Juno Therapeutics Adds Adenosine Receptor Antagonist Through Acquisition of RedoxTherapies

- Acquiring a Small Molecule to Help Overcome the Tumor Microenvironment
- Intend to Use in Combination with Engineered T Cells –
- Vipadenant Has Been Dosed in over 250 People –
- Upfront Payment of $10 Million in Cash with Clinical and Commercial Milestones –

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SEATTLE--(BUSINESS WIRE)--Juno Therapeutics, Inc. (Nasdaq: JUNO), a biopharmaceutical company focused on re-engaging the body’s immune system to revolutionize the treatment of cancer, announced today that it has acquired RedoxTherapies, Inc., a privately held company based in Boston, Massachusetts. The acquisition provides Juno with an exclusive license to vipadenant, a small molecule adenosine A2a (A2a) receptor antagonist that has the potential to disrupt important immunosuppressive pathways in the tumor microenvironment in certain cancers. Juno intends to explore this molecule in combination with its engineered T cell platform and may over time explore it in other areas as well.

The adenosine pathway is increasingly recognized as one of the most important drivers in decreasing the immune response in cancer through upregulation of checkpoints, metabolic downregulation of T cells, and overall immune suppression. Inhibiting this pathway, particularly through the blockade of A2a receptor signaling, has been shown in pre-clinical models to enhance the efficacy of adoptive T cell therapy, checkpoint inhibitors, and vaccines across a number of blood and solid organ cancers.
Vipadenant, an orally bioavailable synthetic small molecule, potently and selectively blocks adenosine receptor mediated immunosuppression. In Phase I and II clinical trials in approximately 250 Parkinson’s disease patients and healthy volunteers, vipadenant was found to reach serum levels that predict saturation of the A2a receptor and blockade of signaling through this pathway and to be well tolerated in these subjects. In addition to vipadenant, with the transaction Juno has acquired proprietary know-how and intellectual property pertaining to the development of A2aR antagonists in combination with immuno-modulatory agents, such as the company’s engineered T cells. RedoxTherapies founder and adenosine biology pioneer Michail Sitkovsky, Ph.D. will become a scientific consultant to Juno.

“Multiple approaches to overcoming the tumor microenvironment will be key in optimizing the clinical benefit of engineered T cells, and T cells more broadly, in the treatment of cancer. Inhibiting the adenosine pathway is one of the most intriguing pathways in this important area of science, and we look forward to testing the hypothesis around this pathway clinically,” said Hy Levitsky, M.D., Juno’s Chief Scientific Officer. “We look forward to integrating this asset into our ongoing research and clinical efforts and exploring it in combination with product candidates from our portfolio.”

“As a leader in understanding the potential for adenosine receptor antagonists to destroy the immunosuppressive tumor-protecting barrier created by the tumor-generated extracellular adenosine, Redox compiled critical intellectual property to interrogate this biology. Reversing the inhibition caused by hypoxia and adenosine has the potential to unlock T cells in even the most difficult to treat tumors. The ability to combine our assets with Juno’s pipeline in the field of TCR and CAR T cell therapies is an ideal match, and we share a vision to optimize the activity of engineered T cells,” said Michail Sitkovsky, Ph.D., Founder of RedoxTherapies.

The upfront consideration for the RedoxTherapies acquisition was $10 million in cash. Redox is also eligible to receive payments upon the achievement of undisclosed clinical, regulatory, and commercial milestones.

About Juno

Juno Therapeutics is building a fully integrated biopharmaceutical company focused on re-engaging the body’s immune system to revolutionize the treatment of cancer. Founded on the vision that the use of human cells as therapeutic entities will drive one of the next important phases in medicine, Juno is developing cell-based cancer immunotherapies based on chimeric antigen receptor and high-affinity T cell receptor technologies to genetically engineer T cells to recognize and kill cancer. Juno is developing multiple cell-based product candidates to treat a variety of B-cell malignancies as well as solid tumors. Several product candidates have shown compelling clinical responses in clinical trials in refractory leukemia and lymphoma conducted to date. Juno’s long-term aim is to leverage its cell-based platform to develop new product candidates that address a broader range of cancers and human diseases. Juno brings together innovative technologies from some of the world’s leading research institutions, including the Fred Hutchinson Cancer Research Center, Memorial Sloan Kettering Cancer Center, Seattle Children’s Research Institute, and The National Cancer Institute. Juno Therapeutics has an exclusive license to the St. Jude Children’s Research Hospital patented technology for CD19 directed product candidates that use 4-1BB, which was developed by Dario Campana, Chihaya Imai, and St. Jude Children’s Research Hospital.

About Redox Therapies
RedoxTherapies is a privately held company based on the pioneering adenosine research of founder Michail Sitkovsky, Ph.D. The goal of Redox is to utilize A2 adenosine antagonists to re-activate the otherwise inhibited tumor-reactive T cells, which remain inhibited even after blockade of immunological checkpoint inhibitors. Redox has compiled key assets in this space, including an exclusive license to vipadenant, a potent and selective A2a adenosine receptor antagonist, and intellectual property covering the combination of adenosine antagonists with immuno-modulatory agents.

**Forward-Looking Statements**

This press release contains “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995, Section 27A of the Securities Act of 1933, and Section 21E of the Securities Exchange Act of 1934, including statements regarding Juno’s mission, progress, and business plans, the potential of the acquired technology, and Juno’s planned application of the acquired technology in Juno’s research and development activities. Forward-looking statements are subject to risks and uncertainties that could cause actual results to differ materially from such forward-looking statements, and reported results should not be considered as an indication of future performance. These risks and uncertainties include, but are not limited to, risks associated with: the success, cost, and timing of Juno’s product development activities and clinical trials; Juno’s ability to obtain regulatory approval for and to commercialize its product candidates; Juno’s ability to establish a commercially-viable manufacturing process and manufacturing infrastructure; regulatory requirements and regulatory developments; success of Juno’s competitors with respect to competing treatments and technologies; Juno’s dependence on third-party collaborators and other contractors in Juno’s research and development activities, including for the conduct of clinical trials and the manufacture of Juno’s product candidates; Juno’s dependence on Celgene for the development and commercialization outside of North America and China of Juno’s CD19 product candidates and any other product candidates for which Celgene exercises an option; Juno’s dependence on JW Therapeutics (Shanghai) Co., Ltd, over which Juno does not exercise complete control, for the development and commercialization of product candidates in China; Juno’s ability to obtain, maintain, or protect intellectual property rights related to its product candidates; amongst others. For a further description of the risks and uncertainties that could cause actual results to differ from those expressed in these forward-looking statements, as well as risks relating to Juno’s business in general, see Juno’s Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on May 10, 2016 and Juno’s other periodic reports filed with the Securities and Exchange Commission. These forward-looking statements speak only as of the date hereof. Juno disclaims any obligation to update these forward-looking statements.

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