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Clinical Hold Continues

Dynavax's Heplisav Hits Endpoint in HBV Trial

By Trista Morrison
Staff Writer

Dynavax Technologies Corp. and partner Merck & Co. Inc. said their Phase III trial of hepatitis B vaccine Heplisav met its primary endpoint of inducing a noninferior antibody response compared to GlaxoSmithKline plc's marketed hepatitis B vaccine, Engerix-B.

Top-line data demonstrated that 95 percent of the 1,819 patients receiving a two-dose regimen of Heplisav developed HBV antibodies, compared to 81.1 percent of the 608 patients receiving a three-dose regimen of Engerix-B. Additional details will be presented at an upcoming conference.

During a conference call, Dynavax President and CEO Dino Dina called the results "in line with our expectations,"

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GSK Pays $15M Milestone

Tolerx Seeks to Change Diabetes Treatment with Otelixizumab

By Donna Young
Washington Editor

Cambridge, Mass.-based Tolerx Inc. is wagering that its experimental drug otelixizumab (TRX4) will be the first product to change the course of Type I diabetes since the first administration of insulin in humans in 1922.

Tolerx said Wednesday that the first patient has been dosed with otelixizumab in a Phase III trial, which triggered a $15 million milestone payment to the privately held firm from its partner GlaxoSmithKline plc. London-based GSK entered into a development and commercialization deal last October with Tolerx that potentially could be worth $760 million for the Massachusetts-based firm. (See *BioWorld Today*, Oct. 24, 2007.)

Otelixizumab, a humanized anti-CD3 monoclonal anti-

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NEWCO NEWS

Sea Lane Biotechnologies Describes New 'Surrobodies'

By Anette Breindl
Science Editor

In the July 29, 2008, online edition of the *Proceedings of the National Academy of Sciences*, researchers from biotechnology start-up Sea Lane Biotechnologies and colleagues from the Scripps Research Institute reported on what they called "a potential new class of therapeutics."

The creations, termed "surrobodies" by their makers, combine a regular antibody heavy chain with a so-called surrogate light chain that is used as a quality control mechanism during B cell development.

"Because of the success of antibody libraries, people

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ESBATech's Series B Adds $22M for Antibody Fragment Pipeline

By Jennifer Boggs
Assistant Managing Editor

Two years after a $41 million Series B investment for ESBATech AG, the Swiss firm extended the round to bring in an additional CHF23 million (US$22 million) to support ongoing work with its antibody fragment pipeline, including a lead program targeting TNF-alpha for ophthalmic indications.

To date, ESBATech, of Zurich, Switzerland, has brought in about $86 million from a pool of global investors. The latest round, expected to carry the company to around mid-2010, included investments from San Francisco-based SV Life Sciences; Cambridge, Mass.-based Clarus Ventures; Zug, Switzerland-based HBM BioVentures and HBM BioCapital; Basel, Switzerland-based Novartis Bioventures; and BioMedinvest and VI Partners, also of Zug.

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Surrobodies

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have decided to use all sorts of alternative scaffolds" to improve on their therapeutic qualities, senior author Richard Lerner, president of the Scripps Research Institute, told *BioWorld Today*. In their paper, Lerner and his colleagues use the surrogate light chain as one such scaffold.

B cells generate enormous antibody diversity by rearranging the DNA segments that code for heavy chains during development. But the resulting chains, Lerner said, "could be great or imperfect" if their structure makes them somehow unable to get to the cell membrane.

The surrogate light chain, Lerner said, is "half of a regular . . . light chain with two peptide extensions" that functions as a quality control mechanism, helping to distinguish heavy chains that clump up or otherwise are unable to function from those that ultimately will be added to the body's mature antibody repertoire.

The researchers were able to combine that surrogate light chain with heavy chains, making a combinatorial library of surrobodies, including surrobodies whose surrogate light chains and heavy chains bound avian influenza virus.

Lerner said he sees several potential advantages of surrobodies over conventional antibodies in medical terms. For one thing, because they consist of an extra part – the peptide sequence – in addition to light and heavy chains, the diversity that can be engineered into them is that much higher. But, he added, he believes that "the real opportunity is in the peptide tails."

Those tails, he said, can be used in two ways. For one thing, combining the binding power of the tails with those of the heavy and light chains could lead to "enormously tight binding." Examples of such high-affinity surrobodies are described in the *PNAS* paper.

The other possibility, Lerner said, is that engineering the tails can give the antibodies "functions beyond what antibodies usually do." Two examples he named were to give the tails killing functions, or to enable them to penetrate cells, possibly leading to intracellular antibodies.

Lerner also pointed out that from a business perspective, the surrobodies have another advantage: "IP-wise, they are not antibodies," he said.

The IP on surrobodies is held by Menlo Park, Calif.-based start-up Sea Lane Biotechnologies LLC. Michael Horowitz, Sea Lane general counsel and CEO, who is a co-author on the *PNAS* paper, told *BioWorld Today* that the company considers itself "an antibody engineering company. We have three types of uncommitted, world class, fully human antibody libraries: first, a cutting-edge synthetic library; second, a comprehensive bone marrow-derived library; and third, a semi-synthetic collection."

In addition, he said, the company has an "alternative display system and vaccine platform [that] present both clinical and intellectual property advantages."

Horowitz said those libraries have generated leads for all of the targets the company is pursuing, but he was mainly mum on exactly what those targets are. "Our business plan is confidential," he noted. "We only disclose those things we publish."

One disease the company has published on is avian influenza. In a paper in the April 22, 2008, issue of *PNAS*, the company, with collaborators from Mount Sinai School of Medicine and Turkish Yil University, described using samples from survivors of the 2005/2006 avian influenza outbreak to generate a comprehensive library of bone marrow-derived antibodies to the H5N1 avian influenza virus.

Sea Lane was founded in late 2005, and has been "growing steadily since then," Horowitz said. The employee count currently stands at 20. The company is funded by VC firm Selby Life Sciences, and Horowitz said that it currently has "no additional capital needs," though he added that "we always explore opportunities to enhance our investors' value." ■

OTHER NEWS TO NOTE

• **Discovery Laboratories Inc.**, of Warrington, Pa., said that it has made significant progress in addressing key remaining requirements identified by the FDA to gain marketing approval of Surfaxin (lucinactant) for the prevention of respiratory distress syndrome in premature infants. Those key requirements are a Surfaxin biological activity test and reducing lipid-related impurities in Surfaxin active pharmaceutical ingredients. Discovery said it expects to submit a complete response in September.

• **Eurand NV**, of Dayton, Ohio, said that Eurand Inc. and **UCB Inc.**, of Smyrna, Ga., have settled long-running litigation concerning a 1999 development, license and supply agreement between the two companies for a sustained-release formulation of methylphenidate hydrochloride co-developed by Eurand and currently marketed by UCB under the brand names Metadate CD and Equasym XL for the treatment of attention deficit hyperactivity disorder. The settlement is expected to close by Sept. 5. UCB will pay Eurand a total of $35 million: $25 million at closing and $5 million plus interest at the first anniversary of the closing, and $5 million plus interest at the second anniversary of the closing.

• The **FDA** said it has approved the seasonal influenza vaccines that include new strains of the virus likely to cause flu in the U.S. during the 2008-2009 season. The six vaccines and their manufacturers are Afluria (CSL Ltd.), Fluarix (GlaxoSmithKline plc.), FluLaval (ID Biomedical Corp.), FluMist (MedImmune Vaccines Inc.), Fluvirin (Novartis AS) and Fluzone (Sanofi Pasteur Inc.). The FDA said it changed all three strains for this year's influenza vaccine – an unusual occurrence, as usually only one or two strains are updated from year to year. The strains are an A/Brisbane/59/2007 (H1N1)-like virus, an A/Brisbane/10/2007 (H3N2)-like virus, and a B/Florida/4/2006-like virus.