



# Embase for biomedical searching – An introduction

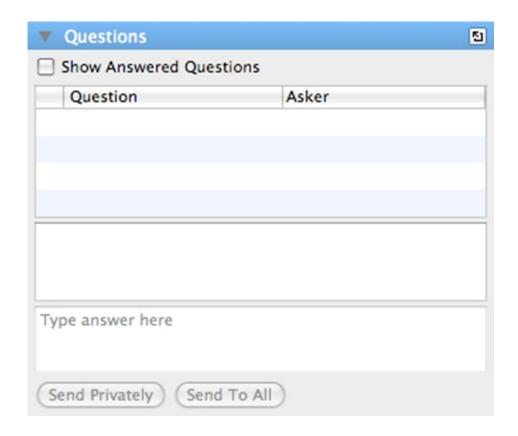


Presented by Sherry Winter January 27, 2015

### Need to know

## Webinar control panel:

- 'Ask a question' for questions and comments
- Option for full screen view
- · Q&A at the end



# Agenda

- Why use Embase?
- Embase content and coverage
- How is Embase indexed?
- How to search in Embase
- Demo
- Tips and tricks for searching
- Any questions??





Why Embase?

## What is Embase?

# A biomedical literature database with comprehensive journal and conference coverage and deep indexing

### Content: Be confident you aren't missing important information

Find all relevant articles that may not otherwise be found by using alternative databases

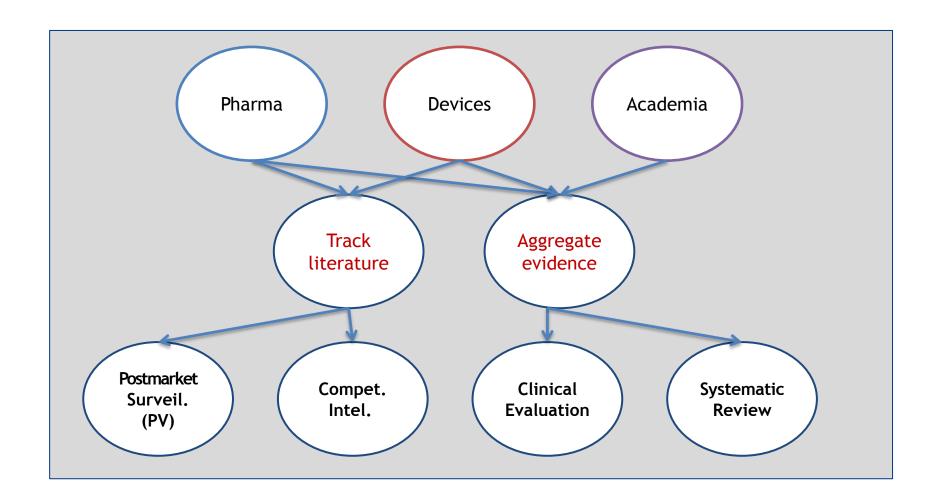
# Deep full-text indexing: Find relevant articles, no matter where a term is mentioned

All relevant, up-to-date, biomedical information from the research literature

### **Precise retrieval: Pinpoint the most relevant results**

Deep and focused research using the most powerful retrieval tools

# Why do people use Embase?



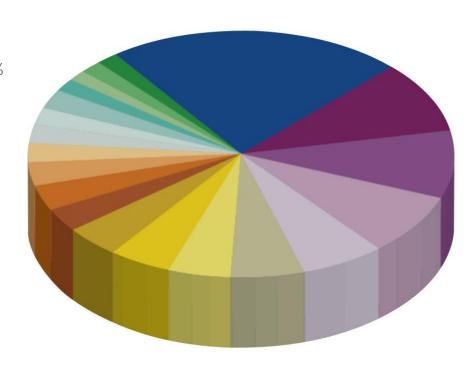




# **Comprehensive content**

# Embase focuses on biomedical literature in key areas for drug, disease and device research

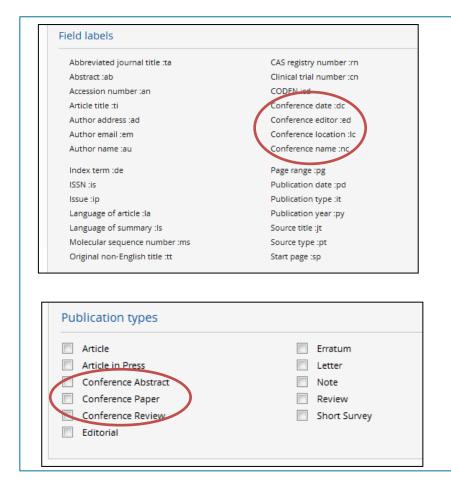
- Pharmacology & Toxicology 12%
- General Clinical Medicine 11%
- Genetics, Biochemistry & Molecular Biology 10%
- Neurology & Behavioral Medicine 8%
- Microbiology & Infectious Disease 7%
- Cardiology & Hematology 6%
- Psychiatry & Mental Health 6%
- Oncology 5%
- Healthcare Policy & Management 4%
- Allergy & Immunology 4%
- Pediatrics 4%
- Endocrinology & Metabolism 3%
- Obstetrics & Gynecology 3%
- Biomedical Engineering & Medical Devices 3%
- Anesthesiology & Intensive Care 3%
- Gastroenterology 2%
- Respiratory Medicine 2%
- Nephrology & Urology 2%
- Dermatology 2%



Other topics 28%

Including public health, basic biomedical science and topics included from MEDLINE

# Unique coverage of conference abstracts



## Coverage began in 2009

Conference coverage is unique to Embase.

- Access to research before it's published in a journal article
- Over 2.1m conference abstracts\*
- Over 6300 conferences included\*

Click here for an up to date list (<a href="http://www.elsevier.com/solutions/embase/coverage">http://www.elsevier.com/solutions/embase/coverage</a>)

<sup>\*</sup> As of January 2016

## What's the overlap between Embase & MEDLINE?

**Embase**: Covers over 8,500 journals

Indexed at Embase (over 5,900 titles)

### **Indexed by MEDLINE (over 5,500 titles)**

#### Over 2,900 journals

Indexed at Embase Unique to Embase

#### Search:

[embase]/lim NOT [medline]/lim

#### Over 3,000 journals

Indexed at Embase
Also covered by MEDLINE

#### Search:

[embase]/lim AND [medline]/lim

#### Over 2,400 journals

Indexed by MEDLINE
Also in MEDLINE

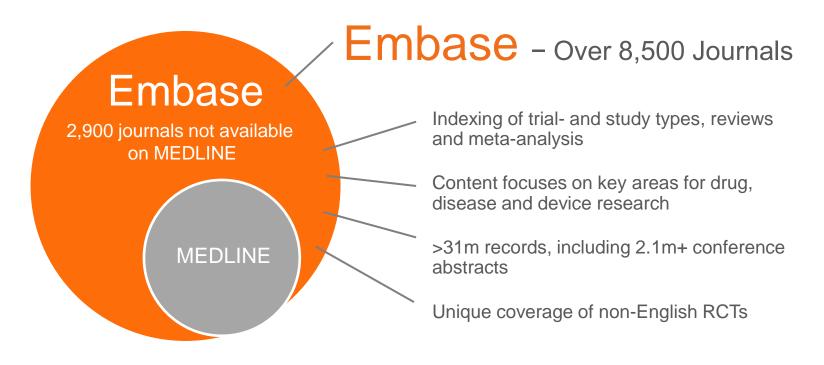
#### Search:

[medline]/lim NOT [embase]/lim

Search: [embase]/lim

# Embase is internationally recognized and recommended

Embase is recommended by the Cochrane Collaboration as a key international general healthcare databases to use when generating Systematic Reviews and is mentioned in EMA regulatory guidelines as a database to search for drug adverse events





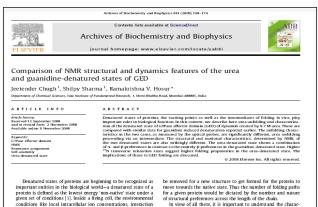


How is Embase indexed?

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# Embase includes information from the full text of articles so critical information isn't missed

Embase focuses on full text indexing of biomedical content — the **entire** article is read and 'tagged' with searchable terms



with various ligands etc. can vary significantly from organelle to organelle [2], and even within the same organelle there can be variations due to signaling processes and interactions with different molecules. All these processes tightly regulate the translational and post-translational processes which decide the fate of the newly synthesized polypeptide chain. Thus a particular protein may see different environments which lead to different denatured states during the course of its function. Some of the denatured states may lead to soluble aggregates, which occasionally lead to diseases [3].

When a polypeptide chain begins to fold starting from a dena-tured ensemble, each molecule in the ensemble can, in-principle, fold along a different path. In this scenario, the starting state in terms of the conformational preferences across the polypeptide chain will have a significant influence on the path the molecule adopts; different denaturing environments inside a cell can create different initial states for the protein to fold from. If the chain already has some structure, that may form the nucleus for additional structure to build upon, and this will reduce the search options for the polypeptide chain in the multi-dimensional conformational space. It can also happen that the existing structure may have to

vel details about the perturbations caused by 9.7 M urea using MMR and finally compare the urse-mediated unfolding with that using Gdn-HG. Gdn-HG is highly charged as compared to urea which is neutral and this is expected to have an inthemse on the tomore collapsed state due to electrostatic screening. Our data received the control of vel details about the perturbations caused by 9.7 M urea using

#### References

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of structural preferences across the length of the chain. In view of all these, it is important to understand the characteristics of the various denatured states, with regard to their topologies, heterogeneities and motional characteristics, their modulations due to changes in environmental conditions, etc. at atomic level detail. In vitro, different denatured states can be created by use of different denaturants, such as, Gdn-HCl, urea, SDS, extreme pH conditions, etc. Although these may not exactly represent the denatured states, in vivo, they help sample the ensen ble quite widely and thus allow investigation of the folding processes, in general,

In this background, we present here a comparative study of the structural and dynamics characteristics of urea-denatured and Gdn-HCI-denatured states of the GTPase effector domain (GED)<sup>2</sup> of dynamin, a crucial protein in clathrin mediated endocytosis. GED plays important roles both in dynamin assembly around the neck of the clathrin coated vesicles, and assists the N-terminal GTP ase domain in GTP hydrolysis required for dynamin function [4,5]. The recombinant form of GED has been shown to self-assemble and form large megadalton-sized oligomers in vitro [6,7] even at micro-molar concentrations. We first describe the global characteristics of urea-mediated unfolding of GED, as studied by optical techniques including CD and fluorescence and then the residue-le-

Bis-ANS [4,4'-Bis(1-anilinonaphthalene 8-sulfonate) Molecular Bis-NNS [4,4'-Bis[1-aniinon-phthalme 8-sulfonate] Molecular Probes, OR, USA was prepared and the concentration was determined using the estimation coefficient. Sup. 22,000 cm<sup>3</sup> M<sup>-1</sup>. Age = 250 mm on a Spex Risurolege 40500F spectrollourineer at 27°C using a 1 cm path length cuvette with a band past of 15°m for both excitation and emission. The emission spectra were measured from 450 to 550 mm at a scan rate of 1 mm s<sup>-1</sup>. By the probability of 15°m for 10°m for 10°

$$F_{\text{app}} = \frac{S_F - S_{\text{abs}}}{S_{\theta} - S_{\theta}}$$
(2)

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Other literature databases only focus on **Abstracts and Citations** — critical information in the full text is missed

# Embase indexing – Deep, full-text indexing to retrieve all relevant results

#### Easy to search

 Over 73,000 preferred terms and more than 310,000 synonyms that map to the preferred term when searched

# Comprehensive drug and Medical Device searching

- Chemical names, trade names, laboratory/research codes, and more than 31,000 generic drugs and chemicals (FDA, EMEA and WHO)
- Over 3,000 specific terms for general and medical devices (e.g. endoscopes, catheters, prostheses) as well as several thousand terms for related medical procedures, (e.g. endoscopy, catheterization)

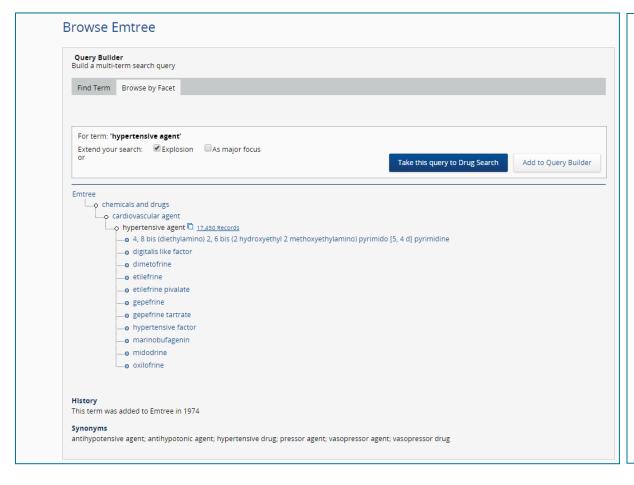
#### **Up-to-date**

The latest drugs, diseases, organisms and procedures are indexed and added 3x per year (with back-posting of older records). Includes all drug generic names described by FDA and EMA, all International Non-Proprietary Names (INNs) described by WHO from 2000

# Inclusive terminology

• All MeSH terms and links to more than 23,000 CAS registry numbers

# Build powerful searches by browsing in Emtree



Explore Emtree to see relationships between terms

Drug and disease terms are qualified by **searchable sub-headings** (e.g. **adverse drug reaction**) describing their precise role in the article

Mapping means that searchers get **the same results** regardless of which term they use, e.g. Vioxx (synonym) or rofecoxib (the preferred term)

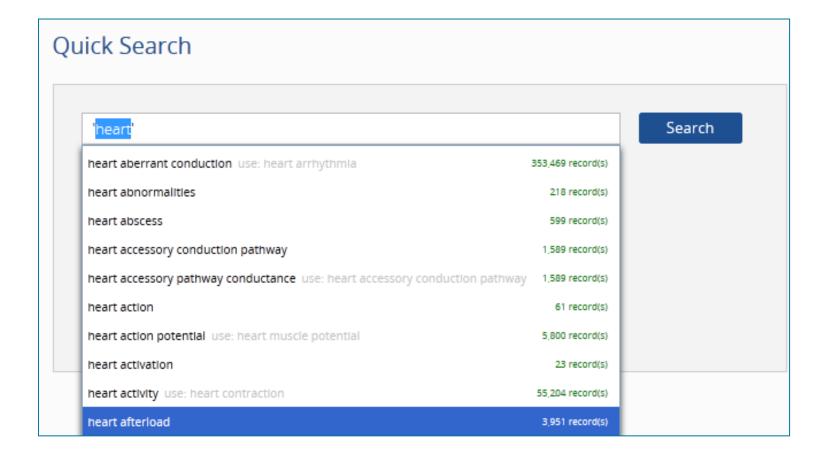




# Precise results retrieval

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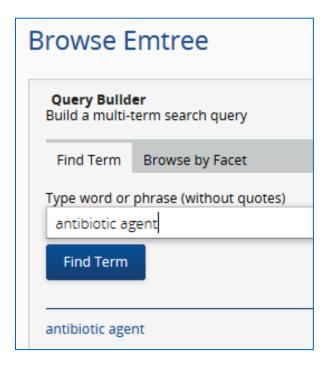
# Start searching



Find the best terms for your search and include synonyms automatically with autocomplete in Quick Search

## Start with Emtree

Identify a preferred term (subject heading) for searching, when available



## Review the Emtree Record

# Take note of any **Synonyms** listed

# Read the entry provided from **Dorland's dictionary**

```
diseases
physical disease
physical disease by etiology and pathogenesis
inflammation
nervous system inflammation
meningitis
bacterial meningitis 15,727 Records
```

#### History

This term was added to Emtree in 1974

#### Synonyms

e. coli meningitis; escherichia coli meningitis; meningitis purulenta; meningitis, bacterial; meningitis, escherichia coli; meningitis, pyogenic; purulent meningitis; pyogenic meningitis

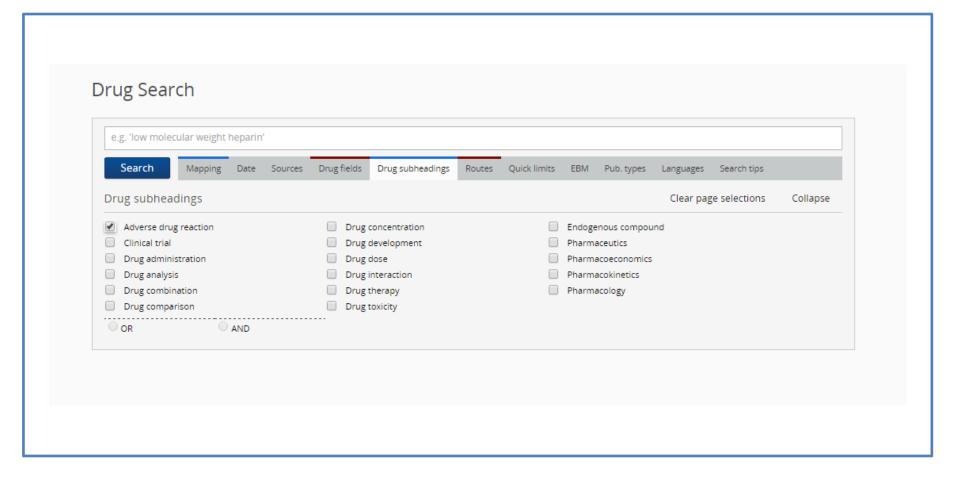
#### **Dorland's dictionary**

bacterial meningitis = meningitis caused by bacteria, usually characterized by fever, headache, a stiff neck, and altered mental status. Common pathogens are Haemophilus influenzae (see Haemophilus influenzae m.), Neisseria meningitidis (see meningococcal m.), Streptococcus pneumoniae (see pneumococcal m.), and Mycobacterium tuberculosis (see tuberculous m.). Called also purulent or pyogenic m. Cf. viral m.

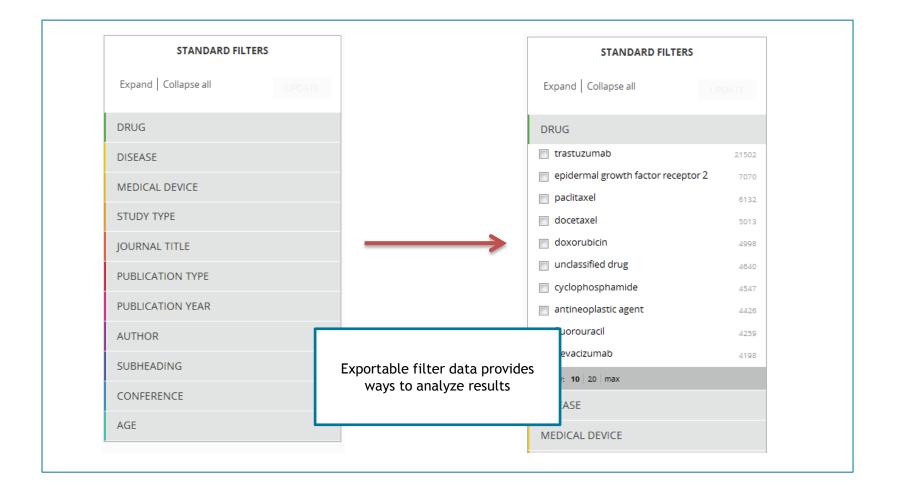
purulent meningitis = bacterial m.

Definition from Dorland's Medical Dictionary, 32nd edition, copyright © 2011 by Elsevier. For more information please go to www.dorlands.com

# Apply limits to investigate data for evidence-based medicine

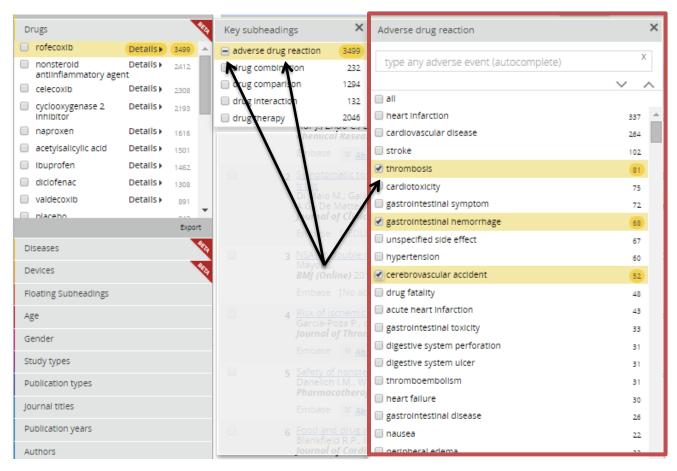


## Use filters to focus search results



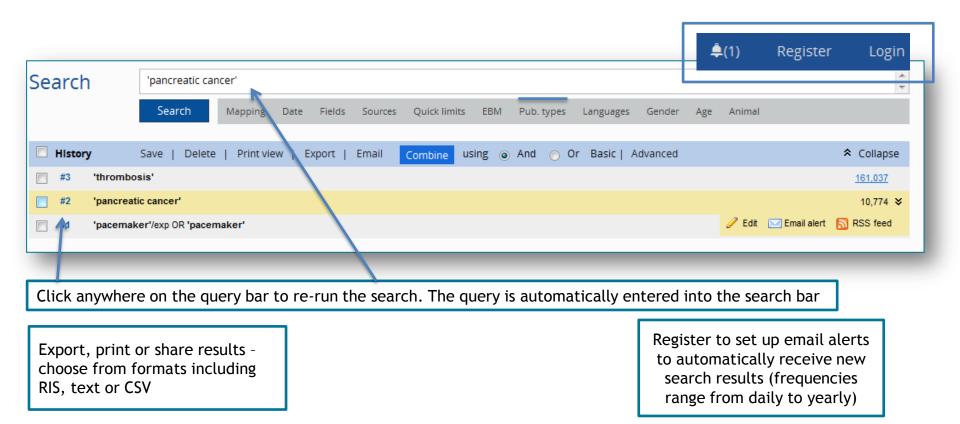
# Identify relationships using filters

Click on key subheading text (e.g., adverse drug reactions) and select individual linked terms (e.g., thrombosis, stroke) for a drug



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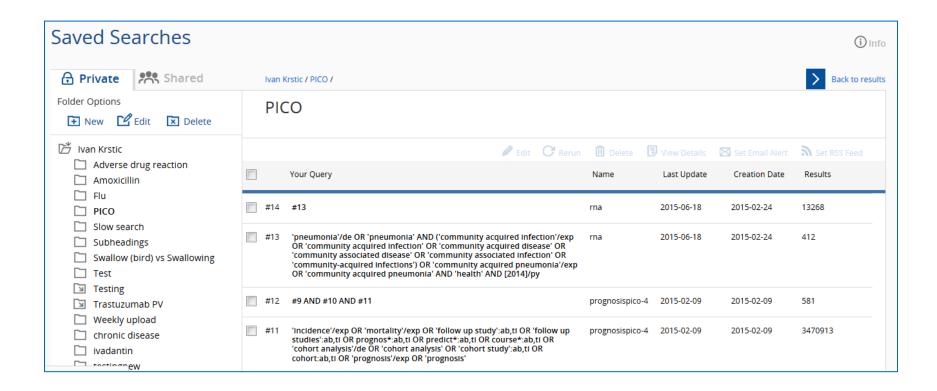
# Keep up-to-date with automated results management tools



# Saving your search

Use Save Searches for regular use of repeated search strategies

- e.g., study design, updating a search
- Or alternatively, set up an Email Alert





# Demo

# Tips for searching

When performing an abstract and title search for any synonyms listed in an Emtree record, consider using **truncation or wildcard** characters (\*, ?) as needed.

When conducting a search of Article title and Abstract for author freetext expressions consider using **proximity operators** (**NEXT**, **NEAR**) as appropriate

When performing free-text searches, remember to **consider variant spellings** including British and American spellings and terminology

e.g., tumor vs tumour; diaper vs nappy; pediatric vs paediatric;
 otorhinolaryngology vs ear, nose and throat; overuse injury vs repetitive strain injury

## Build and combine searches

- Use single quotes to capture a phrase 'diabetes mellitus' for example (not with Autocomplete in Quick Search)
- Break up your search into individual searches, such as a drug search (in Drug Search form) and a disease search (in Disease Search form) and combine your results in Session Results
- Truncation and operators, AND, OR, NOT, NEXT, NEAR
- Note: when using the PICO search form (starting in February), the different P, I, C and O elements are automatically combined into one search, using the AND operator

# Where Can you Learn More?

Start with Embase Help – for answers to Frequently Asked
Questions, Guides, Instructional Videos and links to archived
webinar recordings

- www.Elsevier.com/Embase for an overview on Embase or for links to Embase content (Indexing Guide, Journal and Conference Coverage lists)
- In-Product Messaging gives links to the latest resources, news and upcoming webinars

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## **Thank You!**

- Q&A will be sent to you by email. For more information and questions please contact your regional office
- Our next Embase webinar is on February 24<sup>th</sup> watch in-product messaging for more details
- Please fill out the survey that appears on your screen after leaving the webinar.



**Any questions?** 





Thank you!