



PRESS RELEASE

GlycoVaxyn's *Staphylococcus aureus* Bioconjugate Vaccine Candidate Protects Mice Against Invasive *S. aureus* Infection

- *Presentation at the 51st Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC)*

Chicago, Sept. 16, 2011 – GlycoVaxyn AG, a leader in the development of innovative vaccines, today announced an abstract to be presented on a glycoprotein vaccine based on recombinant DNA technology to prevent *Staphylococcus aureus* infection at the [51st Interscience Conference on Antimicrobial Agents and Chemotherapy \(ICAAC\)](#), September 17 to 20, 2011, in Chicago. The study demonstrates that a glycoprotein made by *in vivo* conjugation of *S. aureus* capsular polysaccharides to various antigen carrier proteins, using GlycoVaxyn's proprietary "bio-conjugate" technology, can induce functional antibodies in several animal models. The data will be presented during a poster session at 11:15 a.m. to 1:15 p.m. CDT on September 18.

GlycoVaxyn's bio-conjugate technology employs well-understood recombinant DNA techniques to modify *E. coli* bacteria to reproducibly manufacture specific glycoproteins. The technology enables almost any bacterial polysaccharide to be conjugated to almost any bacterial protein. The technology has the potential to improve manufacturing efficiency, lower cost and target challenging pathogens, such as *S. aureus*, compared to the chemistry-based technology used for conjugate vaccines today.

The investigators ([Abst. # G1-761](#)) manufactured glycoproteins in *E. coli* cells by enzymatically transferring *S. aureus* capsular polysaccharides (CP5 and CP8) to various bacterial protein antigens. The glycoproteins generated functional antibodies against both of the two polysaccharides and the protein antigens. Antibodies derived from vaccinated animals promoted killing of *S. aureus* in an *in vitro* opsonophagocytic killing assay. Active immunization of mice with different glycoproteins significantly reduced *S. aureus* bacteremia and protected mice against lethal pneumonia after challenge with different *S. aureus* strains. The study demonstrated that *in vivo* manufacture of glycoprotein molecules that include *S. aureus* capsular polysaccharide and protein antigens produce a vaccine against *S. aureus* that was both immunogenic and protective in preclinical studies.

“Since *Staphylococcus aureus* has become a very challenging pathogen because of increased bacterial resistance the availability of an effective vaccine against these bacteria would be an essential tool in the fight against these serious infections,” said Philippe Dro, chief executive officer of GlycoVaxyn. “Our platform recombinant DNA technology is designed to simplify the development and manufacture of conjugate bacterial vaccines and to expand the possible targets to challenging pathogens for which there are no vaccines available today. We have already demonstrated proof-of-concept of our approach in human volunteers with a glycoprotein vaccine candidate against *Shigella dysenteriae*. The data presented at this year’s ICAAC demonstrate that conjugate vaccines made in *E. coli* bacteria, genetically engineered to express both bacterial polysaccharides and protein antigens, is a feasible approach to develop a *S. aureus* vaccine. We look forward to advancing partnering negotiations on this program.”

About GlycoVaxyn

GlycoVaxyn is developing a portfolio of novel bio-conjugate vaccines against common severe bacterial infections produced with its unique, proprietary *in vivo* glycosylation platform. With this platform, the company can develop and produce immunogenic glycoproteins in a simplified biological process that circumvents many of the challenges and uncertainties involved in currently used methods. In addition to the clinical stage *Shigella* vaccine, lead programs in preclinical stage are aimed at the prevention of hospital acquired *Staphylococcus aureus* infections, as well as pneumococcal invasive diseases and meningococcal group B meningitis. For further information, visit www.glycovaxyn.com.

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