

For Robin, Inc. is focused on the Development of their Monoclonal Antibody JAA-F11 for Breast Cancer Patients that Shows Promise in Being Selective And Not Affecting Normal Tissue with the Ability to Block Metastasis

**Healthcare
Breast Cancer Therapy**

**For-Robin, Inc.
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**Kate Rittenhouse-Olson, Ph.D.
CEO**

BIO:

Dr. Rittenhouse-Olson's training includes time as a post-doctoral fellow at Roswell Park Cancer Institute (RPCI), wherein she gained clinical tumor immunology experience with T. Ming Chu, (the discoverer of Prostate Specific Antigen for diagnosis) and then carbohydrate experience with Khushi Matta. For over 25 years her University of Buffalo (UB) laboratory has been involved in studying carbohydrate tumor associated antigens, and she has studied TF-Ag since 1985. Her role as the President of For-Robin is a natural fit since the

JAA-F11 monoclonal antibody was developed in her UB laboratory and the company For-Robin is a spin-off dedicated to efforts to bring JAA-F11 to the clinic. For-Robin, Inc. increases the ability to interact with private funding sources and to market for possible partnering opportunities. Most of the preclinical testing of this monoclonal antibody to the breast cancer target TF-Ag was performed under her direction. The protocols necessary for the testing of the humanized antibody to TF-Ag are in hand at UB and at For-Robin, Inc. Current techniques utilized in these laboratories include; molecular cloning, antibody production and purification, enzyme immunoassays, surface plasmon resonance, flow cytometry, immunotherapy and radioimmuno-localization in a mouse metastatic breast cancer model, ADCC, CDC assays, and assays for direct cytotoxicity. Dr. Rittenhouse-Olson's training as an immunologist, and her ASCP certification as a specialist in clinical immunology, along with her research experience amply suits the needs for her role as President of For-Robin. She will supervise all aspects of the work, at UB and at For-Robin. She is committed to bringing the promising JAA-F11 antibody to clinical trials. She can be reached at krolson@buffalo.edu.

About Robin, Inc.:

The mission of For-Robin, Inc. is to bring the promising monoclonal antibody, JAA-F11 to the breast cancer patient. JAA-F11 is anticipated to be applicable to 80% of breast cancers, to be selective and not affect normal tissue, to block metastasis and to be an effective adjunct therapy for use with current chemotherapy regimens.

**Interview conducted by:
Lynn Fosse, Senior Editor
CEOCFO Magazine**

CEOCFO: Ms. Olson, would you tell us the story of For-Robin Incorporated?

Dr. Olson: The mission is to develop the monoclonal antibody JAA-F11 to target cancer cells, first in breast cancer and ultimately in colon, prostate, bladder and other carcinomas. Our antibody is applicable to 80% of breast cancers including the difficult to treat triple negative breast cancers that occur in young women. These cancers are called triple negative because they do not respond to the current targeted therapies which target estrogen, progesterone or Her2 neu receptor therapies. Our antibody is selective and it should not affect normal tissue. It is diagnostic and can locate breast cancer by imaging. It blocks tumor spread and it prevents metastasis. We are modifying it so it will kill cancer cells as well.

CEOCFO: What has been the previous research on this antibody? What are you doing with this antibody and what are you doing at For Robin that might be a different approach?

Dr. Olson: We have a patent on the antibody and our goal at For-Robin is to bring JAA-F11 to the clinic to improve outcomes in cancer patients. We, along with other scientists, have shown that our JAA-F11 antibody blocks a step in metastasis. Metastasis is when tumor cells leave the primary site and travel to some other place in the body and grow. This spread is what usually kills the cancer patient, since these cancer cells re-

place so much of an organ that the patient cannot survive. Our antibody blocks that traveling of cancer cells to secondary sites in the body. We have shown through multiple publications that the adhesion step involved in metastasis of breast cancer is blocked by our antibody. Several other groups used our antibody and have shown that it also blocks the metastasis in colon cancer and prostate cancer. Our website www.For-Robin.com lists the relevant publications with links so that this peer reviewed literature can be accessed easily.

CEOFCO: How did you develop this antibody and what made you go in that direction?

Dr. Olson: I have been trained to study all cancer markers. I studied with T. Ming Chu, the discoverer of prostate specific antigen and I also studied with Khushi Matta who studies carbohydrate antigens. The cancer cell does not add sugars (carbohydrates) onto protein molecules the same way as normal cells. Therefore, we looked for what carbohydrate markers on the cancer cells would be different and could be used as a target. We were successful in developing a highly specific antibody (JAA-F11) to the TF carbohydrate antigen on the surface of cancer cells. The reason that other people have not done this before is that not as many people study carbohydrates as study proteins and the tools were not available to study carbohydrates as well as to study proteins. Some of the tools have become available through generous donations by the National Institute of Health to a group called the Consortium of Functional Glycomics. We worked with them and were able to show that our antibody JAA-F11 is very specific for the structure of the carbohydrate molecule (TF-ag) found on cancer cells.

CEOFCO: Are you funded to get through the next steps and will you be seeking funding or partnerships?

Dr. Olson: We have been recommended for funding by the National Cancer Institute for the STTR Phase 1 which will bring us closer to getting

the molecule ready for use in humans. If we are successful in this first phase, I believe that we have a good chance of getting Phase II STTR funding, which is needed to initiate Phase 1 human trials. STTR Phase 1 funding could also allow us to obtain the data necessary to bring JAA-F11 for licensing or partnering with pharmaceutical or biotech companies.

CEOFCO: Would you tell us about your sister?

Dr. Olson: My sister was an incredible person. She was a counselor for teenagers with troubles. She was head of United Counsel of Churches counseling group for teenagers. The kids loved her and she had a great knack of not being too friendly but just friendly enough. She was not too soft but just soft enough. She was tough

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with them when they needed it and she really gave good advice that they followed very well. I think there were over two hundred of the kids that she counseled at her funeral. They wrote her lots of letters and told her how she had really made a difference in their lives. Robin was diagnosed with breast cancer when she was only 26 years old. She found the lump on her first breast self-examination. She had surgery, a total mastectomy and for 4 ½ years she was fine. She then got reconstructive surgery and almost immediately afterwards, her tumor recurred and she died at 31 years of age.

CEOFCO: That had an impact on you obviously!

Dr. Olson: We named the company For-Robin, Inc. in her honor. I think of her often, and I hope that our work will help cure others like her. She was

very proud that I obtained my doctorate and began to do cancer research.

CEOFCO: What is the plan for the next year or two?

Dr. Olson: Right now we are humanizing the antibody. I have two students in my lab at the University of Buffalo and For-Robin will be working with my lab at the University of Buffalo to prepare the antibody for use in humans and do the testing of our prepared antibody. At the end of the year we hope to have the optimized humanized antibody read for GMP Production for clinical trials.

CEOFCO: The researchers have paid attention. Has the medical community in general paid attention or is it too early?

Dr. Olson: I had some interest by three different biotech companies which have sent people to talk to me about this product. I believe they will be interested after the humanization of the antibody. I believe I will obtain the humanized antibody in the next year and then I will contact them again.

CEOFCO: Why should the business and investment community pay attention to For Robin?

Dr. Olson: I would compare For Robin, and our JAA-F11 antibody, to Herceptin which is a monoclonal antibody that is already used in breast cancer patients. Herceptin now is shown to give about a 4.8 month increased lifespan for the patients. It blocks the growth factor receptor and can be used in 25% of breast cancer patients. Even with only 25% of the breast cancer patient market I believe they made about \$6 billion last year. When tested against cell lines it appears that JAA-F11 will be able to be used in 80% of breast cancers, so that is over three times as many breast cancers as Herceptin. The pathway of its efficacy is by blocking metastasis and we believe after our modifications it will also kill tumor cells. The tumor marker that we are attacking is called Thomsen-Friedenreich antigen. This marker is on normal cells but it is covered with other sugar molecules so our antibody will not bind. Therefore we think that we will have a big-

ger market and lower toxicity. There is more work to be done before we get to clinical trials in breast cancer patients.

CEO CFO: Final thoughts?

Dr. Olson: We are progressing right now quite rapidly. We have the patent in the US as well as patent applications covering Europe, Japan and Canada. We are a company to keep looking at. In the next year I think we

will have much more data and be ready for GMP production and the beginning of human trials the year after that.



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