



FINAL FOR RELEASE

## **Presage Biosciences Expands Collaboration with Takeda for CIVO™ Technology to Assess Cancer Drugs Directly in Solid Tumors**

*– Extension of 2012 Research Agreement Broadens Takeda’s Access to CIVO™ for Identification of Novel Drug Combinations –*

Seattle – November 12, 2014 –Presage Biosciences, an oncology company developing a radical new testing approach that incorporates human data much earlier in drug development and clinical trials, announced today that it has expanded its cancer research agreement with Millennium Pharmaceuticals, Inc., a wholly-owned subsidiary of Takeda Pharmaceutical Company Limited (TSE:4502).

The agreement is an expansion of the April 2012 cancer research agreement with Takeda that provides access to Presage’s proprietary CIVO™ technology platform to enable identification of novel oncology drug combinations in solid tumors. Presage and Takeda will evaluate hundreds of different combinations of drugs and preclinical models to guide clinical decision-making on Takeda’s pipeline agents. The agreement includes development and regulatory milestones related to identification of successful novel drug combinations. Additional details and terms of the agreement are not disclosed.

“We are pleased to have further strengthened our partnership with Presage,” said Christopher Claiborne, Ph.D., Head of the Oncology Drug Discovery Unit at Takeda. “Working with Presage gives us access to a new type and depth of decision-enabling data from directly within the native tumor environment, including drug resistance and sensitivity, microenvironment effects, immune responses, and drug synergies.”

“We look forward to continuing and expanding our work with Takeda, a leader in innovative oncology research, to identify novel drug combinations for treatment of solid tumor cancers,” said Nathan Caffo, President of Presage. “The goal of this collaboration is to use our CIVO™ arrayed microinjection technology to identify novel synergistic drug combinations based on biologically relevant in vivo systems much earlier in the drug development process.”

CIVO™ technology is currently being used preclinically to identify effective drug combinations, and it also can enable the incorporation of toxicity-sparing comparative drug efficacy data from human patients at several key points in the clinical trial process, ranging from pre-Phase 1 through assessment of novel combinations with approved drugs.

Presage is conducting a first-in-man feasibility study in collaboration with the National Cancer Institute (NCI) and the Fred Hutchinson Cancer Research Center, evaluating response to locally multiple microinjected drugs in lymphoma patients and evaluating the safety profile of CIVO microinjections. CIVO is also being employed in preclinical models including canine cancer patients and human xenograft tumors in mice to drive decisions on drug development programs.

#### **About Presage Biosciences**

Presage Biosciences is an oncology company pioneering the incorporation of human efficacy data much earlier in the drug development and clinical trial processes with its patented CIVO™ arrayed microinjection platform. The CIVO platform allows for simultaneous assessment of multiple drugs or drug combinations directly in a single solid tumor to assess efficacy, resistance and drug synergies. Presage partners with oncology-focused pharmaceutical companies through strategic alliances to provide in vivo data to validate novel targets, promote drug candidates to the right indications and discover effective drug combinations. Presage is also actively pursuing drug programs through in-licensing and is using CIVO to develop a portfolio of promising oncology therapies to advance to the clinic. Presage is privately held and based in Seattle. For more information, visit [www.presagebio.com](http://www.presagebio.com).

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#### **Media Contact:**

Kathryn Morris  
PR On Call  
845-635-9828  
[kathryn@proncall.com](mailto:kathryn@proncall.com)