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Inquiro version 3.5 – July 2020

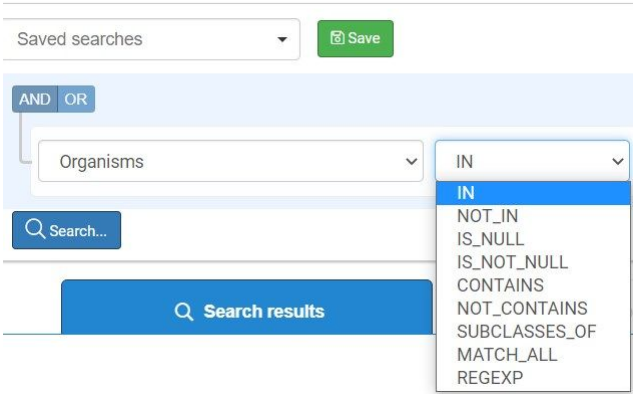
Toulouse – July 2020: DEXSTR, today announced the availability of Inquiro Version 3.5. This is a new version of our software. It comes with the following major enhancements that make Inquiro V3 the Insight Engines for Life science.

Inquiro V3.5 New features & enhancements :

Advanced search improvement

The advanced search feature has been improved to ease the user experience. As a result, the following updates have been put in place :

- **operator list:** the list of operators has been reviewed
    - Metadata with associated dictionaries



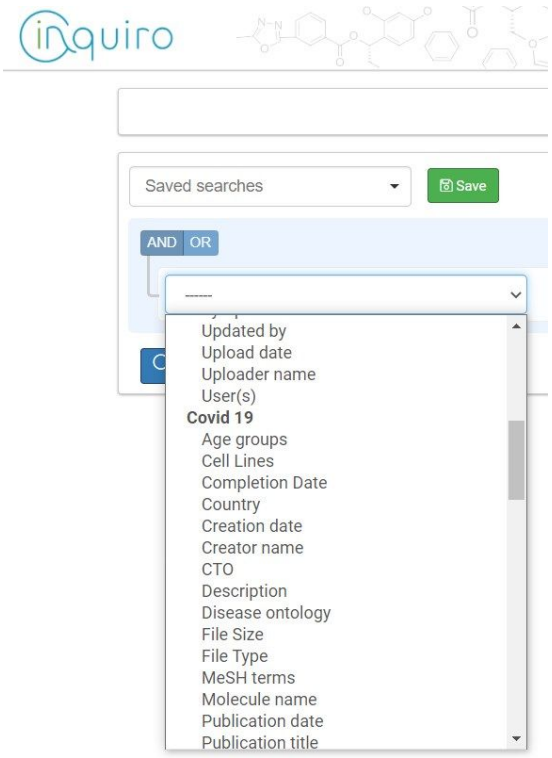
- **IN**: followed by the dictionary list: looks for all documents that contain at least one term of the list.
  example “Disease IN [“influenza”, “cancer”]” will retrieve all documents with disease containing “influenza” or “cancer”
  the user is able to paste termes with comma as a separator even if terms are not in the dictionary.
- **NOT_IN**: inverse of IN operator
- **CONTAINS**: Looks for exact term or expression
  example :
  Contains “breast” match with “breast cancer” or “breast feeding”.
  Contains “breast cancer” looks for documents with only “breast cancer”
- **NOT_CONTAINS**: inverse of CONTAINS operator
- **SUBCLASSES_OF**: looks for documents having children of the metadata in the associated ontology
  Explore
  Disease SUBCLASSES_OF [“tauopathy”] looks for all documents having “Disease” matching with “Alzheimer’s disease”
- **IS_NULL**: looks for a document for which metadata is null
- **IS_NOT_NULL**: looks for a document for which metadata is not null
- **MATCH_ALL**: looks for all documents that contain all terms of a list
  Example
  “patient_code” MATCH_ALL [“patient1”, patient2”, “patient3”] will return the documents that contain all the patients in the list.

        - **REGEXP**: looks for a term or pattern using a regular expression
          Example: “project code” REGEXP “GSE[0-9]{5}” will retrieve all documents having a project code made by “GSE” plus 5 digits.

    - Metadata without associated dictionaries
        - **EQUAL**: exact search for a free term
        - **NOT EQUAL**: Inverse of EQUAL
        - **IS_NULL**: looks for document where selected metadata is null
        - **IS_NOT_NULL**: looks for document where selected metadata is not null
        - **CONTAINS**: extended search of a free term
        - **NOT CONTAINS**: inverse of CONTAINS
        - **WITH_SYNONYMS_OF**: looks for documents that contain the term AND the other terms that are linked through a synonym list.
          example:
          considering the following list of synonyms: “influenza”, “flu” and another list with “influenza”, “cold”.
          the query WITH_SYNONYMS_OF “cold” will provide documents that contain “cold” and “influenza”
          the query WITH_SYNONYMS_OF “influenza” will provide documents that contain “cold” and “influenza” and “flu”
        - **REGEXP**: looks for a term or pattern using a regular expression
          Example: “project code” REGEXP “GSE[0-9]{5}” will retrieve all documents having a project code made by “GSE” plus 5 digits.

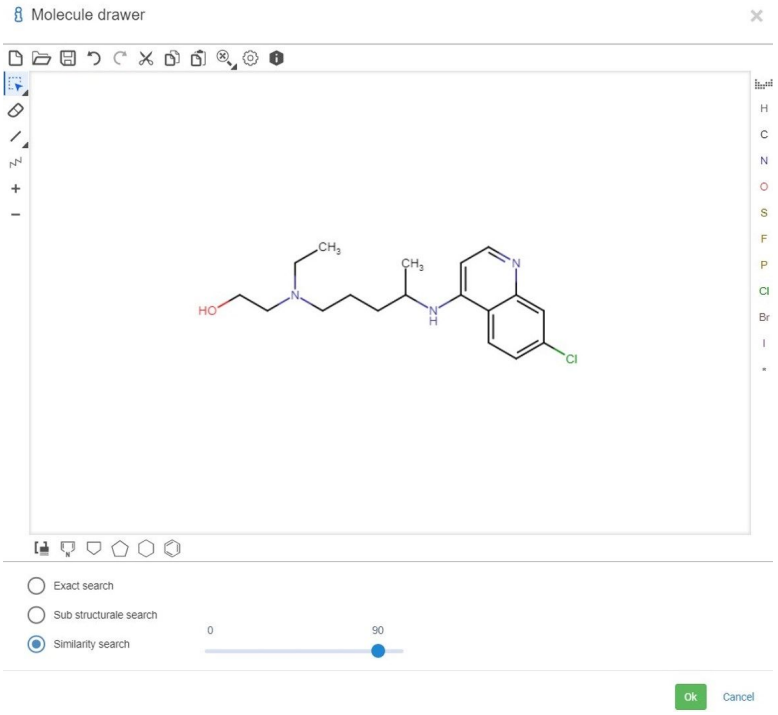
    - Dates: Some metadata are dedicated to the dates. For these metadata, the following operators are available
        - **EQUAL**: needs to be fulfilled with the calendar
        - **NOT_EQUAL**: needs to be fulfilled with the calendar
        - **BEFORE**: needs to be fulfilled with the calendar
        - **AFTER**: needs to be fulfilled with the calendar
        - **IS_NULL**
        - **IS_NOT_NULL**
    - Particular case for “All metadata and text”: This selection allows only the following operator :
        - CONTAINS
        - NOT_CONTIANS
        - WITH_SYNONYMS_OF

- **List of metadata organization**: In the case of multiple instances, the list of metadata is organized by instance. By this way, the user can retrieve more easily the metadata of interest.



Chemistry similarity search

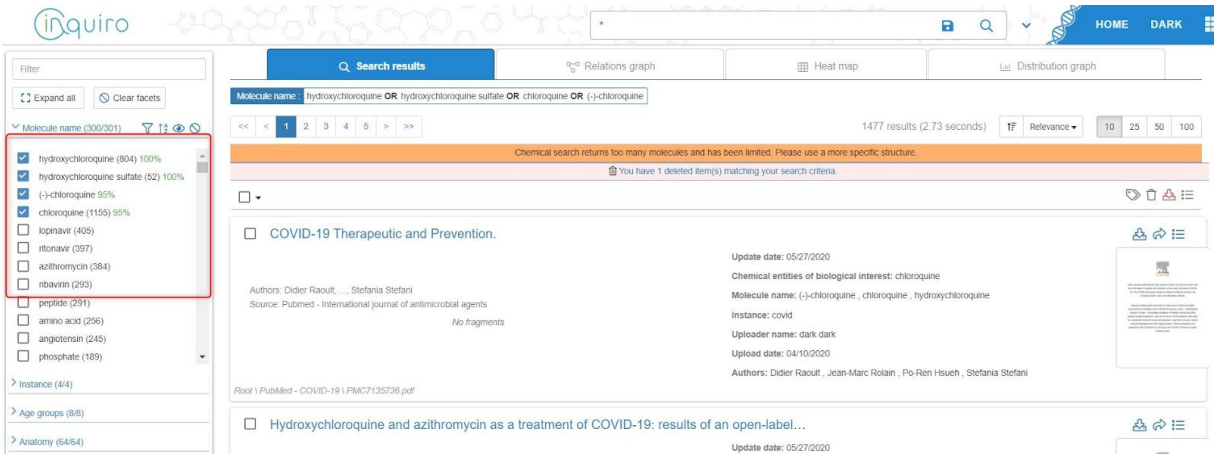
The ChemAxon module dedicated to chemistry has been enhanced in Inquiro and allows now the similarity search in addition to the Exact and substructural search. This is available in the Simple and Advanced search.



The user is able to select either:

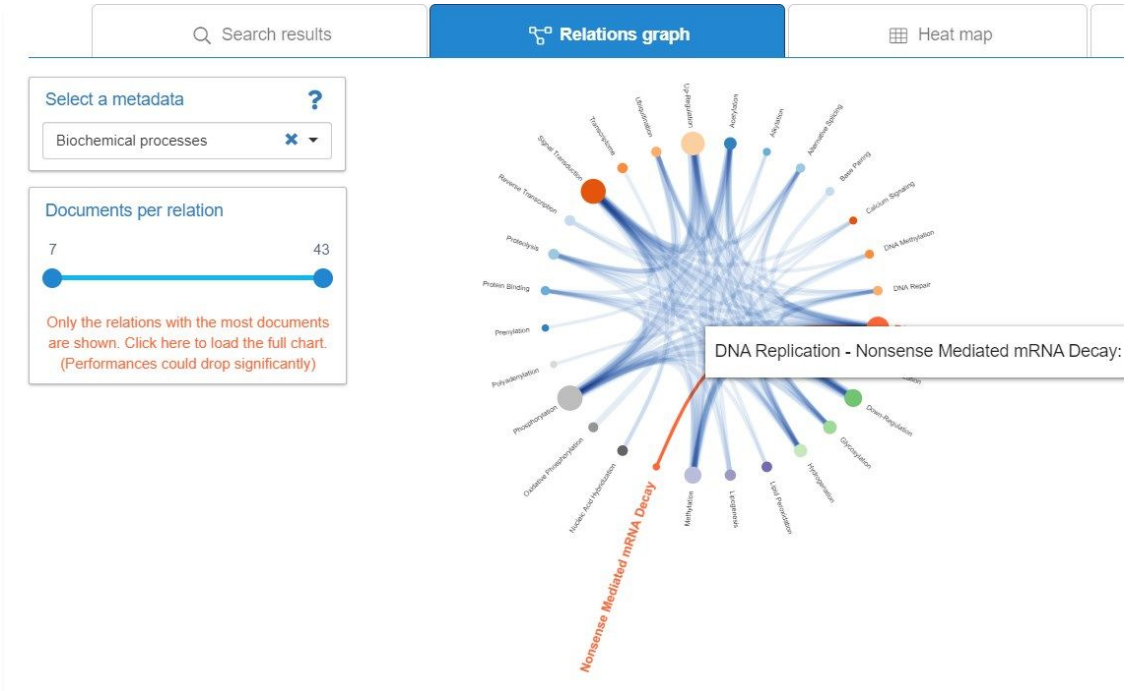
- exact search
- substructure search
- similarity search: In that case, he needs to select also the percent of similarity he is interested with (by default 90%)

The query returns all the documents that fit the specified similarity search. The facet on the left gives the concerned chemical structures order by decreasing the percentage of similarity. if too many results are retrieved, an information banner appears to invite the user to restrict the query criteria.



Relation graph improvements

In Inquiro 3.5, the relation graph has evolved to offer the capability to obtain all the documents concerned by the link between 2 metadata. Indeed, until inquiro 3.4, only the bullets were clickable and gave the documents related to 1 metadata only. Now the link between 2 metadata is clickable too. The link thickness is adapted to the number of documents: The more there are documents concerned by a link, the more the line thickness is important.



Clicking on the link, the user obtains the list of documents concerned by the two metadata. The result display has been harmonized with the result page of the simple or advanced search.

Search relevance

The Inquiro application has been enhanced in order to display the most relevant documents on top of the results page:

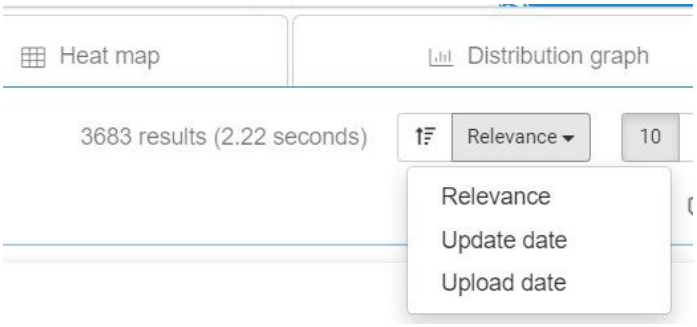
SolR search engine score has been used instead of the number of hits to sort documents of the query. As a result, the relevance of the first documents is more accurate.

The user experience has been taken into account to display documents in the results page. For instance, the more a document has been open or even only selected, the more the document is considered relevant.

The name of the document is also a parameter that makes the relevance of a document. Indeed, if the term used for the query is mentioned within the name of the document, this one is considered more relevant than others and appears prior to others.

All those parameters are considered altogether in order to provide the most relevant document first in the results page.

At any moment, the user is able to rearrange the sorting thanks to a drop-down list providing the sorting criteria he wants.



Technical upgrades

Some technical bricks have been upgraded

- Java: Inquiro has been upgraded with Java 11
- ChemAxon: the Jchem module from ChemAxon, (dedicated to chemistry), has been upgraded from version 17.21 to 20.13.

Various improvements

Handle documents in trash from query builder as it is for simple search
Images file format (jpeg, jpg, png) have now their thumbnails in the result page

improvement of the synonym list creation
enhance user interface to fit with screen resolution
add parameter SORT in the metadata admin console to specify which criteria can be used to sort results in the result page.
on relation graph, replace the threshold for number of relation with the threshold for the number of documents on links