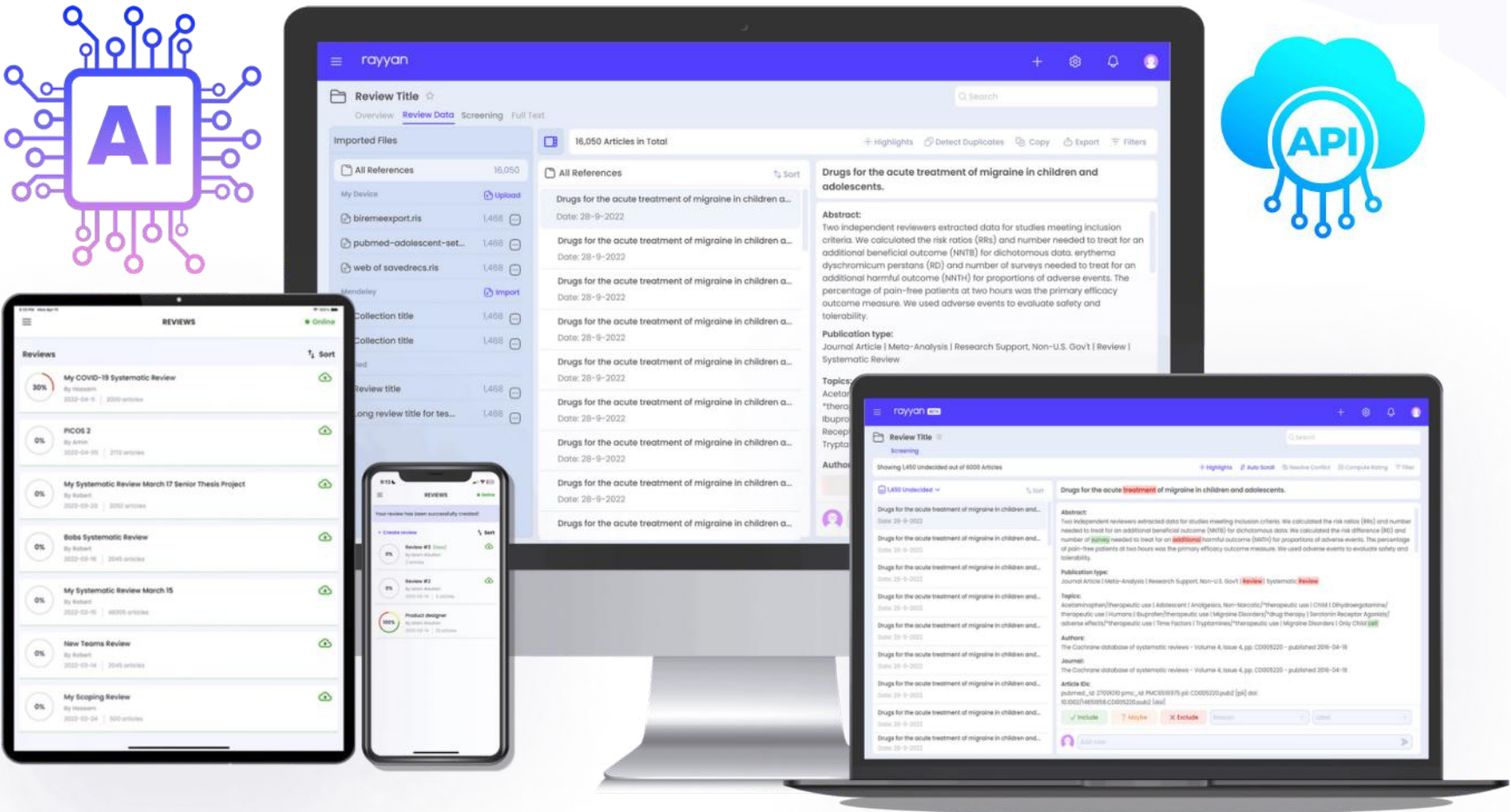
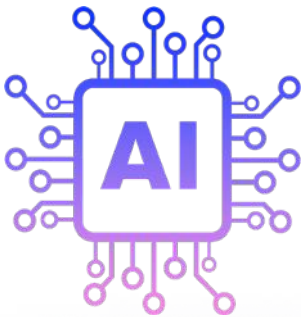
Transparent, Auditable, & Reproducible



Cloud Based Team Collaboration



Personalized and Accessible to Conform to You



Developed using proprietary AI, ML & NLP models.
A new LLM research assistant is in Alpha release.

Scalable, Intelligent, Intuitive.

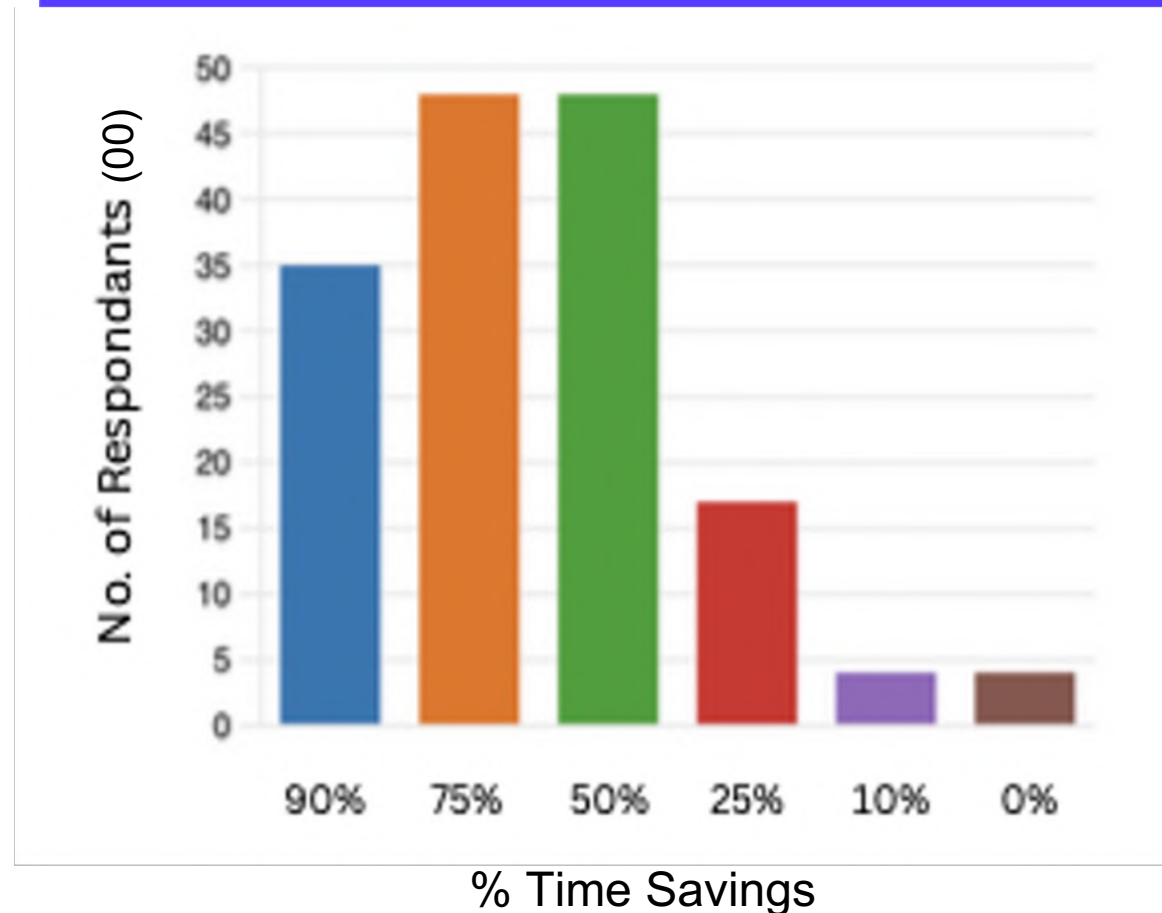
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Designed for Accuracy. Built for Speed.



Key Benefits

- Streamline reviews, slashing time by 50-90%
- Accelerate publishing and commercialization
- Save time & cut research costs
- Boost productivity & research output
- Make more informed decisions
- Deliver life changing & life saving interventions
- Meet important deadlines
- Reduce the stress among your research teams
- Provides the edge in the race to be first



Researchers from Major Global Research Organizations Prefer Rayyan

Trusted by 600,000+ Researchers



"We exclusively rely on Rayyan for rapid reviews of the literature for its unmatched speed."



"We fell in love with literature screening after only one day of using Rayyan."

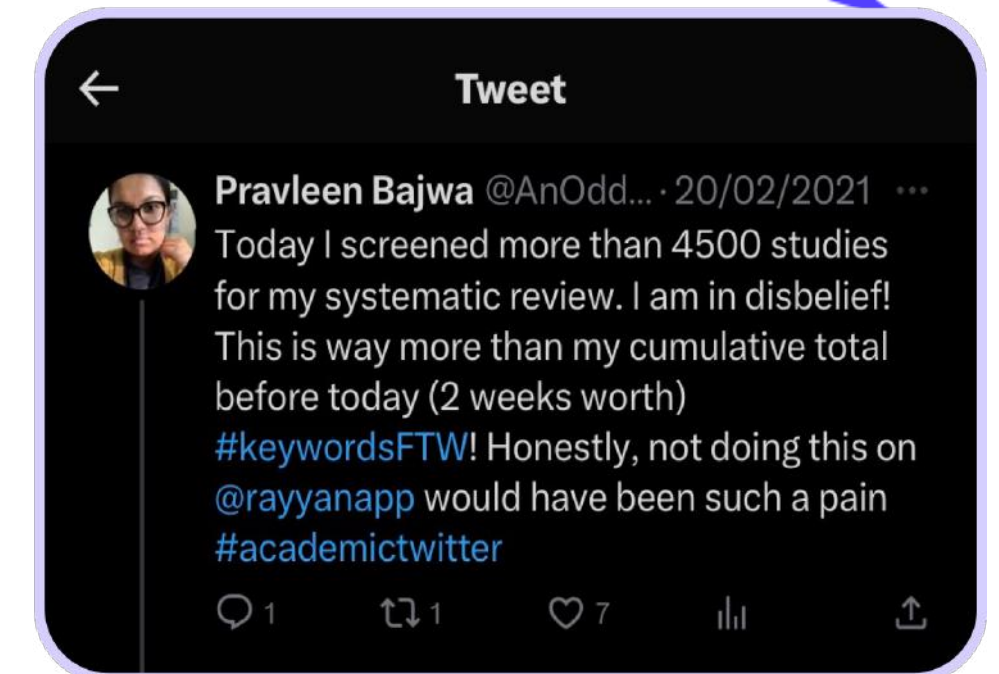


"We wouldn't be able to do this type of research between surgeries without Rayyan."



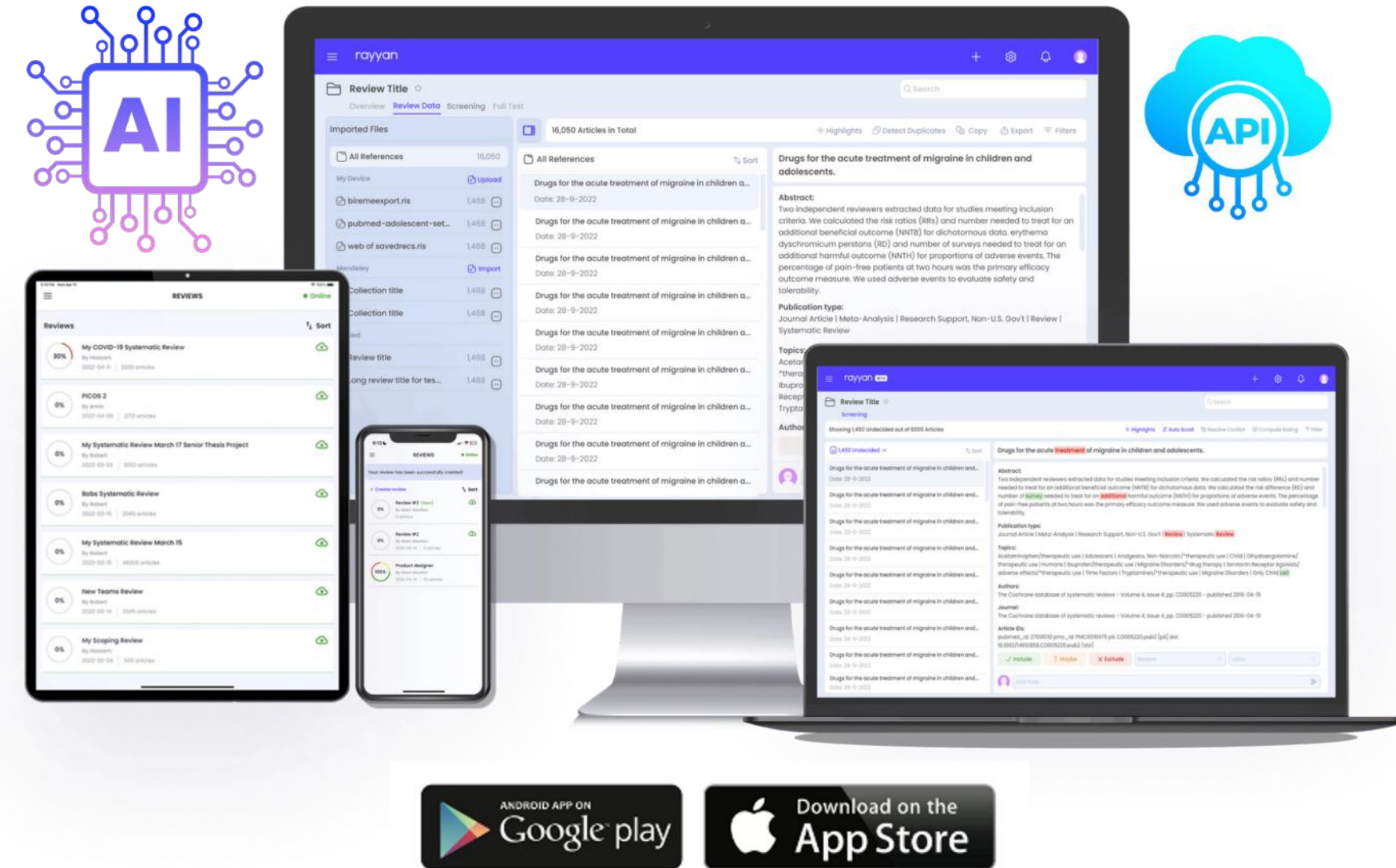
"We find the software brilliant...,we will definitely spread the word!"

"I am in disbelief!"



Rayyan has been cited over 16,000 times*.

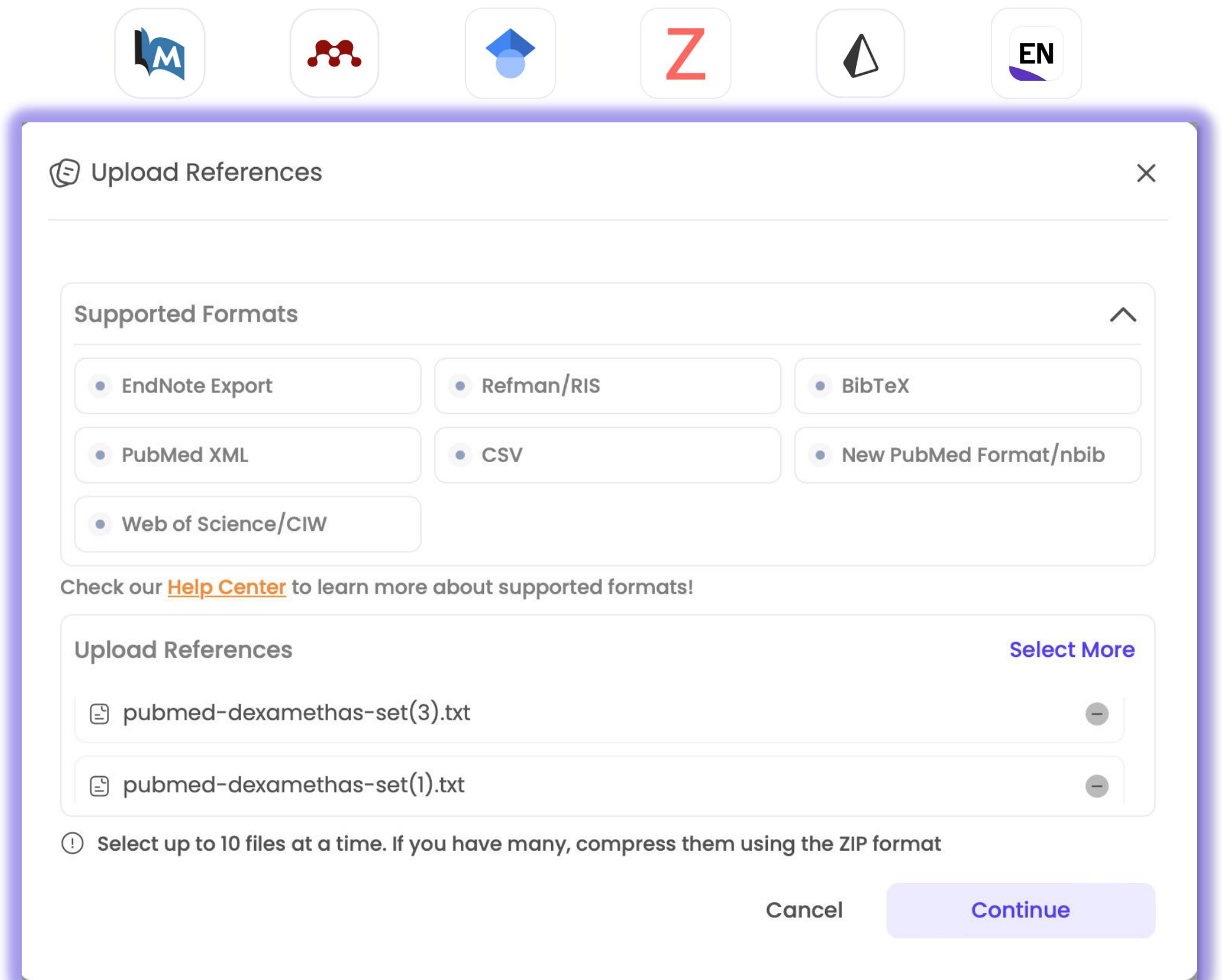
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Rayyan Core Features



Conveniently Import Any Combination of Multiple Large Reference Files

- **Import all industry standard formats**
.enw, .ris, .bib, .csv, .xml, nbib, .ciw, .txt, .docx, .gz, .zip
- **Import 10 files at a time** up to 100MBs per file for up to 1GB per batch. **Imported files are processed in parallel**
- **Import more than 10 files compressed** into a .zip or .gz file
- **Make any number of imports** up to a million references per review
- **Web import directly from Mendeley**
- **Bulk upload full texts**



Create and Manage Reviews and Review Teams

- Create Unlimited Reviews (3 active)
- Invite Unlimited Review Members
- Assign & Change Roles
- Monitor Review Progress
- Chat with Review Members

Review Members			
Name	Email	Role	Status
 Researcher Robert Ayan	bobayan@rayyan.ai	Owner	Active
 Mr. Ray Peru	ray@rayyan.ai	Collaborator ^	Active ...

User Role


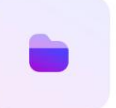



Collaborator ✓

Reviewer

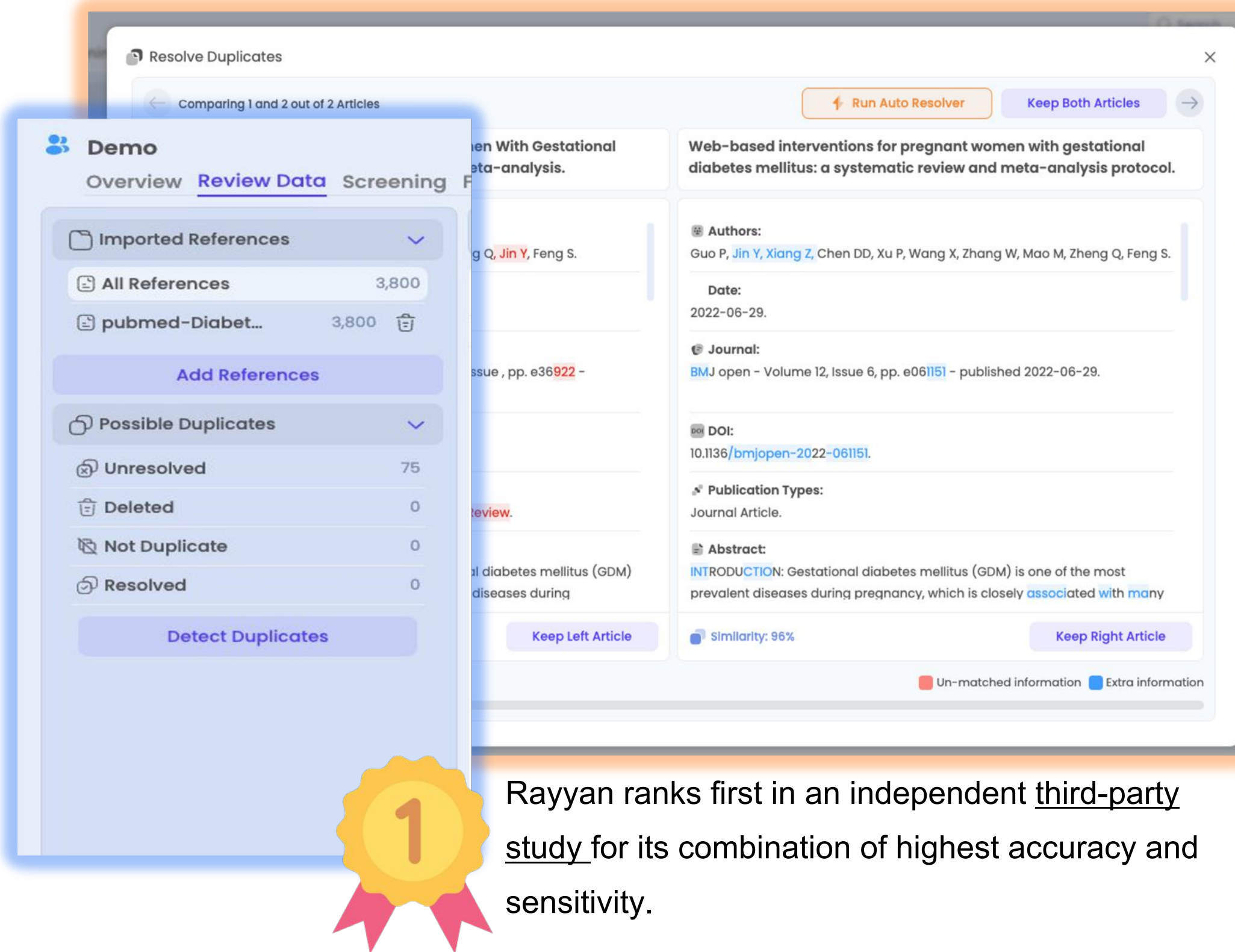
Viewer

With Rayyan Enterprise:

- Increase Active Review Limit
- Revoke & Delete Members
- Assign Additional Roles
- Organize & Share Review Ownership & Management by Team or Enterprise
- Provide Premium Access to Members

Teams				
<div><div>Teams Uncover the tools and resources essential for overseeing all your teams efficiently.</div><div>Reviews Explore all team reviews and the members involved in the review process.</div></div>				
Teams				
Title	Members	Owner	Date Created	
 Evidence Based Medicine Team	2	Robert Ayan	2024-03-16	...
 Systematic Review Team	1	Robert Ayan	2024-03-16	...
 Health Guidelines	1	Robert Ayan	2024-03-14	...

Detect More Duplicates with Industry Leading AI Powered Duplicate Detection



Rayyan ranks first in an independent third-party study for its combination of highest accuracy and sensitivity.

- **Detect more duplicates** with Rayyan's industry-leading deduplication ranked highest for both accuracy and sensitivity
- **Designed for greater sensitivity, Rayyan significantly outperforms** EndNote (76%), Zotero (80%) and Mendeley (93%)*
- **Rayyan utilizes advanced AI** methods to determine and present overall similarity
- **Quickly view and resolve possible duplicates** with less than 100% similarity scores with side-by-side comparisons

Make Decisions, Add Labels, Assign Reasons, and Take Notes

The screenshot displays the Rayyan interface with three overlapping modal windows. The top window shows decision buttons: 'Include' (green), 'Maybe' (orange), 'Exclude' (red), and 'Exclude with Reasons' (blue). Below these is an 'Add note' field. The 'Exclude with Reasons' modal lists various reasons for exclusion, each with a checkbox and a 'Click to add hotkey' button. The 'Labels' modal lists labels like 'children' and 'infants', also with checkboxes and 'Click to add hotkey' buttons. The bottom window shows the 'Apply' button and a dropdown menu with 'Exclude' and 'Exclude with Reasons' options.

Labels

✕ Add hotkeys to get a faster experience!

☐ children Click to add hotkey

☐ infants Click to add hotkey

☐ Click to add hotkey

Exclude with Reasons

✕ Add hotkeys to get a faster experience!

☐ NEW REASONS Click to add hotkey

☐ wrong drug Click to add hotkey

☐ wrong outcome Click to add hotkey

☐ wrong population Click to add hotkey

☐ wrong publication type Click to add hotkey

☐ wrong study design Click to add hotkey

☐ wrong study duration Click to add hotkey

Apply

✕ Exclude Exclude with Reasons Label

- **Make and change inclusion decisions** (Include, Exclude or Maybe)
- **Use default hotkeys** to make decisions and navigate using only the keyboard
- **Create and Assign Reasons** for Exclusion
- **Create and Assign Labels** to code studies
- **Create multiple Notes** per reference
- **Toggle Blinding On/Off** to hide or share the above with others

With Rayyan Enterprise:

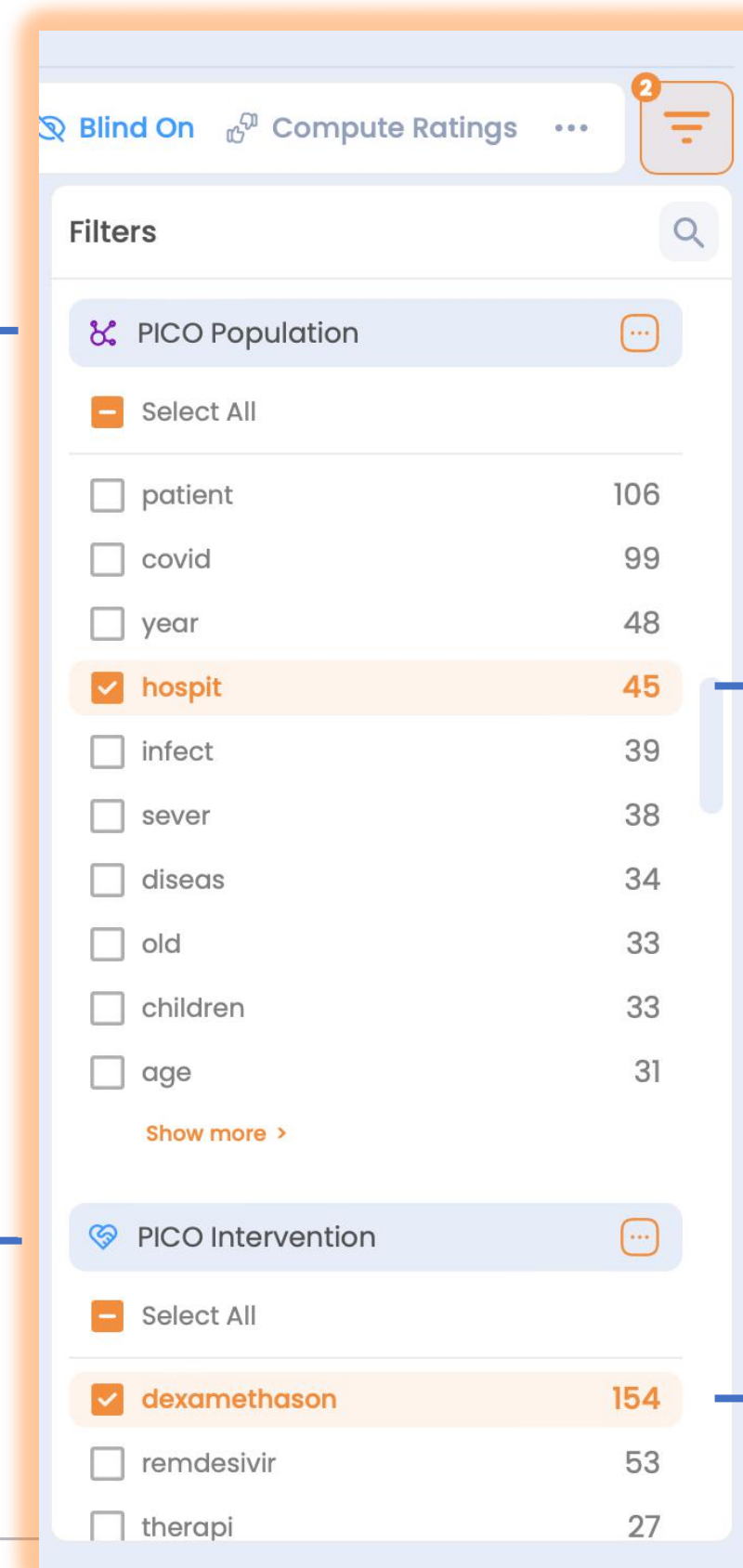
- **Program hotkeys** for faster screening including for Reasons and Labels, and acquire **Multi-select with Bulk Actions**

The Workbench: Filter References, Highlight Text, & Preview Bibliometric Insights

- Rayyan converts your references into an organized library instantly upon import
- The workbench includes over 20 purpose-built facets with thousands of filtering options
- Each filter is also an index of matching references offering valuable bibliometric data and insights
- Combine filters to narrow results to find relevant research with each click
- Highlight text based on keywords for inclusion and keywords for exclusion

Over 20 AI Powered facets that provide the ability to filter by and highlight key information

Each filter is also an index of all articles that share an attribute



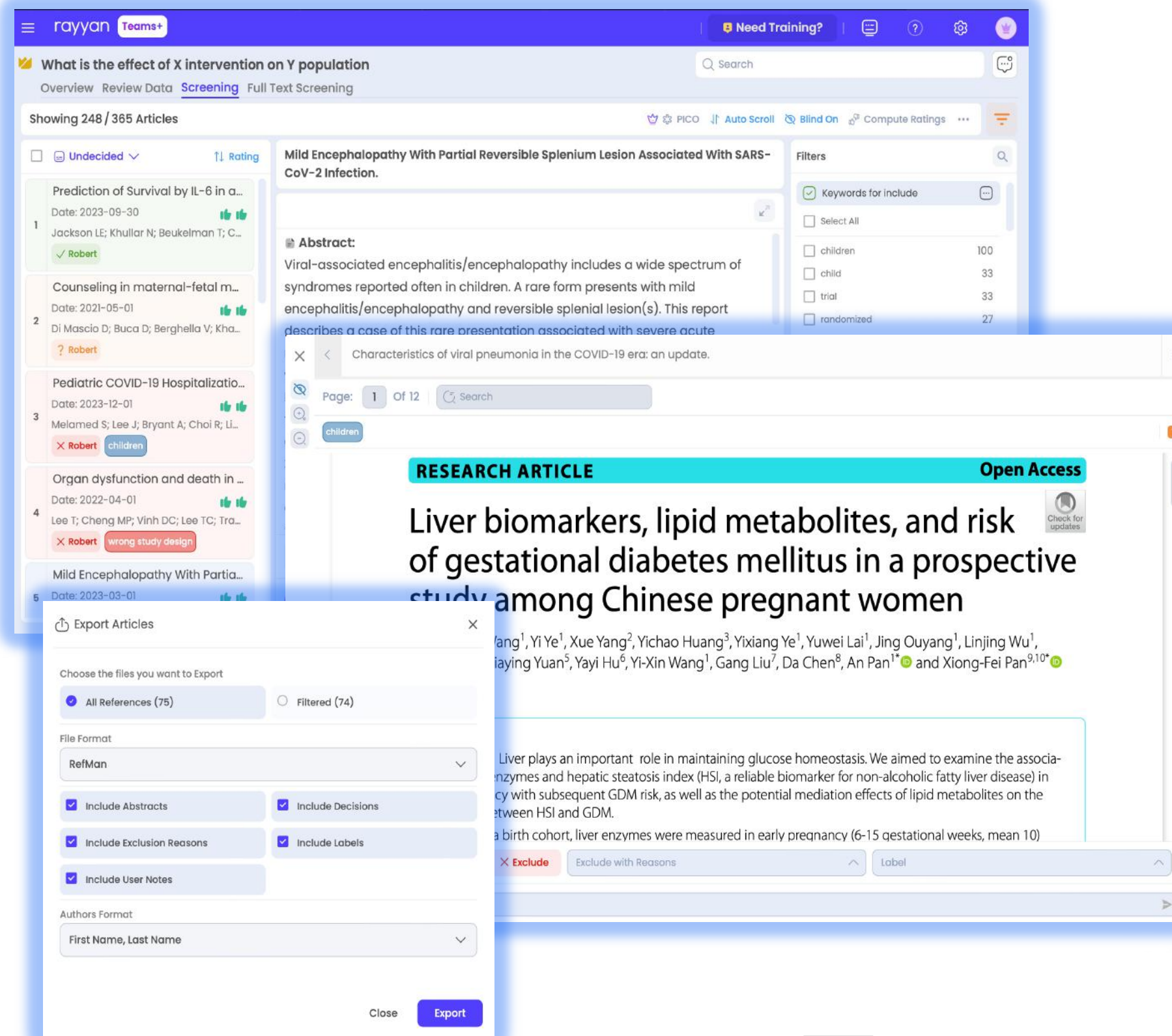
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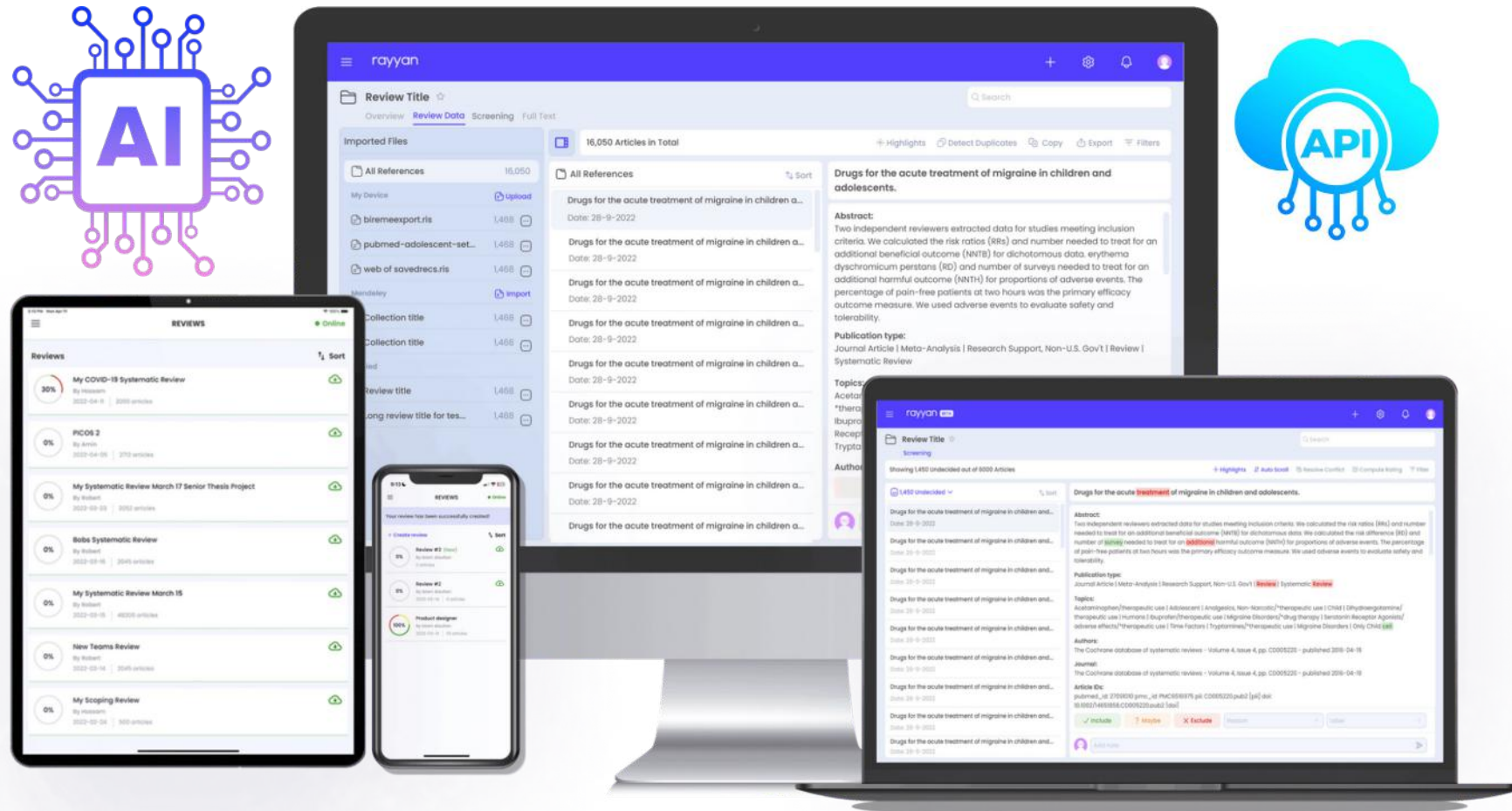
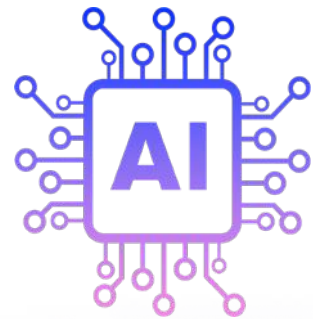
Complete Title, Abstract and Full Text Screening

- Complete Title and Abstract Screening
- Bulk upload full texts
- Complete Full Text Screening
- Resolve conflicts
- Copy references to another review
- Export references to RefMan, BibTex, EndNote or CSV

With Rayyan Enterprise:

- Generate premium reports (Audit Log, PRISMA, Kappa*, and others)
- Auto-match Full Texts*
- Auto-retrieve Full Texts*





Rayyan Enterprise Advanced Features



Gain the Rayyan Enterprise Advantage for Your Research Organization



Provide Security & Convenience

Auto-provision users with single sign-on access control



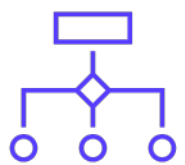
Accelerate Research Enterprise-Wide

Provide time-saving tools to all researchers



Add More Productive Time to Each Day with Mobile

Work on-the-go and even offline from anywhere



Enterprise Level API Access

Provide complete access to the Rayyan API



Preserve and Promote Enterprise-Wide Research

Retain and report on enterprise-wide research output



Provide VIP Support to all Researchers

Keep researchers productive with VIP support & training

Rayyan Enterprise

Sign in to Rayyan using your Enterprise ID!

Email

Want to use your personal account?

Sign in with Rayyan ID

Sign In

Don't have an account? Sign up!

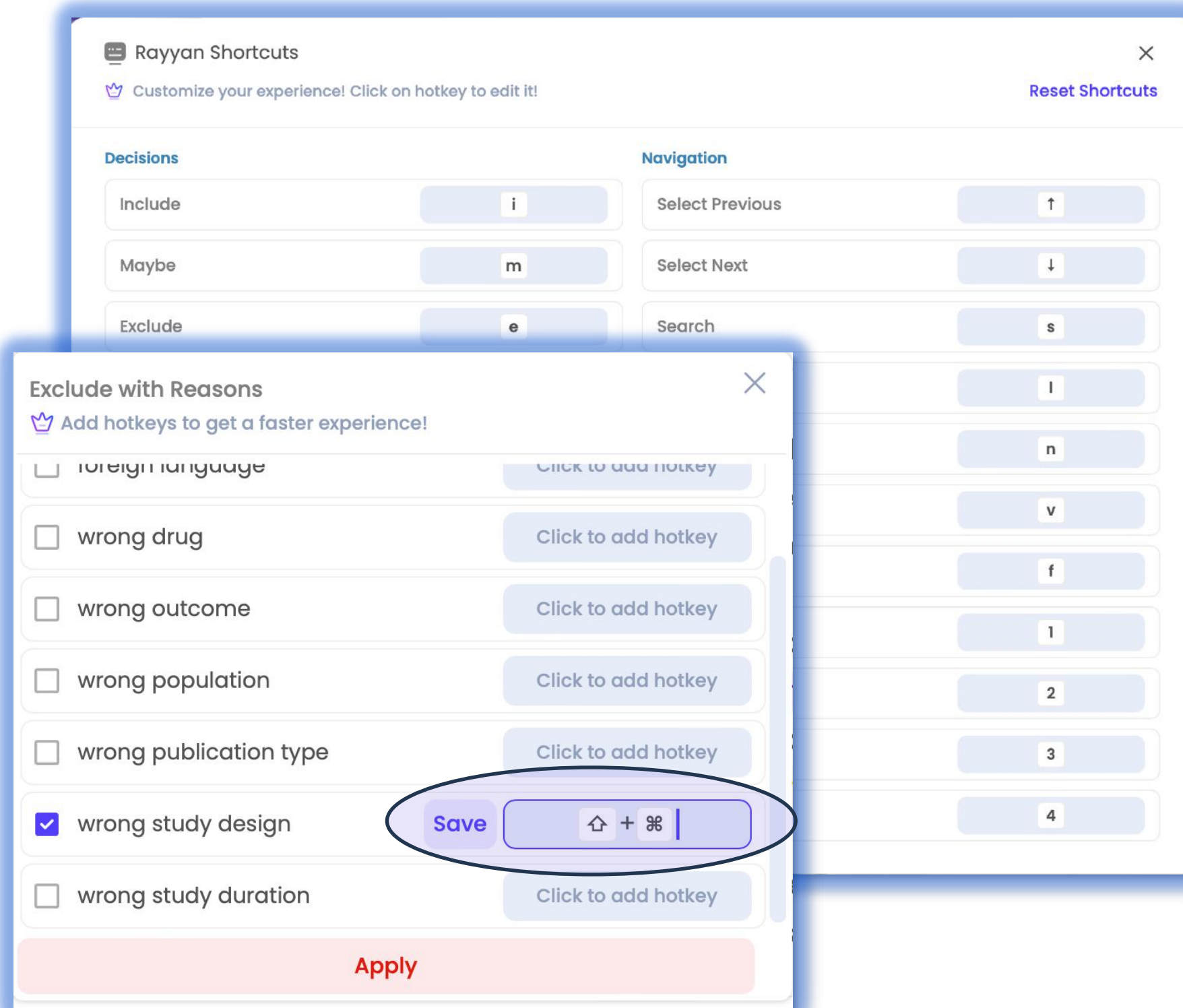
Auto Resolve Possible Duplicates Using a User Defined Set of Rules

- **Protect existing references that have already been worked on** during deduplication of newly imported references
- **Normalize references** to resolve more possible duplicates by ignoring punctuation
- **Select your preferred searches (files) to default to** in the case of duplicates and to simplify full text retrieval
- **Use a systematic, reproducible rules-based approach to resolving duplicates** by combining deduplication criteria

The screenshot shows the 'Systematic Auto Resolver' window. It includes a header with a lightning bolt icon and a close button. A yellow warning icon and text state: 'Rayyan will keep the best article based on your chosen criteria and remove the duplicates, you can learn more from [here](#)'. Below this, a blue oval highlights the instruction 'Choose the duplicate best version to keep:'. A dropdown menu shows 'Imported References*' with the selected file 'pubmed-dexamethas-set(1).txt'. Another blue oval highlights the 'Select your deduplication criteria' section, which contains several criteria: 'Authors', 'Journal', 'Pages', 'Title', 'Year', 'DOI', and 'Articles Similarity Percentage'. The 'Articles Similarity Percentage' is checked and set to 80%, highlighted by a blue oval. A red slider bar is positioned at 80%. Below the slider, a text box explains: 'The Minimum Overall Similarity % measures the similarity of the entire reference. The percentage selected only applies to the overall similarity and not to any other selection criteria. All selected criteria must match for a duplicate to be resolved.' At the bottom, a section titled 'Set up auto resolver settings' contains two blue ovals: one for 'Text Normalization' (checked) and another for 'Articles Customization Protection' (checked). At the bottom right are 'Close' and 'Resolve' buttons.

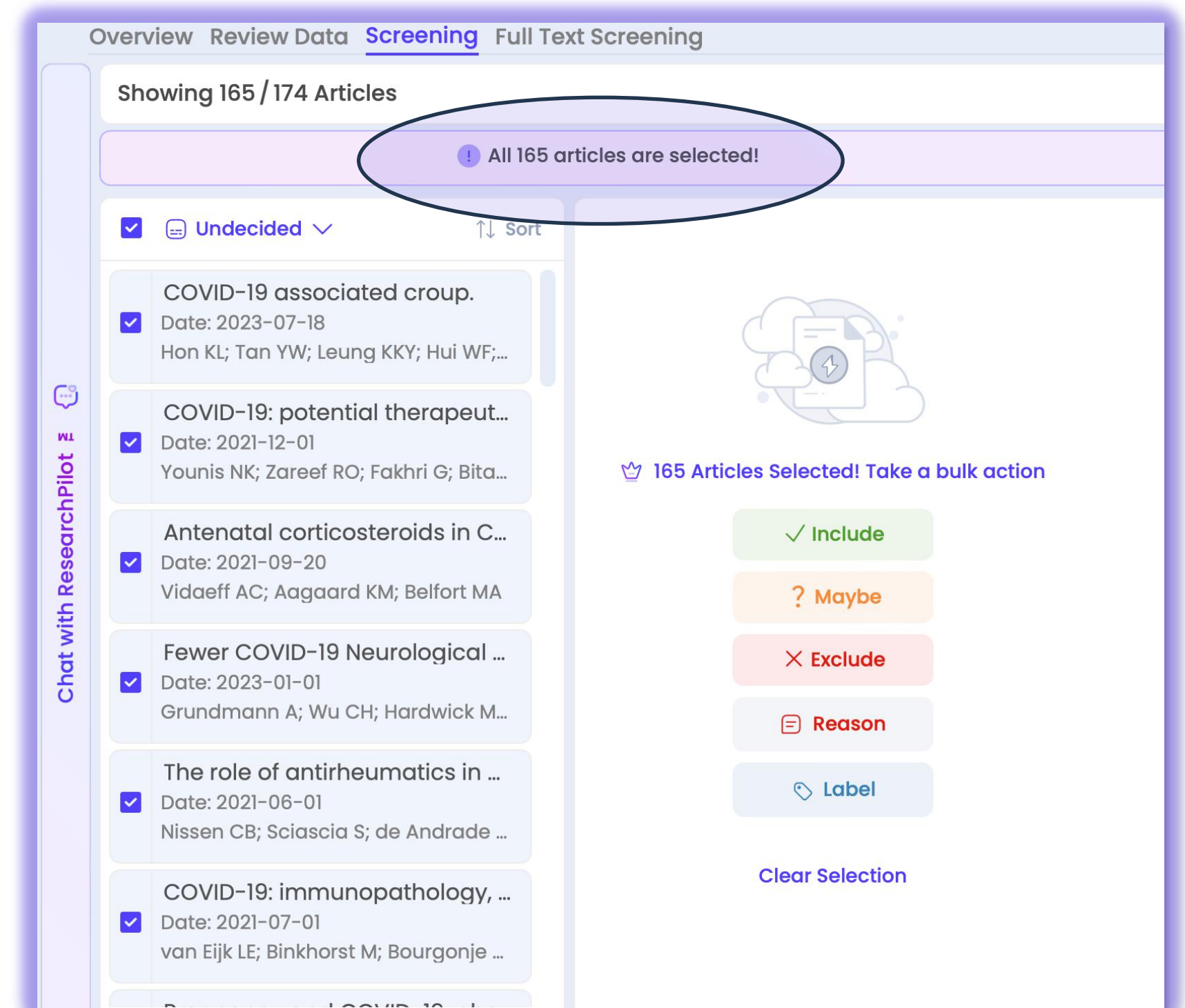
Work Lightning Fast with Programmable Hotkeys and Auto Scroll

- **Program keyboard shortcuts** or use the defaults to work with the keyboard only
- **Assign Reasons and Labels with a single key** by selecting their hotkey
- **Automatically advance to the next reference** after each decision or assigned Reason with auto scroll turned on
- **Configure for one handed operation**
- **Personalize the experience** of each researcher



Work Even Faster than Lightning with Multi-Select & Bulk Actions

- **Combine Multi-Select and Bulk Actions** to assign decisions, reasons, and labels to multiple references even faster
- **Apply filters and use Select All** to select all the filtered results (not just the viewable results)
- **Bulk assign and change labels** with ease
- **Bulk Exclude (with a Reason)** by obvious disqualification criteria
- **Bulk Include** references based on PICO
- **Copy and Export multi-selected references** by selecting the Filtered option



Create Samples to Check Interrater Reliability, Divide the Work, and Reduce Bias

Create Sample

Samples are created to test data sets, train classifier, or distribute your work from

Choose sample Data Source

☒ All References (173) ☐ Filtered (173)

Sample Data Settings

Randomized

Add sample information, and note that number of articles and percentage are connected

Review Team A	50%	86
Review Team B	50%	86

Total percentages for all samples must be 100% or less

[+ Add more samples](#)

Close [Create](#)

Filters

☒ Sampled Data

☐ Select All

☐ Interrater Reliability Test 20

☒ Review Team A 87

☐ Review Team B 87

- **Sample using randomization**, by title or system ID
- **Use a random sample to test interrater reliability** and reviewer understanding of criteria
- **Create sets of samples to divide the work** among multiple reviewers by # or % of references
- **Use random sampling with Compute Ratings** for superior model training of the prediction classifier
- **Create samples from all references or from filtered data**, including samples of samples

Rayyan Learns from Your Decisions to Predict Inclusion or Exclusion

The screenshot displays the Rayyan RMC interface. At the top, a search bar contains the query "What is the effect of X intervention on Y population". Below the search bar, tabs for "Overview", "Review Data", "Screening", and "Full Text Screening" are visible. The "Screening" tab is active, showing "Showing 52 / 365 Articles". A filter bar at the top of the article list shows "Undecided" and "Most Likely to Include" filters. The article list includes titles, dates, and authors. A tooltip "Most Likely to Include" is shown over the first article. On the right, a "Ratings" facet is open, showing a search bar with "rating", a "Select All" button, and a list of rating options with counts: "Most Likely to Include" (62), "Likely to Include" (0), "No recommendation" (244), "Likely to Exclude" (0), and "Most Likely to Exclude" (0).

What is the effect of X intervention on Y population

Overview Review Data Screening Full Text Screening

Showing 52 / 365 Articles

Undecided AND Most Likely to Include

Undecided Rating

Prediction of Survival by IL-6 in a Randomized Controlled Trial

Date: 2023-09-30

Jackson LE; Khullar N; Beukelman T; Chapleau C; Kamat...

Counseling in maternal-fetal medicine: SARS-CoV-2

Date: 2021-05-01

Di Mascio D; Buca D; Berghella V; Khalil A; Rizzo G; Odibo...

Pediatric COVID-19 Hospitalizations During the Outbreak

Date: 2023-12-01

Melamed S; Lee J; Bryant A; Choi R; Liegl M; Pan A

children

Organ dysfunction and death in patients admitted to the intensive care unit

Date: 2022-04-01

Lee T; Cheng MP; Vinh DC; Lee TC; Tran KC; Winston BW; ...

Treatment and care received by children hospitalized with COVID-19

Date: 2023-01-01

Fuller CC; Cosgrove A; Shinde M; Rosen E; Haffenreffer K; ...

Blind On Compute Ratings

rating

Ratings

Select All

Most Likely to Include 62

Likely to Include 0

No recommendation 244

Likely to Exclude 0

Most Likely to Exclude 0

- **Run Compute Ratings to predict inclusion or exclusion of all undecided references**
- **Work in both directions**, from Most Likely to Include or from Most Likely to Exclude
- **Filter using the Ratings facet** to work on any references by their predicted inclusion
- **Run the model multiple times**, even after importing additional data, to get new or improved predictions
- **Combine with Bulk Actions** for rapid reviews

Rayyan Understands Language in Context to Highlight and Filter by PICO

Filters

PICO Population

- ☐ Select All
- ☐ patient
- ☐ covid
- ☐ year
- ☒ hospit
- ☐ infect
- ☐ sever
- ☐ diseases
- ☐ old
- ☐ children
- ☐ age
- [Show more >](#)

PICO Intervention

- ☐ Select All
- ☒ dexamethason 154
- ☐ remdesivir 53
- ☐ therapi 27

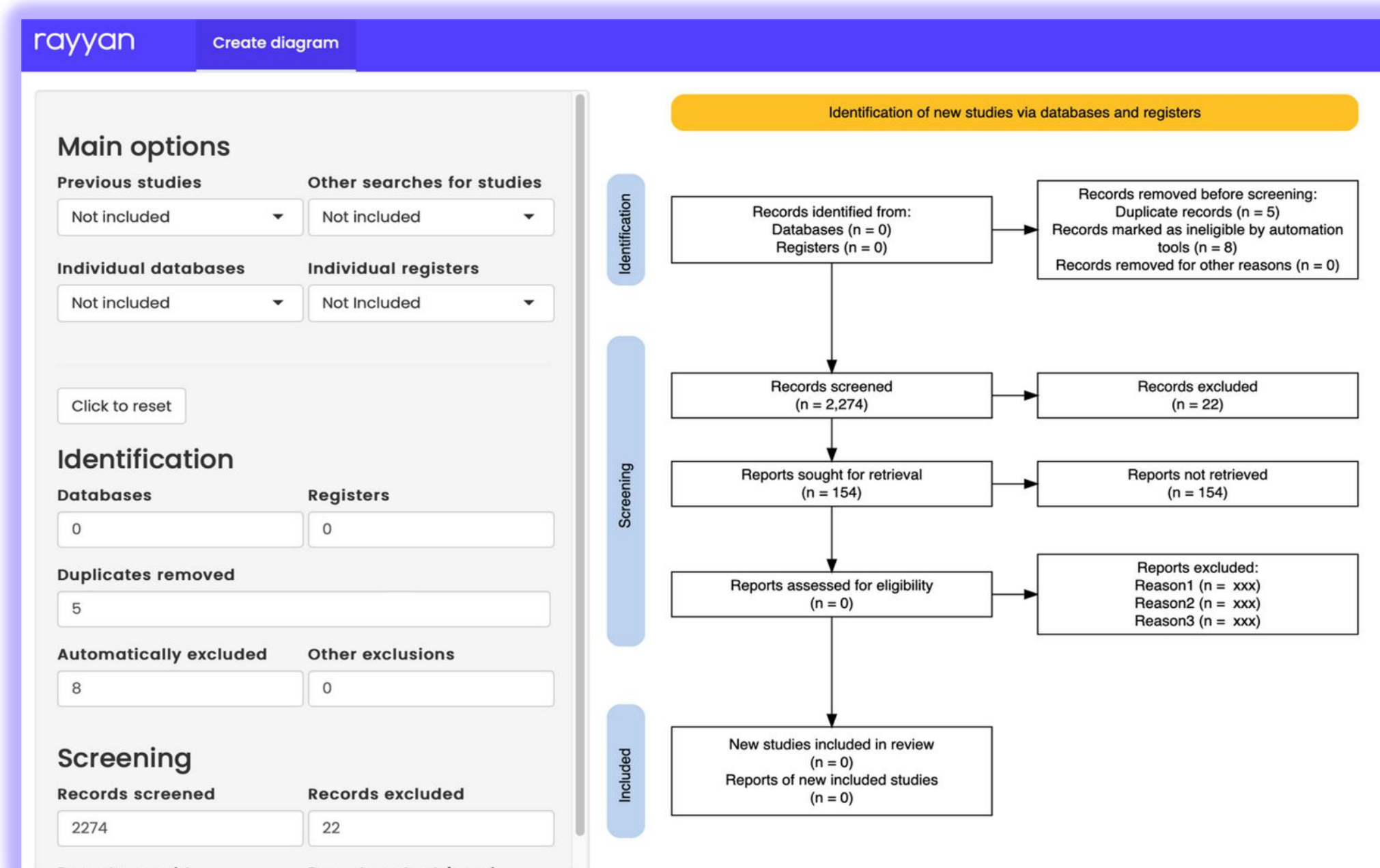
Prospective, randomized controlled trial on Lactobacillus rhamnosus in infants with moderate to severe atopic dermatitis

any effect. OBJECTIVES: We conducted a prospective study to reassess the efficacy of orally administered **L. rhamnosus strain GG (LGG)** in **infants with AD**. METHODS: In a randomized, double-blind, **placebo**-controlled study, **54 infants aged 1-55 months with moderate to severe AD** were randomized to daily 10 x 10(9) colony-forming units of **LGG** or **to placebo** during an 8-week intervention phase. Emollients, class I-II topical **corticosteroids** and **antihistamines** were permitted. RESULTS: The treatment with **LGG** was well tolerated. At the end of treatment there were no significant differences between the groups with respect to **clinical symptoms (SCORAD, pruritus, sleep loss), the use of topical corticosteroids and antihistamines, immunological parameters, or health-related quality of life of the parents**. CONCLUSIONS: Our results could not confirm **LGG** as an effective treatment of **AD in infancy**.

- **Purple** = population
- **Indigo** = intervention
- **Orange** = Outcome

- **Highlight PICO elements with >70% confidence** speed decision making; highlighting can be toggled on/off or by each element
- **Populate three facets containing filters/indices** for all the detected Population, Intervention/Comparison, & Outcome data using truncated terms
- **Preview insights from the instant analysis of the data** in the form of all detected Outcomes, Interventions and Populations
- **Filter by PICO elements** to find the most relevant references first

PRISMA 2020 Compliant PRISMA Flow Diagram Generator with Control Panel



- **Generate a pre-set, ready to use PRISMA 2020 flow diagram**, saving you all the labor of creating one from scratch
- **Rayyan pre-populates the diagram** using the available review data
- **Use the Control Panel to complete and override any entries**
- **Save the completed diagram** as a graphic, PDF or as HTML that can be pasted into a word processor

Add More Productive Time Back Into Your Day with the Rayyan Mobile App

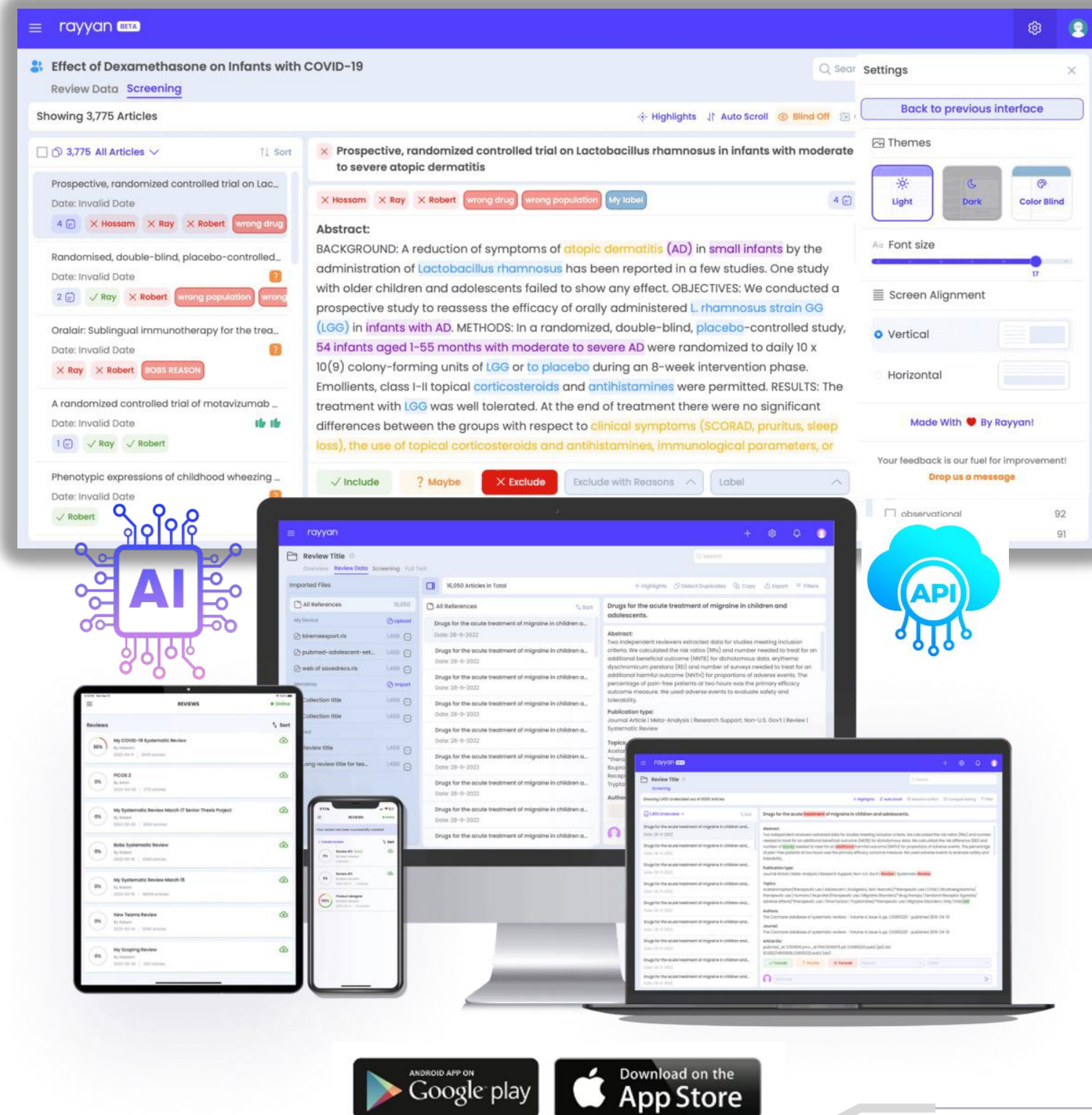


- Turn unproductive time into productive time
- Spend more time on task to finish sooner
- Work online for real-time collaboration
- Work offline to work anywhere, anytime
- Download and synch your references
- Enjoy the speed of a touch screen interface
- Swipe to make inclusion decisions quickly
- Touch to scroll through references fast
- Double tap to apply a custom action
- Auto-scroll after every decision
- Configure and save your preferred settings
- Prompt for a reason after excluding a reference
- Works on iOS, Android phones and tablets

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The All New Rayyan Interface is Designed for Improved Accessibility

- A successful VPAT has been conducted
- Light, Dark and Color-blind modes available
- Adjustable font size of abstract pane
- Mobile app with touch screen options
- Default keyboard shortcuts
- Programmable keyboard shortcuts
- Rayyan handles international character sets
- Work will continue to improve accessibility



Private, Secure and Fully Managed by Rayyan

- Enterprise Admin access for monitoring, reporting and more
- View users, reviews, searches, teams & full-texts
- Configure auto-approval settings
- Assign administrative roles and permissions
- View enterprise-wide research activity
- Transfer review ownership
- Create, Edit and Manage Teams

Rayyan Enterprise Admin Console

The screenshot displays the Rayyan Enterprise Admin Console interface. The top navigation bar includes 'Users', 'Reviews', 'Searches', 'Fulltexts', and 'Advanced'. The 'Users' section is active, showing a table of users with columns: Id, Email, First Name, Last Name, Title, Organization, Country, Admin Role, Enterprise, Sign In Count, Last Sign In At, Confirmed At, and Approved. A blue box highlights the 'Approved' column, showing 'YES' for users 165120 and 165119, and 'NO' for user 165118. The 'Reviews' section is also shown, with a table of reviews and columns: Id, Rayyan Store Enabled, Title, Created At, Updated At, Total Articles, Is Blind, Archived At, and Accessed At. A blue box highlights the 'Is Blind' column, showing 'YES' for all reviews. A 'Filters' sidebar is visible on the right, with fields for TITLE, DESCRIPTION, TOTAL ARTICLES, and IS BLIND, and buttons for 'Filter' and 'Clear Filters'.

Id	Email	First Name	Last Name	Title	Organization	Country	Admin Role	Enterprise	Sign In Count	Last Sign In At	Confirmed At	Approved
165120	doctor@	edu	Maria	Doctor	Medical School	USA			1	October 06, 2021 21:10	October 06, 2021 21:10	YES
165119	professor@	edu	Juan	Professor	Medical School	USA			1	October 06, 2021 21:16	October 06, 2021 21:16	YES
165118									0			NO

Id	Rayyan Store Enabled	Title	Created At	Updated At	Total Articles	Is Blind	Archived At	Accessed At
328366	YES		October 06, 2021 21:15	October 06, 2021 21:16	25	YES		October 06, 2021 21:15
328365	YES		October 06, 2021 21:10	October 06, 2021 21:10	0	YES		
328364	YES		October 06, 2021 21:05	October 06, 2021 21:07	2565	YES		October 06, 2021 21:07
328363	YES		October 06, 2021 21:04	October 06, 2021 21:05	907	YES		October 06, 2021 21:05

Rayyan Fully Respects and Protects Your Rights Over Your Data

- **Privacy** is 100% in your control to grant and revoke access to collaborators
- **Data ownership** belongs to the users and/or their host institution
- **Collaborators** grant certain rights to the review owner to preserve the integrity of the review data
- **No sensitive data** is collected or transmitted in accordance with GDPR
- **Data processing** takes place in the US Northeast Region
- **No sharing** of user data takes place with the exception of sub-processors
- **Sub-processors** have contractual arrangements to comply with the same data privacy rules
- **Admin access** is restricted and there is no physical access to data centers
- **Data portability** allows for the full export of all user data at any time
- **Deactivation** allows users to deactivate their accounts or delete them entirely
- **GDPR compliant**



Contact your sales representative to receive personal assistance.

Marc Keylard

Vice President

Global Partnerships

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Sales Director

The Americas

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@rayyanapp



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FOLLOW US ON LINKEDIN:

[HTTPS://WWW.LINKEDIN.COM/COMPANY/RAYYANAPP/](https://www.linkedin.com/company/rayyanapp/)



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