

Glitches hamper rollout of Moderna's vaccine

Cambridge biotech says problems related to distribution issues beyond its control

By Jonathan Saltzman
GLOBE STAFF

Moderna's COVID-19 vaccine may be a triumph of biotechnology, but its rollout has hit snags lately, from California to Maine.

They illustrate the challenges facing President Biden, who promised before his inauguration Wednesday that the government will administer 100 million doses of coronavirus vaccine dur-

ing the first 100 days of his administration.

That won't be easy, if recent events are any indication. On Sunday, California's state epidemiologist recommended that the state pause the distribution of more than 330,000 doses of the Cambridge company's vaccine after a "higher than usual" number of people showed signs of a possible severe allergic reaction.

Two days later, health officials in Maine and Michigan said more than 16,000 doses spoiled because of temperature control problems during delivery and would probably have to be disposed of.

And on Wednesday, New York Mayor Bill de Blasio said the city was rescheduling 23,000 vaccine appointments because of a supply shortage. He said Moderna and Texas-based distributor McKesson Corporation had told city officials that 103,000 doses expected to arrive Tuesday will be delayed for a couple of days, according to Bloomberg

News.

McKesson, which has a government contract to deliver the Moderna vaccine, confirmed in a statement Wednesday that "certain deliveries" that went out Sunday arrived colder than minus-13 degrees Fahrenheit, the lower end of the recommended temperature range. The company blamed the problem on gel packs that were found to be too cold.

McKesson is replacing those doses as well as others slated for shipment that were held up because of the same problem. The firm said it has "taken steps to prevent this from occurring in

the future."

Ray Jordan, a Moderna spokesman, said the company couldn't comment on most of the problems because they were distribution matters that involved the federal program Operation Warp Speed and McKesson. The government has so far ordered 200 million doses of Moderna's vaccine.

"Our contract has us delivering batches to the US government, and then they do the final delivery, working with McKesson as their primary strategic distributor," said Jordan. Moderna
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GLOBE STAFF PHOTO ILLUSTRATION, ADOBE STOCK

Recorded Future TRACKS PRESENT DANGERS

The Somerville company's search engine looks for potential cyberattacks and terrorist activity. It's no surprise that business is good.

SCOTT KIRSNER
INNOVATION ECONOMY



Geopolitical chaos, cyberattacks, and domestic terrorism make for anxiety-producing headlines these days. But they're fueling the growth of a Somerville company with a name that sounds like something from science fiction: Recorded Future.

The privately held company grew 50 percent in 2020 and chalked up record revenues, according to chief executive

Christopher Ahlberg.

Think of Recorded Future as a mash-up of Google and Jack Ryan — a search engine focused on nasty stuff transpiring or being planned around the world. Whether a criminal gang or a hostile government is plotting a cyberattack, or terrorist groups or military contractors are moving around somewhere, Recorded Future aims to "index all this stuff and make it analyzable," Ahlberg says.

By "all this stuff," he means discussions happening and stolen data being posted in public Web forums and on the "dark Web," hidden Internet servers that, by design, are difficult to access.

With more than 500 employees "who do nothing but intelligence," as Ahlberg puts it, the company, founded in 2009, generated nearly \$150 million in revenue last year. Last February, it inked a \$50 million contract with the US Cyber Command to provide an array of federal agencies access to the company's software platform.

Ahlberg says the company has "actively worked on analysis" for its clients

related to the violent attacks at the US Capitol, this week's inauguration, and what might come next — though he declines to supply specifics.

A big chunk of Recorded Future's business is providing information about cyberattacks targeting government agencies or companies — including troves of stolen data that may be for sale in underground marketplaces. That has been a busy landscape recently, with the hack of network management software from the Texas company SolarWinds that may have purloined sensitive data from a range of federal agencies and major tech companies. (US intelligence agencies have pinned it on the Russians.) Ahlberg refers to it as a "supply chain hack," in which the bad guys seek access to a system or piece of software used by a supplier to the company or agency they're trying to hack.

The SolarWinds hack "was likely happening throughout 2020, even though it came out toward the end," says Roman Sannikov, director of cyber-

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Key site sold near Assembly Row

BioMed Realty plans 1.3m square feet of labs, offices

By Tim Logan
GLOBE STAFF

Developers with a focus on building lab space keep scooping up sites all over Greater Boston, with the latest deal being for nine acres near Assembly Row.

BioMed Realty says it plans to build a 1.3 million-square-foot lab-and-office campus where a mid-size office building and parking lots now stand. Deeds filed in Middlesex County indicate

the real estate firm paid \$163 million for the site.

The deal, announced Tuesday, was first disclosed last summer, when BioMed sought approvals from Somerville to change plans for the site — then known as XMBLY — from a mixed-use project that included apartments into something suited for life-sciences companies. It closed on the property just before Christmas, and BioMed is now preparing a proposal for the first phase of the project. The company aims to start construction later this year.

"Our vision for the Assembly Square location is to create a premier innovation campus where
ASSEMBLY, Page D4

Study: Pfizer vaccine seems to be effective on variant

By Andrew Joseph
STAT

The COVID-19 vaccine from Pfizer-BioNTech appears to work just as well against a fast-spreading variant of the coronavirus first identified in the United Kingdom as it does against earlier forms of the pathogen, the companies reported in a study Wednesday.

The paper from company scientists, which has not yet been peer-reviewed, is a welcome signal that existing vaccines don't seem to be weakened by the variant in question, dubbed B.1.1.7. Already, scientists had tested the Pfizer vaccine against one of the key mutations in the variant and found the immunization's neutralization power was not affected.

Scientists are also testing vaccines against other variants of concern, which contain different mutations that in lab experiments have shown they can, to some extent, help the virus evade existing antibodies that recognize and target the virus. These mutations appear in

"The efficacy of the vaccine is so good and so high that we have a little bit of a cushion."

ROCHELLE WALENSKY,
Biden administration director of CDC

variants first seen in South Africa and Brazil, which also look to be more transmissible than earlier iterations of the SARS-CoV-2 virus. The variants in South Africa and Brazil have raised concerns that they can more easily re-infect people who have already recovered from COVID-19 and have antibodies against the virus, though more studies — including whether there's some impact on how well vaccines work — are ongoing.

In the new study, researchers engineered what are called pseudoviruses (these are more practical to work with in lab experiments than actual live specimens of dangerous viruses such as SARS-2) to have the full suite of mutations as B.1.1.7. They then tested blood taken from 16 people who had received the vaccine against the variant, and found it could neutralize the variant as well as it could an earlier form of the virus. "These data ... make it unlikely that the B.1.1.7 lineage will escape" protection from the vaccine, the researchers
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INSIDE



ENERGY

Work on Keystone XL pipeline halted D3

HEALTHCARE

Haemonetics acquires Calif. medical-device firm D2



BioMed, a Kendall Square life-sciences developer, is one of several that have been on buying sprees. Above is a rendering of what it plans in Somerville.

TALKING POINTS

HEALTH CARE

EAPPEN TAPPED AS BRIGHAM AND WOMEN'S INTERIM CHIEF



Mass General Brigham said on Wednesday that Dr. Sunil “Sunny” Eappen will serve as interim president of its Brigham and Women’s Hospital after the departure of its current president, Dr. Elizabeth Nabel, on March 1. Eappen, 54, has been the Boston hospital’s senior vice president of medical affairs and chief medical officer since July 2018. Nabel, Brigham and Women’s president since 2010, is leaving to pursue opportunities in the biotech sector. Mass General Brigham, the state’s largest health system, said a search for Nabel’s permanent successor will take several months. — LARRY EDELMAN

ADVERTISING

HILL HOLIDAY HAS A NEW CHIEF CREATIVE OFFICER

The Boston ad agency Hill Holliday has recruited Icaro Doria away from rival Havas to be its new chief creative officer. Doria will join IPG-owned Hill Holliday Feb. 1, filling a position that had been held for a decade by Lance Jensen. At Havas, Doria has been global chief creative officer at Havas Health & You, and he was previously chief creative officer at the company’s Arnold Worldwide group. The native of Brazil has worked with a wide range of well-known brands in his 25-year career, including Coca-Cola, Nike, and Diageo. In a note to clients, Hill Holliday chief executive Karen Kaplan called Doria “one of the most talented, optimistic and creative leaders in the business.” — JON CHESTO

COMMERCIAL BANKING

CHASE HIRES NEW DIRECTOR FOR VENTURE CAPITAL

JPMorgan Chase & Co.’s commercial banking arm has hired Skip Kelly to be managing director for its venture capital work, with a particular focus on strengthening the bank’s relationships with firms that invest in biotech and other life-sciences businesses. Kelly, who is based in Boston, is the latest former Silicon Valley Bank executive to join JPMorgan. In late 2019, the bank announced it was hiring several SVB executives as part of its push to do more with the venture capital and innovation economy. The Boston-based executives that were part of that hiring effort included Pamela Aldsworth and Dave Reich. — JON CHESTO

FINANCE

MORGAN STANLEY HAS ITS BEST YEAR ON RECORD

Morgan Stanley traders cashed in during the waning months of 2020 to round off the bank’s best year on record. The division beat analysts’ estimates as fourth-quarter equities revenue surged to cement the bank’s standing as the top stock-trading shop. It joined its closest peers, JPMorgan Chase and Goldman Sachs, in consolidating their standing on the top perch of Wall Street with the pandemic helping secure their lead over smaller rivals. — BLOOMBERG NEWS



TOURISM

HOPES FOR A BUSY EASTER TRAVEL PERIOD ARE DASHED

Airlines and hotel operators can write off the Easter travel season, even as COVID-19 vaccination rollouts pick up speed in many parts of the world, according to the largest provider of flight-booking software. “We don’t see a recovery at Easter, with similar levels to what we saw in 2020 — or 20 percent to 25 percent of what the industry had in 2019,” Decius Valmorbidia, president of the travel unit at Amadeus IT Group, said in an interview. Demand “will not be strong, and the recovery will be more toward summer,” he said. Yet European carriers are becoming fearful that a recovery will arrive too late even for summer, as highly infectious new viral strains prompt people to once again shelve their travel plans. — BLOOMBERG NEWS

AUTOMOTIVE

MERCEDES TO OFFER A SMALL ELECTRIC CAR THIS SPRING



Mercedes-Benz is taking on one of the most complex industry challenges with the rollout of its battery-powered EQA: selling small electric cars without a big profit squeeze. The brand’s first fully electric compact model will hit European showrooms this spring, flanking the mid-size EQC sport-utility vehicle and the EQV van, the Daimler AG unit said Wednesday. Prices in Germany start at \$57,734 and the vehicle offers 302 miles of range. — BLOOMBERG NEWS

AUTOMOTIVE

REGULATORS CHECK ONGOING PROBLEMS WITH FORD TAILGATES

US safety regulators are investigating complaints that a Ford pickup truck tailgate recall didn’t fix the problem. The National Highway Traffic Safety Administration says it has 11 complaints that a recall of power tailgates on 300,000 Super Duty pickups failed to rectify the issue. The agency says it also has received reports from Ford about unintended tailgate openings after the recall repairs were made. Ford recalled the F-250, F-350 and F-450 trucks in 2019 because the power tailgates could open while being driven. The defect allowed for the potential of unrestrained cargo tumbling from vehicles. The trucks are from the 2017 through 2020 model years. — ASSOCIATED PRESS

INSURANCE

UNITEDHEALTH'S EARNINGS DECLINE DUE TO COVID-19

UnitedHealth’s fourth-quarter earnings tumbled as costs from COVID-19 hit the health insurance provider, but results still easily beat expectations. Health care use rebounded in the final quarter of 2020 after the global pandemic kept people away from doctors’ offices and surgery centers when it first spread earlier last year. UnitedHealth also said Wednesday that its insurance business spent more in the quarter covering claims for COVID-19 testing and treatment. They accounted for 11 percent of all care activity, not counting prescriptions. That was up from 6 percent in the third quarter. Medical costs, by far the company’s largest expense, jumped 7 percent to more than \$42 billion in the fourth quarter. — ASSOCIATED PRESS



FINANCE

VANGUARD RAMPS UP FEE WAR IN ETFs

Asset managers hoping 2021 might bring some respite to the fee war are in for disappointment, if Vanguard Group’s latest exchange-traded fund is anything to go by. The \$7.1 trillion investment giant this week filed plans for the Vanguard Ultra-Short Bond ETF, which will track high-quality fixed-income securities and is expected to begin trading next quarter. The average cost of similar funds is about 0.22 percent, but Vanguard — whose low-cost approach helped it dominate ETF flows last year — is charging less than half that for the new actively managed offering. Its 0.10 percent expense ratio compares with 0.18 percent for the \$15.9 billion JPMorgan Ultra-Short Income ETF and 0.35 percent on the \$14.4 billion PIMCO Enhanced Short Maturity Active Exchange-Traded Fund (MINT). — BLOOMBERG NEWS

HOME PRODUCTS

P&G'S SALES, PROFIT TIED TO CONTINUED DEMAND FOR TOILET PAPER, DETERGENT



Procter & Gamble boosted its sales and profit outlook on expectations that surging at-home demand for its toilet paper and laundry detergent will continue, even as the rapid pace of growth took a slight dip in the latest quarter. The maker of Charmin, Tide, and other household staples now expects organic revenue to grow as much as 6 percent in fiscal 2021, an increase from the previous outlook of no more than 5 percent. P&G also sees core earnings per share rising as much as 10 percent, according to a statement Wednesday, up from a range of 5 percent to 8 percent. — BLOOMBERG NEWS

ROCKLAND TRUST BANK

Hunt for online threats is keeping Mass. firm busy

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crime and underground intelligence at Recorded Future. “People are posting [data] they purport to be from SolarWinds, and we are trying to ascertain that this is legitimate,” or whether it is fake information being posted to “mask involvement by nation-states,” Sannikov continues.

But beyond compromised networks and credit card theft, Recorded Future is increasingly finding that its customers want to know about what is being said in online forums that attract neo-Nazis, other extremist groups, and conspiracy theorists. As an example, Ahlberg says that telecommunications companies that use Recorded Future are interested in tracking online discussions that falsely link the emergence of the COVID-19 virus with 5G wireless communications. In Britain, the conspiracy theory led people to set fire to dozens of wireless towers last year.

Over the past year or two, Ahlberg says, Recorded Future’s customers, largely those in law enforcement and at intelligence agencies, are increasingly concerned about “threats that can lead to violence and disruption. So yes, we’re going to be doubling down on that.”

Where Recorded Future gets cagey is about how its product works. It does a lot of gathering (or “scraping”) of content from around the open Web, using software and humans to analyze it. But it also sometimes creates fictional personas to infiltrate closed groups and forums. That can get dicey, Sannikov explains, because “sometimes you have to make it seem you’re involved in criminal activity — like buying or selling” stolen information.

(Last year, the Department of Justice published some helpful guidelines on this kind of cloak-and-dagger activity: “Legal Considerations When Gathering Online Cyber Threat Intelligence and Purchasing Data from Illicit Sources.”)

But when it comes to gaining entry to groups organized around political activity, Sannikov says it can be easier, because “they’re trying to bring in as many people as possible” and “foment as much anger and chaos and violence on as grand a scale as possible, so you can’t create something that’s too locked-down.”

Sannikov says that Recorded Future is seeing from its own data sources that “some of these groups are organizing further demonstrations and protests. There’s certainly still a



CEO Christopher Ahlberg says his firm has worked on analyses for clients related to the attack on the Capitol.

lot of anger.”

He says the company is also noticing that foreign adversaries are doing what they can to amplify the discord. And they are seeing conspiracy theory-oriented groups like QAnon expanding digital footprints across Europe. “Unfortunately, this is not something that’s going to go away anytime soon,” he says.

Bad news for society, but good news for Recorded Future’s continued growth. Ahlberg says the company is closing in on 1,000 clients; it has chosen not to sell its product to US adversaries such as China, Russia, and Venezuela — and embargoed countries already included North Korea, Cuba, and Iran.

John Robb, an Acton security analyst who has consulted to the chairman of the Joint Chiefs of Staff, says there are lots of home-brewed tools for analyzing online information about terrorism, extremism, and other threats — and lots of “heavy lifting” that is done by law enforcement officials, contractors, and volunteer groups to infiltrate these online groups and discover what they’re discussing. But those conversations, Robb observes, sometimes lacks “actionable info” about the groups’ preparations or capabilities to execute an attack.

Robb says he’s “not sure there is a dominant commercial player in the space” that Recorded Future operates in. That creates an opportunity for the company. It was acquired in 2019 by Insight Partners, a private equity firm, for \$780 million. Ahlberg predicts that an initial public offering of stock could happen “within the next two years.”

Scott Kirsner can be reached at kirsner@pobox.com. Follow him on Twitter @ScottKirsner.

Haemonetics acquires Calif. medical device firm

By Anissa Gardizy GLOBE CORRESPONDENT

The health care company Haemonetics Corp. said Wednesday that it has agreed to acquire a California medical device company for \$475 million in cash upfront.

Boston-based Haemonetics, which focuses on equipment, software, and services around blood management, will acquire Cardiva Medical, a privately held firm in Silicon Valley that makes devices to seal arteries and veins.

The merger, expected to close in the first quarter of the year, could add about \$65 million to \$75 million in revenue for Haemonetics in the first fiscal year.

The deal is valued at up to \$510 million, based on sales growth considerations.

“We are excited to add Cardi-

va’s vascular closure technology to our portfolio and look forward to welcoming their talented team, said Chris Simon, chief executive of Haemonetics. He added that the deal “immediately expands and diversifies [Haemonetics’] hospital offerings.”

To finance the acquisition, the company said it will use a combination of cash, credit, and a \$150 million term loan. Haemonetics used to be headquartered along Interstate 93 in Braintree, but in 2019 it made a move to a 62,000-square-foot space on Summer Street in Boston. Haemonetics employs about 225 workers in Massachusetts and about 3,000 globally.

Anissa Gardizy can be reached at anissa.gardizy@globe.com. Follow her on Twitter @anissagardizy8.