

Regen BioPharma, Inc.'s Immune Checkpoint Inhibitor Found to Stimulate Key Immune System Proteins Interleukin-17 and Interleukin-18

Results from Ongoing Studies Suggest Major Role of Regen's NR2F6 Target in Controlling Key Immune Functions

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SAN DIEGO, February 17, 2016 /PRNewswire/ --

RegenBioPharma, Inc., (OTCBB: RGBP) and (PINK: RGBP) announced today the filing of two patent applications covering new immunological pathways activated by gene silencing of the Company's checkpoint inhibitor target NR2F6. The results, which are part of a collaborative effort with Dr. Santosh Kesari, demonstrate that suppression of NR2F6 in T cells results in increased expression of key immune stimulatory proteins interleukin-17 (IL-17) and interleukin-18 (IL-18). Dr. Santosh Kesari serves as the Professor of Neurosciences and Chair of the Department of Neuro-oncology and Neuro-Therapeutics at the John Wayne Cancer Institute (Providence Saint John's Health Center).

IL-17 promotes the generation of pro-inflammatory cytokines and chemokines, which leads to the attraction of neutrophils and macrophages to the tumor site[1]. The IL-18 protein, also known as the Interferon Gamma Stimulating Factor, plays an essential role in allowing the immune system to kill cancer[2].

One of the mechanisms by which IL-18 endows anticancer activity is through activation of natural killer cells[3], which possess the ability to directly kill tumor cells while sparing non-malignant cells. Natural killer cells play a role in the efficacy of existing cancer monoclonal antibody drugs such as Herceptin[4], Cetuximab[5], and Rituximab[6].

"These new data suggest the exciting possibility that our NR2F6-targeting programs, both the gene-silencing, as well as the small molecule, may be useful as adjuvants to existing checkpoint monoclonal antibodies," said Harry M. Lander, Ph.D., MBA, President and Chief Scientific Officer of Regen BioPharma. "The market for this class of drugs is staggering based on sales figures, Herceptin (\$6 billion 2013)[7], Cetuximab (\$1.8 billion 2013)[8], and Rituximab (\$7.7 billion 2013)[9]. Remarkably, these drugs have not reached their full potential - in many cases due to their dependence on the existing immune status of the patient which is often

compromised. It is our belief that if our existing data is translated into clinical trials, we may possibly enhance the efficacy of existing checkpoint inhibitor-based therapies."

Previous studies have demonstrated efficacy of adding IL-18 to monoclonal antibodies for stimulation of efficacy. However, current approaches to administer IL-18 are non-specific and expensive[10]. Through selectively modulating IL-18 expression by NR2F6 inhibition, the Company hopes to overcome previous hurdles to the implementation of this approach.

"The current findings and patent applications enhance the spectrum of possible collaborators and partners," said Dr. David Koos, Chairman and CEO of Regen BioPharma. "We are delighted that Dr. Kesari and our scientific team have followed where the science has led them, which in this case has produced unexpected results which may potentially yield benefits useful to patients."About Regen BioPharma, Inc.

Regen BioPharma Inc. is a publicly traded biotechnology company (OTCBB: RGBP) and (OTC PINK: RGBP). The Company seeks to identify undervalued regenerative medicine applications in the immunotherapy and stem cell space. The Company is focused on rapidly advancing these technologies through pre-clinical and Phase I/ II clinical trials. Currently the Company is centering on gene silencing therapy for treating cancer, telomeres and small molecule therapies, along with developing stem cell treatments for aplastic anemia.

Disclaimer: This news release may contain forward-looking statements. Forward-looking statements are inherently subject to risks and uncertainties, some of which cannot be predicted or quantified. Future events and actual results could differ materially from those set forth in, contemplated by, or underlying the forward-looking statements. The risks and uncertainties to which forward looking statements are subject include, but are not limited to, the effect of government regulation, competition and other material risks.

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1. Jin and Dong, *Emerging Microbes & Infections* (2013);
<http://www.nature.com/emi/journal/v2/n9/full/emi201358a.html>.
 2. Srivastava et al. *Curr Med Chem*. 2010;17(29):3353-7.
<http://www.ncbi.nlm.nih.gov/pubmed/20712569>

3. Ortaldo et al. Semin Immunol. 2006 Jun;18(3):193-6.
<http://www.ncbi.nlm.nih.gov/pubmed/16678434>
4. Kohrt et al. J Clin Invest. 2012 Mar;122(3):1066-75.
<http://www.ncbi.nlm.nih.gov/pubmed/22326955>
5. Kohrt et al. J Clin Invest. 2014 Jun;124(6):2668-82.
<http://www.ncbi.nlm.nih.gov/pubmed/24837434>
6. Wang et al. February 1, 2008; Blood: 111 (3).
<http://www.ncbi.nlm.nih.gov/pubmed/18024795>
7. <http://www.fiercepharma.com/special-reports/herceptin-best-selling-drugs-2013>
8. <http://www.fiercepharma.com/special-reports/top-10-best-selling-cancer-drugs-2013-erbitux>
9. <http://www.fiercepharma.com/special-reports/top-10-best-selling-cancer-drugs-2013-rituxanmabthera9>.
10. Srivastava et al. Cancer Immunol Immunother. 2013 Jun;62(6):1073-82.
<http://www.ncbi.nlm.nih.gov/pubmed/23604103>

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