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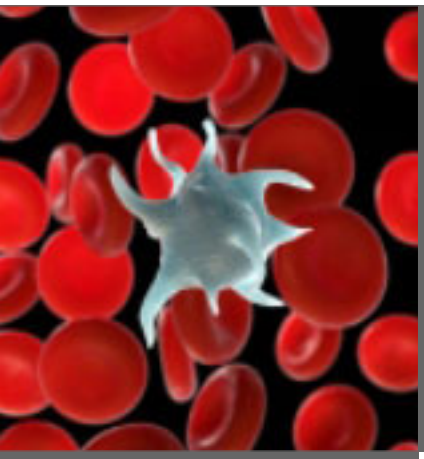

Eyeing upside in second indication

Tavalisse price, strategies still to come as Wall Street cheers Rigel victory in ITP

By Randy Osborne, Staff Writer

With FDA approval secured for Rigel Pharmaceuticals Inc.'s Tavalisse (fostamatinib), company backers sought details about price and positioning, but heard they must wait for answers.

Chief commercial officer (CCO) Eldon Mayer said he would "rather address lot of these detailed questions about payer strategy, market access strategy and all of that at a future time," as South San

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Tetherex takes in $50M to back phase II trials of SEL-K2

By Michael Fitzhugh, Staff Writer

Tetherex Pharmaceuticals Inc., a rare Oklahoma City-based biotech, raised $50 million in a private placement of series B stock led by MPM Capital. The funds will support a phase II trial of the company's lead candidate, SEL-K2, for the potential treatment of venous thromboembolism (VTE) in patients undergoing total knee replacement surgery and a second midstage study in Crohn's disease, another inflammatory indication, or cancer. The financing follows an initial raise of about $4.4 million in convertible debt in 2014.

Scott Rollins, Tetherex's CEO and board chair, told *BioWorld* that the P-selectin glycoprotein ligand-1 (PSGL-1) inhibitor could have multiple applications, and a broad reach. Rollins formerly led Selexys Pharmaceuticals Corp. and was a co-founder of Alexion Pharmaceuticals Inc., a company that to this day remains reliant on his most successful discovery yet, the Oklahoma City-generated hit, Soliris (eculizumab).

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U.S. biodefense is riding on half an aircraft carrier

By Mari Serebrov, Regulatory Editor

Despite the growing public health threats of pandemics, disastrous weather events and bioterrorism, the U.S. annually spends about half of what it costs to build an aircraft carrier on developing medical countermeasures, maintaining a stockpile of just-in-case diagnostics and treatments, and preparing and responding to threats that materialize around the world.

"You can't do much with half an aircraft carrier. It won't float, and it won't fight," Assistant Secretary for Preparedness and Response (ASPR) Robert Kadlec told a House Appropriations subcommittee Wednesday.

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AACR 2018

The holy 'Grail' of cancer: Early detection of tumors

By Brian Orelli, Staff Writer

CHICAGO – Attendees of the American Association for Cancer Research that stayed toward the end of the last full day of the meeting were handsomely rewarded with initial data from Grail Inc., which is still enrolling patients in its 15,000-participant Circulating Cell-Free Genome Atlas. Early results showed that by combining signals from cancer patients using cell-free DNA samples processed with whole genome sequencing, a targeted 507 gene panel assay and a whole genome bisulfite assay, it was possible to develop a test with greater than 99 percent specificity.

See Grail, page 6

Alphamab's bispecific antibody gets clinical approval in China

By Elise Mak, Staff Writer

HONG KONG – China's Suzhou Alphamab Co. Ltd. has obtained the IND approval from regulators for its HER2 bispecific antibody, KN-026. The phase I trials will commence later this year.

Targeted at HER2-positive breast cancer and gastric cancer, KN-026 is developed based on Alphamab's charge repulsion improved bispecific, or CRIB, platform with the same format and size of natural immunoglobulin G antibody.

The phase I study in China is expected to recruit 15 to 20 subjects in the dose-escalation portion, "then it will be expanded to 40 people," Junhong Zhang, vice president at Alphamab, told *BioWorld*.

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Aussie biotechs to benefit from strategic intervention partnering program

By Tamra Sami, Staff Writer

PERTH, Australia – Australia's Medical Technologies and Pharmaceuticals Industry Growth Centre (MTPConnect) and Biopacific Partners have launched a new program that will work with small Australian biotechs to better prepare them for partnering with big pharma.

The SME Strategic Intervention program will provide free-of-charge advice to a targeted cohort of Australian biotechs using Biopacific Partners' network of multinational companies. Serving as a sort of matchmaker, multinational companies

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Alphamab

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The Suzhou-based biopharma company filed a clinical registration application for KN-026 in China in August 2017 and got the regulatory green light eight months later. KN-026 was included in the "Major New Drug Innovation" project under the 13th Five-Year Plan of China, which may explain the speedy approval.

"The regulatory agency well recognized the quality and innovation of this bispecific biologic," said Xu Ting, chairman and CEO of Alphamab. "We are quite excited about the opportunity to develop this improved therapy with better efficacy and lower costs for millions of cancer patients."

With China's approval under its belt, Alphamab is planning to file an IND application to the U.S. FDA next, as it's also looking to enter the U.S. and Japanese markets.

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>
> Junhong Zhang
> Vice President, Alphamab

"In the preclinical trials, KN-026 was proven as active as the trastuzumab plus pertuzumab combination; it even had better efficiency than the combination in many models," said Zhang, referring to the drugs marketed as Herceptin and Perjeta, respectively, by Roche Holding AG's Genentech unit.

"When it comes to the molecular form, KN-026 is the same as the traditional monoclonal antibodies, and it keeps the complete structure of Fab and the Fc functions," she added.

The bispecific antibody has shown an excellent preclinical profile in binding affinity, efficacy, safety and pharmacokinetics. It also demonstrated better efficacy activity in about 40 percent of HER2-positive tumor cell lines and multiple in vivo tumor models, as compared to the combination of trastuzumab and pertuzumab.

Currently, the global annual sales of trastuzumab and pertuzumab account for about $10 billion, which means KN-026 could be a blockbuster drug for Alphamab.

And the chemistry, manufacturing and control (CMC) process for KN-026 is robust, consistently with the titer of 3+ g/L for multiple large-scale batches.

"Due to the challenges in product pharmacokinetics and CMC scale-up, the progress of bispecific biologics development has been slow in the past three decades, with only two marketed bispecific antibodies worldwide," said Xu. "Alphamab has developed a cutting-edge bispecific platform and validated it through the development of KN-026. We also look forward to partnering with pharma and biotech companies on this leading platform."

As single-target drugs, monoclonal antibodies can inhibit tumor growth, though often show limited efficacy. The encouraging results from combining antibody drugs such as trastuzumab and pertuzumab showed that better efficacy can be achieved through inhibiting multiple targets due to synergy effects, hence the advance of bispecifics.

The CRIB platform, on which KN-026 is based, is an in-house innovation of Alphamab that has helped bring the drugmaker to the forefront in drug discovery. It provides a stable scaffold to generate bispecific antibody mimics that target different epitopes in a single drug. With that platform, the company can use a single cell to produce two antibodies that may generate two-drug combinations while reducing the overall cost of drug development.

"We are the only company in the world doing this," Xu told *BioWorld*.

The company is set to develop more bispecific antibodies based on that in-house technology. Out of the seven innovative oncology candidates in its pipeline, three are bispecific.

Founded in 2009, Alphamab has transformed itself into a biosimilar development engine from contract research activities. With multiple in-house platforms in protein engineering, antibody screening and bispecifics, Alphamab and its subsidiaries have created a pipeline of more than 20 innovative biologics programs in oncology and several other areas.

Xu said speed is of utmost importance for biopharmaceutical companies to serve the vast Chinese market. With that in mind, Alphamab identifies six to eight drug candidates every year and moves one or two along the development pathway on its own. (See *BioWorld Today*, July 14, 2014.)

KN-026 is Alphamab's second candidate in its oncology pipeline that sees the fastest progress following its PD-L1 antibody, KN-035, which is entering phase Ib/IIa trials in China. ♦

Other news to note

Probiogen AG, of Berlin, signed a second clinical immuno-oncology development and manufacturing agreement with **Tizona Therapeutics Inc.**, of South San Francisco. Under the terms of the agreement, Probiogen is developing a stable cell line, followed by process development and GMP clinical manufacturing for Tizona's lead antibody drug candidate. Further details were not disclosed.

Prota Therapeutics Pty Ltd., of Melbourne, Australia, said it partnered with Chr. Hansen, a bioscience company, to manufacture and supply pharmaceutical quality LGG probiotic strain, *Lactobacillus rhamnosus*, initially for the treatment of peanut allergy. Prota's oral immunotherapy aims to treat food allergies using its probiotic and peanut oral immunotherapy, or PPOIT, treatment, designed to reprogram the immune system's response to peanuts and eventually develop tolerance.