

Regen BioPharma, Inc. Files Utility Patent Application on NR2F6-Silenced CAR-T Cell for Solid Tumors

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Company Augments Scope of its NR2F6 Program

PR Newswire

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Regen BioPharma Inc. (OTCQB: RGBP), (OTCQB: RGBPP) announced today the filing of a [provisional/nonprovisional] utility patent application with the United States Patents and Trademark Office covering NR2F6-silenced CAR T cells. While previous work demonstrated that methodologies developed by Regen and covered under its issued patent #9,091,696 are useful in stimulation of T cell activity, the current patent further modifies T cells to express molecules that act as a localized "danger signal" to the immune system. CAR T cells are T Cells (T lymphocytes) which are genetically engineered to produce chimeric antigen receptors (CARs) on their surface. CARs are proteins that allow the T cells to recognize an antigen on targeted tumor cells.

Remarkable clinical results have been obtained by numerous investigators utilizing CAR T cells in the treatment of leukemias and lymphomas[1]. Unfortunately, results for solid tumors have been limited[2]. This is thought to occur because solid tumors produce numerous immune-suppressive factors that coax the cells that surround the tumor to protect the tumor against the immune response. By utilizing NR2F6-silencing methods, Regen believes it has developed a new method of augmenting the cells that surround the tumor to allow for immune destruction of the tumor to occur.

"When we look at other chronic diseases, it is important to note that effective treatment protocols always involve multifactorial attacks on the disease process. This is best illustrated in the case of HIV where only after the introduction of the "cocktail therapy" approach have significant extensions of lifespan been achieved," said Harry Lander, Ph.D., President and Chief Scientific Officer of Regen BioPharma. "By activating the adaptive arm of the immune system, in the form of NR2F6-silenced T cells, we anticipate achieving synergistic effects in killing of solid tumors, something which has not been observed in previous CAR-T approaches."

Augmentation of CAR-T cells has previously been performed with cytokines such as IL-12[3], however, IL-12 is one signal out of many signals involved in alerting the immune system to "danger". However, by inhibiting NR2F6 in these CAR-T cells, it is very likely that multiple cytokines will be secreted leading to an augmented killing effect.

"At Regen BioPharma we are committed to developing the next generation of immune-oncology. By combining silencing of the immune checkpoint NR2F6 with this advanced CAR-T approach, we continue at the cutting edge of intellectual property in this extremely promising and rapidly evolving field," said David Koos, Ph.D., Chairman and Chief Executive Officer of Regen BioPharma.

1. Davenport et al. Oncoimmunology. 2015 Jun 1;4(12):e1053684.
<http://www.ncbi.nlm.nih.gov/pubmed/26587330>

2. Beavis et al. Semin Immunol. 2015 Nov 20. pii: S1044-5323(15)00074-3
<http://www.ncbi.nlm.nih.gov/pubmed/26611350>

3. Koneru et al. J Transl Med. 2015 Mar 28;13:102. <http://www.ncbi.nlm.nih.gov/pubmed/25890361>

Further, Dr. Koos noted "We believe there is a spillover effect with this new approach that will be valuable to our licensee for veterinary applications, Zander Therapeutics Inc. (a wholly owned subsidiary of Entest BioMedical Inc., PINKS: ENTB)."

Zander Therapeutics Inc. is a wholly owned subsidiary of Entest BioMedical Inc. (PINKS: ENTB). David R. Koos serves as Chairman and Chief Executive Officer of Regen, Entest Biomedical, Inc. and Zander Therapeutics.

About Regen BioPharma Inc.:

Regen BioPharma Inc. is a publicly traded biotechnology company (OTCQB: RGBP) and (OTCQB: RGBPP). 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 focused on gene silencing therapy and small molecule therapies for treating cancer, along with developing stem cell treatments for aplastic anemia and disorders of the bone marrow. Additional information on Regen BioPharma is available at <http://www.regenbiopharmainc.com>.

About Zander Therapeutics Inc.:

Zander Therapeutics, Inc. is a veterinary biotechnology company that is wholly owned by Entest BioMedical Inc. (a publicly traded company -- PINK: ENTB). Zander is primarily focused on developing small molecule therapies for treating autoimmune disorders and canine cancer (dogs). Currently the Company is developing products treating blood disorders using small molecules based on NR2F6 under an exclusive license agreement for veterinary use from Regen BioPharma Inc. (OTCQB: RGBP), gene silencing for treating cancer with immunotherapy, modulating key molecular processes in cancer stem cell through its patent molecular targeting approaches and repairing damaged bone marrow in animals with aplastic anemia and bone marrow suppression due to side effects of chemotherapy/radiotherapy treated cancer patients.

<http://www.zandertherapeutics.weebly.com/>

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