



## **Atreca, BeiGene, and IGM Biosciences Agree to Collaborate on Novel Antibody Treatment for COVID-19**

April 29, 2020

*- Companies to utilize proprietary platforms to discover, develop, and manufacture potential therapeutic antibodies to combat ongoing COVID-19 pandemic -*

SOUTH SAN FRANCISCO, Calif. and CAMBRIDGE, Mass. and BEIJING, China and MOUNTAIN VIEW, Calif., April 29, 2020 (GLOBE NEWSWIRE) -- Atreca, Inc. (Nasdaq: BCEL), BeiGene, Ltd. (Nasdaq: BGNE; HKEX: 06160), and IGM Biosciences, Inc. (Nasdaq: IGMS), today announced their plans to collaborate to help address the COVID-19 pandemic. The companies will leverage their combined technology and expertise in an effort to discover, develop, and manufacture novel IgM and IgA antibodies targeting SARS-CoV-2 for the potential treatment of COVID-19. Given the urgency of the global COVID-19 pandemic, the parties have agreed to begin work immediately and plan to finalize financial details and other terms in the future.

Immunoglobulin M (IgM) and immunoglobulin A (IgA) are classes of antibodies naturally produced by the human immune system and are differentiated from immunoglobulin G (IgG) antibodies in part by their greater number of binding domains (IgM: 10, IgA: 4, IgG: 2). IGM Biosciences engineers IgM and IgA antibodies with greater binding power per antibody, relative to comparable IgG antibodies. This greater binding power could potentially result in better activity against a broader range of variants of the virus which causes COVID-19, as compared to traditional IgG antibodies. IgA and IgM antibodies also have the inherent property of active transport from the blood stream to mucosal surfaces, such as in the lung, which may provide a therapeutic advantage for respiratory diseases such as COVID-19.

The alliance will utilize Atreca's proprietary discovery platform to generate the sequences of antibodies made by particular B cells found in blood obtained from acutely infected COVID-19 patients. IGM's technology platform will then be leveraged in an effort to develop and manufacture engineered IgM and IgA therapeutic antibodies from the identified sequences.

BeiGene has agreed to provide global clinical development support by leveraging its more than 1,100-person global development team across China, the United States, Europe, and Australia, including leading global regulatory interactions for any potential drug candidate that is developed. BeiGene is a leader in global clinical development with 26 potentially registration-enabling trials ongoing and over 60 studies enrolling patients in more than 35 countries. Its large, global clinical development team is focused on high-quality, efficient drug development optimized for global regulatory submissions.

Atreca and IGM have entered into a Material Transfer and Collaboration Agreement to enable the parties to begin working together immediately. Atreca, IGM, and BeiGene plan to discuss further terms and arrangements in the future. If research, manufacturing, and regulatory activities proceed very well, then the companies believe that an antibody may be ready to begin clinical testing in the first half of 2021.

"Atreca has a history of successfully generating potent, neutralizing antibodies against a number of infectious disease pathogens, and we are proud to join BeiGene and IGM in working to identify a potential therapy to help address this unprecedented international health crisis," said John Orwin, Chief Executive Officer of Atreca. "We believe our discovery platform is uniquely positioned to rapidly isolate a broad range of relevant antibody sequences from COVID-19 patients that can then be used to create potentially effective targeted therapies. We have begun processing samples obtained from acutely infected COVID-19 patients and are focused on analyzing single plasmablast B cells isolated from these samples to identify antibodies targeting potentially novel epitopes that may be missed by other approaches that rely on a specific viral protein to select B cells."

"Helping patients is core to our mission, and we believe IGM may be the only company in the world that is currently positioned to produce IgM and IgA antibodies with high yield and high quality," said Fred Schwarzer, Chief Executive Officer of IGM Biosciences. "As such, we feel that we have a responsibility to explore the utility of these antibodies in COVID-19 patients. We believe that IgM and IgA antibodies created from sequences identified with Atreca's platform may produce better binding, cross-reactivity, neutralization, and mucosal transport than the corresponding IgG antibodies. These characteristics, plus IGM's ability to efficiently manufacture IgM and IgA antibodies, gives us confidence in the collaboration and hope that we may develop a product that will be of significant benefit to public health."

"While the COVID-19 pandemic has presented new challenges to the biotechnology and pharmaceutical industries, equally notable is the desire for international scientific collaboration and cooperation," said John V. Oyler, Co-Founder, Chief Executive Officer, and Chairman of BeiGene. "We are grateful for the opportunity to lend our global clinical development resources to this critical cause, with both Atreca and IGM to leverage their innovative discovery and development platforms in an effort to combat COVID-19."

Atreca's proprietary discovery platform, including its Immune Repertoire Capture® (IRC™) technology, generates bias- and error-corrected, natively paired heavy and light chain sequences of the antibodies expressed by single plasmablast B cells isolated from patient blood samples, enabling analyses of patient antibody repertoires generated in an active immune response in a target agnostic fashion, and permitting selection of antibody sequences for immediate gene synthesis and expression. IGM's proprietary platform expands upon the inherent characteristics of IgM and IgA antibodies and enables the rapid development of engineered therapeutics. IGM's technology allows it to create IgM and IgA antibodies with higher affinity and avidity than naturally occurring IgM and IgA antibodies, and the company has also overcome the historical difficulties in recombinantly expressing and manufacturing IgM and IgA antibodies.

**About Atreca, Inc.**

Atreca is a biopharmaceutical company developing novel antibody-based immunotherapeutics generated by its differentiated discovery platform. Atreca's platform allows access to an unexplored landscape in oncology through the identification of unique antibody-target pairs generated by the human immune system during an active immune response against tumor. These antibodies provide the basis for first-in-class therapeutic candidates, such as our lead product candidate ATRC-101. A Phase 1b study evaluating ATRC-101 in multiple solid tumor cancers is currently enrolling patients. For more information on Atreca, please visit [www.atreca.com](http://www.atreca.com).

#### **About BeiGene**

BeiGene is a global, commercial-stage biotechnology company focused on discovering, developing, manufacturing, and commercializing innovative medicines to improve treatment outcomes and access for patients worldwide. Our 3,500+ employees in China, the United States, Australia, and Europe are committed to expediting the development of a diverse pipeline of novel therapeutics for cancer. BeiGene currently markets two internally-discovered oncology products: BTK inhibitor BRUKINSA™ (zanubrutinib) in the United States, and anti-PD-1 antibody tislelizumab in China. BeiGene also markets or plans to market in China additional oncology products licensed from Amgen Inc., Celgene Logistics Sàrl, a Bristol Myers Squibb (BMS) company, and EUSA Pharma. To learn more about BeiGene, please visit [www.beigene.com](http://www.beigene.com).

#### **About IGM Biosciences, Inc.**

Headquartered in Mountain View, California, IGM Biosciences is a clinical-stage biotechnology company focused on creating and developing engineered IgM antibodies. Since 2010, IGM Biosciences has worked to overcome the manufacturing and protein engineering hurdles that have limited the therapeutic use of IgM antibodies. Through its efforts, IGM Biosciences has created a proprietary IgM technology platform for the development of IgM antibodies for those clinical indications where their inherent properties may provide advantages as compared to IgG antibodies.

#### **Atreca Forward-Looking Statements**

This release contains forward-looking statements regarding Atreca's strategy and future plans, including statements regarding the anticipated isolation of relevant antibody sequences from COVID-19 patients using Atreca's proprietary discovery platform, the development of ATRC-101 and Atreca's clinical and regulatory plans, and the timing thereof. These forward-looking statements include, but are not limited to, statements about our plans, objectives, representations and contentions and are not historical facts and typically are identified by use of terms such as "plan," "will," "believe," "may," "future," "potential" and similar words, although some forward-looking statements are expressed differently. Atreca's actual results may differ materially from those indicated in these forward-looking statements due to risks and uncertainties related to the initiation, timing, progress and results of its research and development programs, preclinical studies, any clinical trials and Investigational New Drug application and other regulatory submissions, and other matters that are described in Atreca's Annual Report on Form 10-K for the fiscal year ended December 31, 2019 filed with the Securities and Exchange Commission (SEC) and available on the SEC's website at [www.sec.gov](http://www.sec.gov), including the risk factors set forth therein. Investors are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date of this release, and Atreca undertakes no obligation to update any forward-looking statement in this press release, except as required by law.

#### **BeiGene Forward-Looking Statements**

This press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 and other federal securities laws, including statements regarding BeiGene's plans to work together with Atreca and IGM in the development of a novel IgM or IgA antibody targeting SARS-CoV-2 for the potential treatment of COVID-19, the services to be provided by BeiGene, and the parties' efforts to finalize further terms and arrangements in the future. Actual results may differ materially from those indicated in the forward-looking statements as a result of various important factors, including the ability of Atreca, BeiGene and IGM to discover, develop and manufacture a novel IgM or IgA antibody targeting SARS-CoV-2 for the treatment of COVID-19; the risk that Atreca, BeiGene or IGM decide not to pursue the collaboration or that the parties are unable to agree to further terms and arrangements for the collaboration in the future; the risk that the potential benefits of the collaboration do not materialize or do not outweigh the costs; BeiGene's ability to demonstrate the efficacy and safety of its drug candidates; the clinical results for its drug candidates, which may not support further development or marketing approval; actions of regulatory agencies, which may affect the initiation, timing and progress of clinical trials and marketing approval; BeiGene's ability to achieve commercial success for its marketed products and drug candidates, if approved; BeiGene's ability to obtain and maintain protection of intellectual property for its technology and drugs; BeiGene's reliance on third parties to conduct drug development, manufacturing and other services; BeiGene's limited operating history and BeiGene's ability to obtain additional funding for operations and to complete the development and commercialization of its drug candidates; and the impact of the COVID-19 pandemic on BeiGene's clinical development, commercial and other operations, as well as those risks more fully discussed in the section entitled "Risk Factors" in BeiGene's most recent annual report on Form 10-K, as well as discussions of potential risks, uncertainties, and other important factors in BeiGene's subsequent filings with the U.S. Securities and Exchange Commission. All information in this press release is as of the date of this press release, and BeiGene undertakes no duty to update such information unless required by law.

#### **IGM Cautionary Note Regarding Forward-Looking Statements**

This press release contains forward-looking statements. These statements include, but are not limited to, statements relating to the contemplated collaboration among IGM, Atreca and BeiGene; the possible nature and scope of any such collaboration; the capabilities of IGM's technology platform, both generally and specifically with respect to development, testing and manufacture of antibodies targeted at COVID-19; the potential safety and efficacy of such antibodies; and the capabilities of Atreca and BeiGene.

Such statements are subject to numerous important risks and uncertainties that may cause actual events or results to differ materially, including, but not limited to, the risks that: IGM, Atreca and/or BeiGene ultimately decide to not pursue the collaboration; IGM, Atreca and BeiGene do not reach agreement on the definitive terms and conditions of such collaboration; one or more of IGM, Atreca, BeiGene decide to leave the collaboration; antibodies with the desired characteristics cannot be isolated from the COVID-19 patient samples obtained by Atreca; any antibodies developed are not safe and effective in treating COVID-19; such antibodies are not safer and/or more effective than alternatives to treating or otherwise addressing COVID-19; IGM is not able to successfully manufacture such antibodies; any preclinical studies and clinical trials do not proceed successfully; all necessary regulatory approvals cannot be obtained; the potential benefits of the collaboration and these efforts do not outweigh their costs; the collaboration and related efforts are delayed or disrupted by the COVID-19 pandemic itself or by governmental responses to the pandemic; and other risks and uncertainties, including those more fully described in IGM's filings with the Securities and Exchange Commission ("SEC"), including IGM's Annual Report on Form 10-K filed with the SEC on March 26, 2020 and in IGM's future reports to be filed with the SEC. Any forward-looking statements contained in this press release speak only as of the date hereof, and IGM specifically disclaims any obligation to update any forward-looking statement, except as required by law.

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