



The BioAI™ Difference

Underlying the effectiveness and efficiency of *Qinsight*™ is Quertle's BioAI engine. BioAI (bio-specific artificial intelligence) was specially built for medical, life science, and chemistry text discovery. With a basis in the fundamentals of biology and chemistry, BioAI understands the literature to find what you need.

BioAI is

- **>10X** more effective: Deeper discovery helps avoid R&D dead ends
- **>30X** more efficient: Immediately relevant results with intuitive exploration means finding what you need faster, getting your product to market sooner and increased revenues
- **Infinitely** better insights: Finding what others miss and answering questions no other solution can, provides unparalleled insight

*BioAI minimizes the risk of missing key information
by moving from “searching” to “discovery”.*

Relevant Results, Right Away

BioAI allows discovery of the facts within a document that are relevant to the user by finding meaningful relationships among the user's search terms. This provides the critical results immediately. Say goodbye to the frustration of overwhelming lists of often irrelevant results provided by standard old-fashioned keyword-based search engines. *Qinsight* uses BioAI to find documents by what they say, not just because keywords are present.

Find All the Relevant Documents

BioAI is concept-based. The BioAI discovery process is based on meaning. So, if your search includes a term such as “activation”, you will find information that includes the concepts “activation” implies. Your results may include “up-regulation” and “stimulate”, for example.

Understanding of Biology and Chemistry

The concept-based methods in BioAI extend to entities such as genes, chemicals, diseases, and much more. This means you can enter the terms you are familiar with and rest assured that the related concepts (aliases and synonyms) will be found. No need to do a complicated Boolean query such as “TP53 OR TRP53 OR p53 OR ...” (assuming you even know all the aliases and synonyms for the entity you are interested in). Simply enter what you want using the terms you know and let BioAI do the work.

Finding all Members of a Class

Another aspect of BioAI's concept-based approach is the ability to find members of a class. For example, often when you enter a term such as disease, you actually want to find names of diseases. With its understanding of biology and chemistry, BioAI can automatically identify all the members of a class, allowing you to answer questions such as "What diseases are associated with arsenic?"

Plain English Queries

The query in the preceding section is an example of using natural wording in your queries. In this case, BioAI recognizes that you probably will not be helped by finding documents that simply mention "disease". Rather, the query asks about specific diseases. This type of plain English query applies to all type of searches.

Disambiguation

Many technical terms (such as gene names) are the same as common English words. Being able to disambiguate the different uses of a term makes the BioAI engine very powerful. In areas like personalized medicine, BioAI's unique abilities can be the critical difference.

Automatic Discovery of Key Concepts

BioAI automatically discovers concepts in the documents that are specifically related to the user's query. These Key Concepts provide a way to understand the discovered documents in a way that looking at long lists of results can never provide. In addition, the Key Concepts provide a foundation for intuitive exploration, and power the visual analytics in *Qinsight*.

Serendipity

BioAI's unique methods make it possible for you to discover important information that you may not have even known to look for. As you explore the rich results that come from the BioAI engine, information like the Key Concepts or relationships discovered in the visual analytics can help you to recognize an important aspect that was not the focus of your search. These Aha! moments could lead to your next breakthrough discovery.

*Discovery of meaningful information is the future.
With BioAI, the future is now!*

AI-based Analytics for Biomedical Big Data

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