

Consensus Consulting provides effective business focused solutions that unlock the potential of your IT investment in support of new business initiatives

NeuTec Pharma plc is a biopharmaceutical company formed in 1997 which specialises in the development of genetically recombinant antibodies, or "grabs",

NeuTec's two leading drug candidates are Mycograb®, which targets systemic candidiasis, and Aurograb®, which targets Staphylococcus aureus including methicillin-resistant Staphylococcus aureus ("MRSA").

Consensus Consulting provides NeuTec with Fabtec® platform technology for the identification of new therapeutic antibody fragments.

Background

The development of NeuTec's products differs from the traditional approach used by conventional pharmaceutical companies which screen numerous chemical compounds for activity against bacteria and fungi. Many of these compounds will be too toxic for human use.

In contrast, NeuTec identifies naturally occurring potentially protective antibodies from patients who have recovered from bacterial and fungal infections and then uses these to generate "grabs" to treat these infections. As a result, these "grabs" are likely to be intrinsically safer than antibiotics.

Consensus Consulting was asked to assist in this process by creating a WEB based database solution to store and query their antibody sequences, allowing for the identification of new therapeutic antibody fragments.

This platform technology Fabtec® is now available for licensing from NeuTec.

Solution

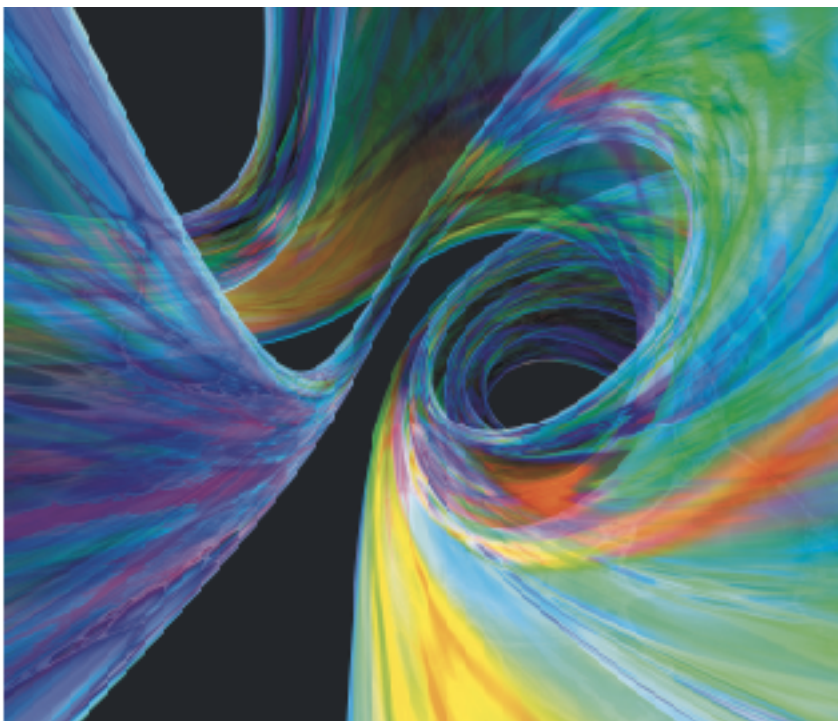
Of central importance was the ability to isolate and identify the complimentary determining regions (CDRs) of each antibody sequence. The CDRs are the most variable part of the sequence and are the most interesting part to NeuTec as they are the active areas that bind with other molecules. A simple language was devised to traverse the antibody sequence looking for each CDR based on a set of rules. There is a different set of rules for each type of sequence.

The database solution is Microsoft SQL Server 2000 running on Microsoft Windows 2000 Server. The rules are processed by stored procedures in the database written in Transact-SQL. The front end is browser-based and uses JavaServer Pages (JSP) to talk to the database. The pages are served up from Apache Tomcat, a JSP-enabled web server. Using a browser-based approach means people can connect over a network without the need for distributing and maintaining a bespoke client-side application.

From this browser-based front-end the user can perform all the necessary tasks, from importing the sequences, processing the sequences (i.e. finding the CDRs), querying the sequences and also exporting the results of a query back to a file that can then be used as input to other biological computational tools. One of the key-features of the query mechanism, which is basically a graphical front-end to SQL, is the ability to

search for sequences or CDRs that are similar to another sequence or CDR and to order the results with the closest matches first.

Of the system, Gordon Rigg PhD, a Senior Scientist at NeuTec, said, "Consensus Consulting designed and implemented an innovative data warehousing package tailor-made for our bioinformatics needs. The result was an impressive and versatile suite of programs, termed FabTec®, that has speeded our drug discovery platform, with new drug candidates emerging after weeks of analysis, rather than years taken by conventional methods. The whole scientific consultation and software production process was undertaken at our facility in Manchester and took just 18 months to complete."



"We are the Catalysts for Positive Change."

Focused at the board level, our industry expertise allows companies to realise the potential of information in their organisations. Consultants working with key executives carry out evaluations that will directly affect the way in which you deliver new or improved products to your customers whilst maintaining control over costs. Recommendations span from strategy to architecture and design. Consensus can also manage any programme and project requirements arising from the recommendations and resource technical implementations.

What makes us different from other consultancies is that we do not only talk and advise - we actually provide project management and people that deliver the solution. We have an impressive track record of the successful delivery of solutions to complex technical problems. We commit to long-term relationships with our customers.

Consensus Consulting offerings
Consensus InsightSM, Consensus CatalystSM
and Consensus FoundationSM Services are aimed at providing solutions that ensure technical implementations fully support a client's business strategy.

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