

AN INFORMATION NETWORK OF BIOMEDICAL ENTITIES FOR GENERATING HYPOTHESES

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The sheer volume of biomedical literature has made it impossible for any individual researcher to keep up with so much being published. We have developed a proprietary information network to explore the relationships between biomedical entities, such as genes and diseases. The relationship information was computationally extracted from millions of biomedical publications. The current network contains over hundred million connections established among genes, diseases, chemicals and other biomedical entities. Each connection has a strength score to indicate how strong a connection is between two entities. A simple web interface was developed for user to explore the network. This information network was used to discover the hidden knowledge, or the indirect relationships between the biomedical entities that have no direct connection between them but are strongly connected to some common entities. We have identified many such relationships that could drive new biological hypothesis generation..