



Goodwin Biotechnology and For-Robin Collaborated to Generate a Unique Antibody : Drug Conjugate (ADC) that Shows Promise in Enhancing the Treatment of a Variety of Cancers

October 2017 -- Plantation, Florida -- [Goodwin Biotechnology, Inc.](#), a biological Contract Development and Manufacturing Organization (CDMO) that specializes in bioprocess development and cGMP manufacturing of biopharmaceuticals today announced that it has and continues to collaborate with For-Robin, Inc., an antibody immunotherapy company whose primary mission is developing treatments for Breast Cancer patients, on a promising advance as an immunotherapy for a number cancer types.

An article recently appeared in a peer-reviewed publication, *Neoplasia*,* that reports on the impressive affinity, specificity, tumor cell internalization, and resultant suppression of several breast and lung cancer cell lines by two humanized variants of the JAA-F11 antibody and the resultant cytotoxic Antibody Drug Conjugate (cADC), JAA-F11 : DM1 conjugate, which Goodwin Biotechnology prepared for For-Robin.

“Based on our patented technology, JAA-F11 has proven to be a highly specific mouse monoclonal to the Thomsen-Friedenreich glycoantigen (TF-Ag) which is an alpha-O-linked disaccharide antigen on the surface of ~80% of human carcinomas, including breast, lung, colon, bladder, ovarian, and prostate cancers, and is cryptic on normal cells,” said Sally A. Quataert, Ph.D., RQAP-GLP, Chief Executive Officer at For-Robin, Inc.

“As importantly, rapid internalization of hJAA-F11 into cancer cells was demonstrated in a separate study with 68% to 95% of the antibody being internalized within one hour,” continued Dr. Quataert. “This observation led to construction of the proof-of-principle cADC, JAA-F11 : DM1 which has shown to have potent in vitro cytotoxic activity in several human breast and lung cancer cell lines that showed varying degrees of TF-Ag expression. The other important attribute of this study showed that the JAA-F11 : DM1 conjugate reduced tumor growth in a mouse xenograft human triple negative breast cancer model. This is especially important because there are currently no successful targeted therapies for triple negative breast cancers. These clinical findings of targeting and specificity as well as the internalization make our humanized antibody an ideal candidate for ADC therapy specifically for metastatic breast cancers.”

“We selected Goodwin Biotechnology to develop the ADC based on the years of experience they have in Bioconjugation and in developing and manufacturing cADCs, radioimmunoconjugates, and other conjugates,” noted Dr. Quataert. “They demonstrated a great deal of flexibility, worked within our budget, and they delivered our ADC ahead of schedule.”

“At the start of our collaboration with For-Robin, we evaluated both site-directed and random conjugations of the JAA-F11 chimeric antibody using DM1 payload (a highly cytotoxic maytansinoid that induces mitotic arrest) with non-cleavable linkers,” noted Muctarr Sesay, PhD, Chief Scientific Officer and VP Bioconjugation Development at Goodwin Biotechnology. “The cADCs generated via site-directed conjugation utilizes proprietary process that has been validated at Goodwin for several IgG1-based conjugates. The random conjugation approach was conjugating the antibody via primary surface amines of the lysine residue that was similar to the conjugation process for Kadcyra®, a commercially available ADC. After evaluation, it was determined that the site-directed approach was a superior choice because it shifted the linker-payload away from the antigen binding site (hypervariable region) on the antibody and resulted in higher binding to the antigens on the surface of the cancer cells compared to the random conjugation approach. Based on that, we scaled up the manufacturing process of the cADC via site-directed conjugation for the in vitro and in vivo animal studies upon which this important publication was based.”

“At Goodwin Biotechnology, our scientists take a great deal of pride in being able to make these types of contributions to the field of medicine,” said SooYoung Lee, PhD, Chief Operating Officer at Goodwin Biotechnology. “This article clearly demonstrates the added value that Goodwin brings to our partners in an effort to significantly improve the treatment of insidious diseases while enhancing the quality of life for patients and their families.”

About Goodwin Biotechnology, Inc.

[Goodwin Biotechnology](#) is a uniquely qualified CDMO that offers a Single Source Solution™ for our clients from cell line development, exploratory proof of concept projects through process development and cGMP contract manufacturing of monoclonal antibodies, recombinant proteins, vaccines, and Biologic Drug Conjugates including Antibody Drug Conjugates (ADCs) for early and late stage clinical trials. By working with Goodwin Biotechnology, clients can enhance the value of their product candidates with clear development and manufacturing strategies, as well as a road map to meet the appropriate quality requirements from the milligram and gram range to kilogram quantities as the product candidates move along the clinical development pathway in a cost-effective, timely, and cGMP compliant manner to enhance patients’ lives. With over 20 years of experience as an independent integrated contract manufacturer, Goodwin Biotechnology has worked as a strategic partner with companies of all sizes from small university spin-offs to major research institutes, government agencies and large, established and multi-national biopharmaceutical companies. [Click here](#) to view the press releases, white papers, review articles and peer reviewed articles! Additional information may be found at <http://www.GoodwinBio.com>.

About For-Robin

[For-Robin, Inc.](#), founded in 2012, is an antibody immunotherapy company whose primary mission is developing treatments for Breast Cancer patients. Our patented technology, monoclonal antibody, JAA-F11 and humanized variants, hJAA-F11, targets all Breast Cancer cell subtypes including triple negative Breast Cancer where no targeted therapy currently exists. For-Robin, Inc is located in the Buffalo/Niagara region of upstate New York. The company has received designation as a StartUp New York company occupying R&D laboratory space at the University of Buffalo Main campus with access to university animal and shared resource facilities.

At For-Robin, our mission to find treatments for Breast Cancer is personal. The company is named in honor of the founder's sister who died at age 31 of Breast Cancer. We feel now is the time to stop curing mice and embark on a mission to get this monoclonal antibody to clinical trials! For-Robin is developing hJAA-F11 for adjunct therapy of Breast Cancer either directly or as antibody : drug conjugates. Our strategic plan is to bring JAA-F11 to the clinical trial stage for breast cancer treatment with the intent to license our technology. Importantly, JAA-F11 should be applicable treatment for colon, prostate, lung, ovarian, and bladder cancer patients. Our technology will have significant potential for broad future applications.

For more information, please contact:

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* Humanization of JAA-F11, a Highly Specific Anti-Thomsen-Friedenreich Pancarcinoma Antibody and In Vitro Efficacy Analysis. Tati S, Fisk JC, Abdullah J, et al. *Neoplasia*. September, 2017: 19(9); 716-733.