

## **Juno Therapeutics and Editas Medicine Announce Exclusive Collaboration to Create Next-Generation CAR T and TCR Cell Therapies**

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*Alliance combines Editas' genome editing technology and expertise and Juno's extensive CAR T and TCR platforms*

**Seattle, WA and Cambridge, MA, May 27, 2015** – Juno Therapeutics, Inc., a leading biopharmaceutical company focused on re-engaging the body's immune system to revolutionize the treatment of cancer, and Editas Medicine, a leader in genome editing, today announced an exclusive collaboration focused on creating chimeric antigen receptor (CAR T) and high-affinity T cell receptor (TCR) therapies to treat cancer. The companies will pursue three research programs together utilizing Editas' genome editing technologies, including CRISPR/Cas9, with Juno's CAR and TCR technologies.

"Encouraged by the clinical results we have seen to date with our product candidates, we are committed to accessing and investing in leading science to create next generation therapeutics that maximize benefits and increase the breadth of cancers we address," said Hans Bishop, CEO, Juno Therapeutics. "Editas' disruptive genome editing technology may unlock the ability of CAR T and TCR technologies to address a much wider range of cancers, giving hope to countless patients and families waiting for treatments."

"We are impressed and inspired by the scope and sophistication of Juno's scientific vision and the exceptional product development experience of the Juno team," said Katrine Bosley, CEO, Editas Medicine. "They are intensely focused on advancing T cell based therapies for cancer patients, and we share their ambition to significantly expand the types of cancers that can be treated with this approach."

Under the terms of the agreement, Juno will pay Editas an upfront payment of \$25 million and up to \$22 million in research support over the next five years across the three programs in the alliance. Editas is also eligible to receive future research, regulatory, and commercial sales milestones in excess of \$230 million for each program. Following the approval of any products resulting from the alliance, Editas is also eligible to receive tiered royalties.

### **About Juno's CAR T and TCR Platforms**

Juno is developing cell-based immunotherapies based on its chimeric antigen receptor, or CAR, and high-affinity T cell receptor, or TCR, platform to genetically engineer T cells to recognize and kill cancer cells. T cells are a type of white blood cells that identify and kill infected or abnormal cells, including cancer cells, in healthy individuals. Juno leverages its CAR and TCR platform to activate a patient's own T cells so that they attack cancer cells. Through genetic engineering, a gene is inserted for a particular CAR or TCR construct into the T cell enabling it to better recognize cancer cells. The CAR technology directs T cells to recognize cancer cells based on the expression of specific proteins located on the cell surface, whereas the TCR technology provides the T cells with a specific T cell receptor to recognize protein fragments derived from either the surface or inside the cell. CAR constructs typically use a single chain variable fragment, or scFv, to recognize a protein of interest. The modified T cells can be infused into the patient or frozen and stored for later infusion.

### **About Genome Editing**

Genome editing enables sequence-targeted modifications of DNA. Recent advances in this field have made it possible to modify almost any gene in the human body with the ability to directly turn on, turn off or edit disease-causing genes. This has the potential to address diseases that have previously been intractable to traditional gene therapy, gene knock-down or other genome modification techniques.

The CRISPR (clustered, regularly interspaced short palindromic repeats)/Cas9 (CRISPR associated protein 9) system, the newest genome editing approach, uses a protein-RNA complex composed of an enzyme known as Cas9 bound to a guide RNA molecule that has been designed to recognize a particular DNA sequence. The RNA molecules guide the Cas9 complex to the location in the genome that requires repair. CRISPR/Cas9 uniquely enables highly efficient knock-out,

knock-down or selective editing of defective genes in the context of their natural promoters, unlocking the potential to treat the root cause of a broad range of diseases.

### **About Juno**

Juno Therapeutics, Inc. is building a fully integrated biopharmaceutical company focused on revolutionizing medicine by re-engaging the body's immune system to treat 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 evidence of tumor shrinkage in the clinical trials in refractory leukemia and lymphoma conducted to date. Juno's long-term aim is to improve and 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.

### **About Editas Medicine**

Editas Medicine is a leading genome editing company and part of a transformational new area of health care – genomic medicine. The company was founded by pioneers and world leaders in genome editing bringing specific expertise in CRISPR/Cas9 and TALENs technologies. The company's mission is to translate its proprietary technology into novel solutions to treat a broad range of genetically driven diseases. For more information, visit [www.editasmedicine.com](http://www.editasmedicine.com).

### **Forward Looking Statements for Juno**

This press release contains forward-looking statements, including statements regarding commitments, clinical benefits, technology, company capabilities, hope, and vision, as well as the impact, benefits, and funding of collaboration between Juno and Editas. 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, and Juno's ability to finance these activities and 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 research institution 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 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 Annual Report on Form 10-K filed with the Securities and Exchange Commission on March 19, 2015 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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