

Precision medicine needs the power of **Genomics** data



MediSapiens Genomics Software Suite

The use of genomics in healthcare and drug development is steadily increasing: this ranges from public health programs such as population screening that are aimed at preventive healthcare of chronic diseases, via consumer wellness programs to combining genomics with clinical and lifestyle data in drug discovery. With an estimated value of USD 35.7 billion in 2024 (up from USD 18.9 billion in 2019), at a CAGR of 13.5%, genomics does not only provide useful, but also lucrative promise.

The inclusion of genomics as part of healthcare and drug development programs does pose challenges: clinical, genomic, sample, and other omics data is often scattered over different locations and applications, which makes building suitable cohorts challenging. In addition, the market lacks solid, scalable software solutions that are suitable to combine phenotype/genotype data with other data sources and extract value from their analysis. The growing genomic market demands sophisticated, specialized software solutions adding value to biomedical data for a variety of commercially (and socially) driven use cases, be this drug research and discovery or precision medicine.

It is with these challenges in mind that MediSapiens has created the MediSapiens Genomics Software Suite (GSS), a cloud-based solution to integrate and manage genomic, clinical, and other omics data.

Based on the experience working with leading pharmaceutical companies and healthcare providers, the GSS provides an adaptive, scalable, and cost-effective solution to integrate genomics as part of healthcare operations or in guiding decision-making in drug development. GSS offers unprecedented flexibility in managing and combining biomedical data sources. The data can be queried with graphics user interfaces or via API, e.g., Python and R. People can focus on data discovery and practical applications, instead of setting up infrastructures.

Use Case Pharma

MediSapiens has been a long-term partner with a Global 500 pharmaceutical company with its HQ in Europe, providing them with large-scale data management and analytics solutions as well as data quality services.

One of the biggest challenges that the pharmaceutical partner faced was using different clinical and genomic data sets together, querying and applying the data sets in one single process, contrary to the previous one-set-at-a-time approach.

To solve the above challenge, MediSapiens has provided the pharmaceutical client a data solution for the integrated management, analysis, and visualization of their NGS and clinical data – driving valuable insights in the early drug discovery phase. Optimized to use data sets from different sources together, it enables the client's researchers to combine data from different sources and query it together, increasing the cohort sizes, saving time and improving the insights gained from the different data. Adapted to the specific requirements of researchers, it comes with both an elaborate graphical user interface and the option to query data using command lines, making it adaptable and flexible to many valuable use cases.

To support the different sources of data and ensure compatibility, MediSapiens included data quality processes as part of the solution: each data set is verified according to set standards, so that all data can seamlessly work together.

Capabilities and Features

The Terveystalo case offers a glimpse into some of the capabilities and features GSS provides. Other key features include:

- Harmonization of data from different sources
- Complement clinical data with genomic and phenotypic data
- Granular selection of patient cohorts in deep detail
- Consent management
- Risk score implementation
- Longitudinal data integration
- Package data for further research or commercialization
- Genetically informed drug target discovery
- Secure environment for cooperative, multi-site research
- Use of industry standards for integration of applications
- Genotype-phenotype associations

Additional Use Cases

GSS is suitable for different use cases, seamlessly integrating with existing operations to add maximum value against the minimum of interruption in your operations. Example use cases include:

Pharma and Life Science:

- Data-driven drug discovery, combining data sources, creating higher value, genetically informed drug targets

Hospital groups and biobanks:

- Integrate genomic data with your electronic health records, biobank inventories and LIMS solutions
- Platform for consent-based biobank activities, with granular selection of patient cohorts

EHR providers:

- Enrich your clinical and admin data with genomic and phenotype data

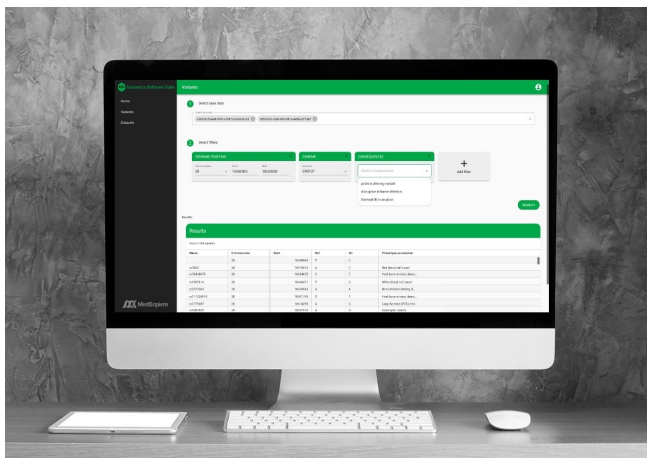
Academia:

- Create secure (multi-site) research environments that integrate biobank and population research from different groups

For more reference cases see www.medisapiens.com/references/

The GSS is designed to work with the data of millions of patients, providing results in real-time.

About MediSapiens



MediSapiens has a 12-year track record providing innovative IT solutions to clients in the biomedical field. Our solutions turn biomedical data into new insights and knowledge. Our clients range from global pharmaceutical companies and leading healthcare organizations to international research groups, population programs and start-ups.

For more information, please visit www.medisapiens.com or contact us at sales@medisapiens.com