

BROADER RESEARCH COMMUNITY A SOUTH DAKOTA ADVANTAGE

While using animals to produce human antibodies may have sounded like a work of science fiction in the not-too-distant past, that's exactly what one South Dakota company – SaB Biotherapeutics, Inc. – is currently doing.

“We are using our unique platform technology called diversitAB to produce fully human antibodies currently being tested in human clinical trials to treat Middle East Respiratory Syndrome (MERS-CoV) and Mycoplasma,” said Eddie Sullivan, President and CEO at SaB Biotherapeutics.

“When a foreign organism or even part of a human cancer cell is injected into the cattle, they produce an antibody response to the injection and produce fully human antibodies that can be extracted and purified from the cattle and placed in a human patient.”

Antibody therapeutics have a worldwide market of more than \$80 billion per year, but what makes SaB Biotherapeutics' system unique is that the animals produce fully human antibodies from the entire human antibody germ line sequences, which makes them more diverse than any other transgenic animal system.

Additionally, the sheer size of cattle offers an advantage in the volume of antibodies that can be produced from a single animal.

Sullivan says that being in an area with large agricultural resources is an excellent advantage for a company like SaB Biotherapeutics.

“South Dakota is a great place to conduct biomedical research. This area has a number of other organizations that are involved in applications of genetically engineered animals, and being a part of the broader research community is also an advantage,” Sullivan said. “The State of South Dakota – including the Governor and the Governor's Office of Economic Development – has helped ensure this technology continues to move forward, and the public is very supportive of research in all sectors.”

For more information, please visit www.sabbiotherapeutics.com.



EDDIE SULLIVAN
SAB BIOTHERAPUTICS
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GOVERNOR'S OFFICE OF ECONOMIC DEVELOPMENT