

Big Data Opportunities in Medicinal Chemistry: how can patents in dengue affairs contribute?

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Key words: dengue, big data in health, medicinal chemistry, patents, public health.

Abstract

The topic of Big Data has been gathering more and more attention, namely in the healthcare sector. Nowadays, it became there is need for awareness around the evolution and opportunities associated with the management of large datasets and how the information generated from these sources can change the research, development & innovation (R,D&I). Big Data has the potential to transform research practice by integrating different data sources and making use of real time data, to increase patient's involvement and improve the efficiency of care. Some major challenges are related with understanding its value, security and governance, health-care management and patient's outcomes can be improved. It could be helpful to bring up this discussion to a larger audience, focusing on two main dimensions: the potential impact of Big Data on Medicinal Chemistry and dengue patents. On this regard can raise awareness, stimulate adoption of digital tools and electronic data management, data mining, support partnerships while mitigating potential safety and to aid decision makers of the university, industry and governments. About dengue, is a mosquito-borne viral infection causing a severe flu-like illness and, sometimes causing a potentially lethal complication called severe dengue. The incidence of dengue has increased 30-fold over the last 50 years. Up to 50-100 million infections are now estimated to occur annually in over 100 endemic countries, putting almost half of the world's population at risk.

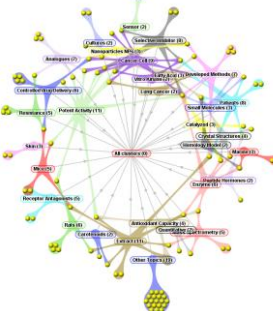
Introducion

In health, there is a widespread uptake of electronic health records and a certain "chaos" on how to manage them. Some of these records contain quantitative data. However, about 80% of the data is qualitative and registered in an unstructured format. In scientific and technologic database note that European Patents Office there are more 90 million documents available and PubMed more than 25 million citations. Thus, to manage the core information in specific subject is not trivial. Data integration enables comprehensive searches for subsets of data based on the linkages established, while smart algorithms linking laboratory and clinical data, e.g., could raise red flags concerning safety or efficacy. Traditionally R,D&I in Pharma has been a secret activity conducted within the walls of R&D. In recent years, the external collaboration with universities, other Pharma companies, consultants, health providers and payers, expanded. By breaking internal silos and enhancing collaboration with external partners,

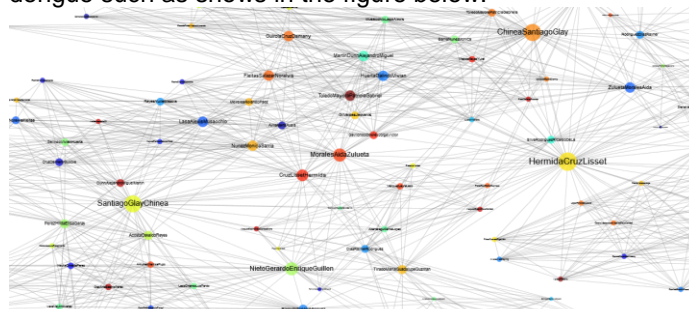
pharmaceutical companies and researchers can extend their knowledge and data networks.

Results and Discussions

From 239.982 papers in medicinal chemistry into PubMed, it was extracted and grouped the 100 most important subject in network (side left figure). Applicants patents more incidence red and yellow countries.



There are 5.088 scientists in core network for R,D&I in dengue such as shows in the figure below.



This is a great opportunity for Brazil is aware of these groups for cooperation in view of the core competencies of researchers studying the problem.

Conclusions

Some core researchers are inhibition activity, induces cells, synthesis etc. The greatest scientist in patents is Whitehead Stephen S. The technology will help stakeholders to early diagnose, to predict diseases, to act and allocate resources in the critical areas in advance. The available data sets will differentiate procedures and drug outcomes, allowing decision makers to invest better and prioritize on the most important areas.

Acknowledgements



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