Genoscooper Laboratories, a Finnish company specialized in animal genetics and DNA testing, envisioned a revolutionary conceptual shift in the industry: building a groundbreaking DNA testing service for dogs. The new service would introduce more sophisticated, yet cost-efficient DNA technology, improved screening methods for both individual and population level analysis, and a comprehensive global database to serve researchers and canine health professionals, as well as regular dog owners and breeders. To combine all these elements and present relevant information in a user-friendly interface, novel custom-made bioinformatics solutions were needed. These solutions were obtained with a platform developed and provided by MediSapiens Ltd.

**Background**

Genoscooper Laboratories, a company led by visionaries in commercial business development and an award winning, internationally recognized professor of molecular genetics, envisioned in 2011 launching a comprehensive DNA testing service for dogs, MyDogDNA. As this was a unique project, the first ever global commercial database to handle large amounts of canine DNA data, it was quickly noticed that regular IT solutions would not be adequate, and more profound knowledge of bioinformatics was needed for handling all the genetic data and translating it into an understandable format for use in animal care.

**Starting the development**

Involving MediSapiens in the project started the actualization of the vision. The services MediSapiens was able to provide were without competition. The need to build a new platform concept from scratch required a BioIT partner to develop novel solutions that demand:

1. Understanding the genetics to build a scientifically valid screening tool for reporting DNA data from thousands of genes to the end customer.
2. Understanding the problematics of the amount of data to be transformed into a usable and commercially interesting form.
3. Capabilities in performing complex bioinformatic computations.
4. In addition, the capability to provide basic IT services, including a web shop, a CRM, and laboratory production management systems.

“Starting a project requiring unique custom-made BioIT solutions was a challenge, and finding a partner with the ability to visualize the data and understand both scientific, technical and end user needs was crucial for success.”
The solution: MyDogDNA today

The MyDogDNA service has been available for over two years and is constantly evolving. As envisioned, it is a global DNA testing service and canine database built on MediSapiens technologies for databases, data models, data processing algorithms and visualization tools for complex biomedical data. In addition to static reporting of test results for inherited canine disorders, the platform and its custom-made solutions enable handling huge amounts of different types of data: ranging from handling data for managing sample logistics to handling complex data for multidimensional scaling of genome-wide information, both for individual dogs as well as for entire populations. The novel platform developed by MediSapiens makes managing, analyzing and comparing complex data very straightforward, and allows presenting the data in a comprehensible manner to the end customer. This has been one of the keys to success for MyDogDNA. Modern DNA technology combined with powerful BioIT applications enable advancing even further in the transition towards predictive, preventive and more personalized care for dogs for the benefit of an individual dog, and the entire breed.

To future and beyond

Along with the next steps of the platform development, the project will be taken to the next level on a global scale. Genoscope Laboratories has established a partnership with Mars Veterinary, including integrating the MyDogDNA testing platform into Mars Veterinary’s existing DNA testing products. MyDogDNA is sold through affiliate Mars Petcare businesses, such as Royal Canin and Banfield Pet Hospital. Genoscope’s DNA testing concept covers almost all known inherited canine disorders, conformational traits, and genetic diversity in one test, and the partnership with a distributor with a wide reach will add new requirements for the platform functionalities and turn it truly global. Results are reported via mydogdna.com, the core of the service being the global online database developed in co-operation with MediSapiens. Through this partnership with Mars Veterinary, the MyDogDNA testing concept will be introduced to a wide global audience of dog owners, breeders, and benefitted by researchers and animal health professionals. MediSapiens will continue to be a strong part of the collaboration and future development, enabling scaling the database globally and introducing the concept to other species, starting from cats.

“MediSapiens is able to offer when starting a project from scratch has been one of the enablers for MyDogDNA to actualize the groundbreaking vision that originated the solution.”
"Starting a project requiring unique custom-made BioIT solutions was a challenge, and finding a partner with the ability to visualize the data and understand both scientific, technical and end user needs was a crucial part for the success. The flexibility MediSapiens is able to offer when starting a project from scratch has been one of the enablers for MyDogDNA to actualize the ground-breaking vision that originated the solution. MediSapiens differentiates itself from other BioIT service providers in its ability to create unique and innovative solutions to meet the precise needs of a customer, while committing to projects as a long-term partner instead of working as an external software provider."

Tuomas Poskiparta,
Director of Genoscooper Laboratories

MyDogDNA by Genoscooper Laboratories – In brief

2011: Vision of the future of DNA testing – platform development with MediSapiens begins

2013: Soft launch of ground-breaking MyDogDNA.com service for animals utilizing the latest in DNA and BioIT technologies, based on custom-built bioinformatics and technology solutions provided by MediSapiens

2015: Genoscooper Laboratories signs global licensing contract with Mars Inc., global rollout by Mars Inc. starting from the US market during 2015 and 2016, future development carried out in collaboration with MediSapiens – Vision to see the service as global standard for animal DNA testing

Genoscooper Laboratories, the specialists in canine genetics and animal DNA testing, offer solutions to help in making informed decisions about pet care and breeding, through comprehensive testing services and improved DNA diagnostics, with the most advanced BioIT – powered by MediSapiens.