



FOR IMMEDIATE RELEASE

EMERGENT BIOSOLUTIONS TO ACQUIRE SPECIALTY VACCINES COMPANY PAXVAX

- Adds two revenue-generating FDA-licensed vaccines that protect against cholera and typhoid fever, both with dual-market potential
- Broadens development pipeline with an adenovirus 4/7 vaccine funded by the DoD for military requirements as well as other programs addressing emerging infectious diseases for both commercial and government markets
- Expands sales capabilities with the addition of global specialty salesforce and marketing and distribution partners focused on the travelers market
- Establishes international manufacturing footprint and provides opportunities for growth of CDMO business with European-based cGMP biologics facilities
- All-cash transaction of \$270 million
- Expected to generate revenues of \$70 million to \$90 million in 2019 and be accretive by year-end 2019

GAITHERSBURG, Md., August 9, 2018—Emergent BioSolutions Inc. (NYSE: EBS) announced today that it has entered into an agreement to acquire PaxVax, a company focused on specialty vaccines that protect against existing and emerging infectious diseases, for an all-cash consideration of \$270 million. PaxVax is majority owned by an affiliate of Cerberus Capital Management, L.P.

Upon the closing of the transaction, Emergent will acquire:

- Vivotif® (Typhoid Vaccine Live Oral Ty21a), the only oral vaccine licensed by the U.S. Food and Drug Administration (FDA) for the prevention of typhoid fever, a potentially severe and life-threatening infection caused by the bacterium *S. Typhi*. Vivotif is licensed for sale in 27 countries.
- Vaxchora® (Cholera Vaccine Live Oral), the only FDA-licensed vaccine for the prevention of cholera caused by *Vibrio cholerae serogroup O1*, a potentially serious intestinal disease
- An Adenovirus 4/7 vaccine candidate being developed for military personnel under contract with the U.S. Department of Defense (DoD) and additional clinical-stage vaccine candidates targeting Chikungunya and other emerging infectious diseases
- European-based cGMP biologics manufacturing facilities
- Approximately 250 employees including those in research and development (R&D), manufacturing, and commercial operations with a specialty salesforce

“The acquisition of PaxVax solidifies our position as a global leader in the public health threats market, expands our portfolio of only-in-class products, advances our growth strategy, and progresses us towards the achievement of our 2020 financial and operational goals,” said Daniel J. Abdun-Nabi, CEO of Emergent BioSolutions. “Importantly, we believe this acquisition will contribute incremental 2019 revenues of \$70 million to \$90 million and be accretive by the end of 2019. We look forward to continuing to drive growth in the business by building on the successes of PaxVax in the travelers market, leveraging our core competencies in government contracting and manufacturing, and advancing the development pipeline while remaining disciplined in our approach to R&D.”



Commenting on the acquisition, Abigail Jenkins, senior vice president and head of the Vaccines and Anti-Infectives Business Unit, said, "We are excited to capitalize on this unique opportunity to acquire a portfolio of marketed vaccines supported by established commercial capabilities and global distribution partners that will enable us to diversify our customer base and expand our reach internationally. We look forward to merging the teams and growing our vaccines business to positively impact public health."

Strategic Rationale

This transaction supports the company's strategy to grow through the acquisition of revenue-generating products and businesses that align with its focus on public health threats and emerging infectious diseases. The addition of Vivotif and Vaxchora, both FDA-licensed vaccines, will diversify the company's portfolio of products with dual-market potential. In May 2017, the Centers for Disease Control and Prevention (CDC) published its recommendation for the use of Vaxchora in adults traveling to an area of active cholera transmission, which is defined as an area within a country where cholera is regularly found or where a cholera epidemic is ongoing. Currently being distributed in the commercial market, these vaccines also have the potential to address governments' needs to protect their military forces.

This acquisition will broaden Emergent's development pipeline with the addition of a next generation adenovirus 4/7 vaccine being developed under contract with the DoD. This vaccine candidate is intended to meet the government's stated requirement of protecting the U.S. military against adenovirus types 4 and 7, which are common causes of acute respiratory disease. The vaccine pipeline also includes a Phase 2 candidate to address Chikungunya, a viral disease spread to humans by infected mosquitoes that can cause severely debilitating joint pain, as well as additional clinical-stage products with the potential for partnering that address a number of emerging infectious diseases.

Through this acquisition, Emergent will expand its sales capabilities and supplement its core competencies in government contracting with the addition of a global commercial salesforce and marketing and distribution partners focused on the travel vaccines market. The company will also strengthen its manufacturing capabilities with the acquisition of European-based cGMP biologics facilities, expanding its international operations and enhancing opportunities for contract development and manufacturing.

Transaction Approvals

This transaction, which is subject to customary closing conditions, including antitrust regulatory approval, is expected to close in the fourth quarter of 2018.

Covington & Burling LLP acted as legal counsel for Emergent. Dechert LLP acted as legal counsel for PaxVax and Cerberus, and Morgan Lewis & Bockius LLP acted as legal counsel for PaxVax.

Conference Call and Webcast

Emergent will host a conference call to discuss this acquisition on August 9, 2018 at 8:00 a.m. eastern. The conference call will be accessible by dialing (855) 766-6521 (US/Canada) or (262) 912-6157 (International) and providing conference ID: 6479897. The call will also be webcast, accessible from the company's website at www.emergentbiosolutions.com, under "Investors."

A replay of the conference call will be accessible, approximately one hour following the conclusion of the call, by dialing (855) 859-2056 (US/Canada) or (404) 537-3406 (International) and using conference ID: 6479897. The replay will be available through August 23, 2018 on the company's website www.emergentbiosolutions.com, under "Investors."

About Vivotif® (Typhoid Vaccine Live Oral Ty21a)

Vivotif is a live attenuated typhoid fever vaccine for oral administration. It is the only oral vaccine indicated for use against *Salmonella typhi*, the most prevalent of the typhoid fever-causing bacteria. The vaccine is indicated for adults and children over the age of six and has an established track record for safety, having been on the market for more than 20 years. An estimated 21 million people develop typhoid fever each year. If untreated, typhoid fever persists for three weeks to one month. Death occurs in between 10 percent and 30 percent of untreated cases. Not all recipients of Vivotif will be fully protected against typhoid fever. Vaccinated individuals should continue to take personal precautions against exposure to typhoid organisms. The most common undesirable effects reported during prior clinical trials concern the gastrointestinal tract: abdominal pain, nausea, diarrhea and vomiting. Reported symptoms resolved spontaneously within a few days. Similar results have also been obtained in post-marketing surveillance.

For full Prescribing Information, please visit www.vivotif.com.

About Typhoid Fever

Typhoid fever is a systemic, febrile disease contracted by ingesting contaminated food or water. It is unique to humans and commonly found where sanitation is deficient. Millions of people are affected by typhoid fever annually, especially people living in low- and middle-income countries and international travelers. Typhoid fever is caused by infection with the bacteria *Salmonella enterica serovar Typhi*. *S. Typhi* is spread from infected to susceptible people via the fecal-oral transmission route. Important risk factors for infection with *S. Typhi* include lack of access to improved sanitation and clean drinking water. A small proportion of infected individuals (2-5%) in endemic regions will develop a chronic gall bladder infection and serve as asymptomatic reservoirs of *S. Typhi*, potentially infecting contacts for years. Unfortunately, antimicrobial resistance is growing among *S. Typhi* strains, undermining the effectiveness of many existing antibiotic treatment options and underscoring the importance of immunization.

The CDC's Advisory Committee on Immunization Practices recommends vaccination against typhoid for travelers to areas where there is a recognized risk for exposure to *S. Typhi*, persons with intimate exposure (e.g., household contact) to a documented *S. Typhi* chronic carrier, and microbiologists and other laboratory workers routinely exposed to cultures of *S. Typhi* or specimens containing this organism or who work in laboratory environments where these cultures or specimens are routinely handled.

About Vaxchora® (Cholera Vaccine, Live, Oral)

Vaxchora is an oral vaccine indicated for active immunization against disease caused by *Vibrio cholerae* serogroup O1. It was approved by the FDA in June 2016 as the only vaccine available in the U.S. for active immunization against cholera. In May 2017, the CDC published the recommendation stating that Vaxchora should be used in adults traveling to an area of active cholera transmission.

For full Prescribing Information, please visit www.vaxchora.com.

About Cholera

Cholera, transmitted by ingestion of food and water contaminated with *Vibrio cholerae*, is an important cause of diarrhea that may be severe and life-threatening in some individuals. If untreated, death may result in 24 hours.¹ A recent report from the CDC suggests that the true number of cholera cases in the U.S. is at least 30 times higher than observed by national

surveillance systems.³ Non-vaccine intervention to prevent cholera infection is the avoidance of contaminated water and food, but studies have shown that 98 percent of travelers do not comply with these precautions when traveling.⁴

In May 2017, the CDC published its recommendation for the use of Vaxchora in adults traveling to an area of active cholera transmission, which is defined as an area within a country where cholera is regularly found or where a cholera epidemic is ongoing.

1. World Health Organization website. *Cholera Fact Sheet*. July 2015. <http://www.who.int/mediacentre/factsheets/fs107/en/>. Accessed September 2016.
2. Ali M, Nelson AR, Lopez AL, Sack DA. Updated Global Burden of Cholera in Endemic Countries. *PLoS Negl Trop Dis* 2015;9(6):e0003832.
3. Scallan E et al. Foodborne Illness Acquired in the United States –Major Pathogens. *Emerg Infect Dis*. 2011. <http://dx.doi.org/10.3201/eid1701.P11101>.
4. Kozicki M et al. Boil It, Cook It, Peel It or Forget It': Does This Rule Prevent Travellers' Diarrhea? *Int J. Epidemiology*. 1985; 14(1):169-72.

About Emergent BioSolutions

Emergent BioSolutions Inc. is a global life sciences company seeking to protect and enhance life by focusing on providing specialty products for civilian and military populations that address accidental, intentional, and naturally occurring public health threats. Through our work, we envision protecting and enhancing 50 million lives with our products by 2025. Additional information about the company may be found at emergentbiosolutions.com. Find us on LinkedIn and follow us on Twitter @emergentbiosolu and Instagram @life_at_emergent.

Safe Harbor Statement

This press release includes forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Any statements, other than statements of historical fact, including statements regarding the expected closing of the transaction, the potential opportunities and financial impact of the transaction, and any other statements containing the words "believes," "expects," "anticipates," "intends," "plans," "targets," "forecasts," "estimates" and similar expressions in conjunction with, among other things, discussions of the amount and timing of additional revenue expected to be generated by PaxVax's products and the timing of accretion by such products, the company's outlook, financial performance or financial condition, growth strategy, product sales, government development or procurement contracts or awards, manufacturing capabilities, product development regulatory approvals or expenditures are forward-looking statements. These forward-looking statements are based on our current intentions, beliefs and expectations regarding future events. We cannot guarantee that any forward-looking statement will be accurate. Investors should realize that if underlying assumptions prove inaccurate or unknown risks or uncertainties materialize, actual results could differ materially from our expectations. Investors are, therefore, cautioned not to place undue reliance on any forward-looking statement. Any forward-looking statement speaks only as of the date of this press release, and, except as required by law, we do not undertake to update any forward-looking statement to reflect new information, events or circumstances.

There are a number of important factors that could cause the company's actual results to differ materially from those indicated by such forward-looking statements, including uncertainties as to the satisfaction of closing conditions with respect to the transaction, including the timing and receipt of third party and regulatory approvals related to the transaction; our ability to successfully integrate the business and realize the benefits of the transaction, including our ability to continue the momentum of the sales of PaxVax's products; availability of funding for government grants and contracts; whether anticipated synergies and benefits from the

acquisition are realized within expected time periods, if at all; our ability to utilize our manufacturing facilities; our ability and the ability of our contractors and suppliers to maintain compliance with current good manufacturing practices and other regulatory obligations; general industry conditions and competition; general economic factors, including interest rate and currency exchange rate fluctuations as we continue to expand internationally; the impact of pharmaceutical industry regulation in the United States and internationally; new products and patents attained by competitors; the company's ability to accurately predict future market conditions; and financial instability of international economies and sovereign risk.

The foregoing sets forth many, but not all, of the factors that could cause actual results to differ from our expectations in any forward-looking statement. Investors should consider this cautionary statement, as well as the risk factors identified in our periodic reports filed with the SEC, when evaluating our forward-looking statements.

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