Checkmate Pharmaceuticals Announces Start of Phase 1b Trial of CMP-001 in Combination with Anti-PD-L1 Immunotherapy in Anti-PD-1/PD-L1 Resistant Advanced Non-Small Cell Lung Cancer

CMP-001 Clinical Studies Expand into Second Tumor Type

CAMBRIDGE, Mass., April 24, 2018 – Checkmate Pharmaceuticals (Checkmate) announced that it had initiated treatment with CMP-001 combined with atezolizumab (TECENTRIQ®) in a Phase 1b clinical trial of patients with advanced non-small cell lung cancer (NSCLC) and disease progression on prior anti-PD-1/PD-L1 therapy.

CMP-001 is designed to activate innate immunity to convert "uninflamed" tumors, which generally do not respond to anti PD-1/L1 therapy, into "inflamed" tumors, which are responsive to PD-1 inhibition. When used in combination with PD-1/PD-L1 inhibitors, CMP-001 has the potential to increase the number of cancer patients who respond to checkpoint inhibitor therapies and to increase the magnitude and duration of the antitumor responses, possibly providing added clinical benefit.

"We are pleased to be advancing the clinical development of CMP-001 into a second tumor type," stated Art Krieg, founder and CEO of Checkmate Pharmaceuticals. "The mechanism of action of CMP-001 should apply across most or all tumor types, and so we expect CMP-001 to reverse PD-1 resistance in NSCLC, just as we reported for PD-1 resistant advanced melanoma last week at the 2018 American Association of Cancer Research Annual Meeting in Chicago," noted Dr. Krieg.

The trial is designed as a multi-center, open label, two-part Phase 1b study of CMP-001 administered in combination with atezolizumab with and without low-level radiation therapy. Part one of the study will evaluate CMP-001 (5 mg dose) administered subcutaneously (SC) weekly for two weeks and then intratumorally (IT) weekly for three weeks, followed by either SC or IT injection every three weeks.

In the second part of the trial, the combination of CMP-001 and atezolizumab therapy will be preceded by low-level radiation therapy to the target lesion. "In our ongoing melanoma trial we learned that patients whose tumors contain more plasmacytoid dendritic cells (pDC) appear to be more likely to respond to CMP-001 in combination with checkpoint inhibitor therapy. Low dose radiation therapy recruits pDC into tumors, and so we expect this triple combination regimen to increase the response rate to our therapy," explained Dr. Krieg. Patients will be monitored for safety and tolerability, as well as clinical response. Correlative studies will also be undertaken to characterize the immune effects of treatment in the blood and tumors.

About CMP-001

CMP-001, is a first-in-class CpG-A Toll-like receptor 9 (TLR9) agonist, that is encapsulated in a virus-like particle (VLP) and is designed to activate the innate immune system via TLR9 and mediate tumor control by the subsequent induction of both innate and adaptive anti-tumor immune responses,

thereby converting immunologically “cold” tumors to immunologically “hot” tumors. It is the only CpG-A class TLR9 agonist in clinical trials and differs from other CpG classes in clinical development by having a native DNA backbone that induces the highest levels of type I IFN. Based on analysis of gene expression in human tumors showing that increased IFN gene expression is associated with better response to PD-1 inhibition, it is believed that this mechanism of action may restore, enable or improve responses to anti-PD-1/PD-L1 therapeutics.

CMP-001 is being evaluated in multiple tumor types to assess its safety, activity, alternative routes of administration and combination with other immunotherapies and modalities. For information on CMP-001 trials that are currently recruiting patients, please visit www.clinicaltrials.gov.

TECENTRIQ® (atezolizumab) is a registered trademark of Genentech, a member of the Roche Group.

About Checkmate

Checkmate Pharmaceuticals is a clinical stage company that is leveraging its expertise in the field of CpG oligonucleotides to discover and develop immunotherapies designed to increase the efficacy of existing immunotherapies and to provide new treatment options for patients and their healthcare providers. Checkmate’s lead product candidate, CMP-001, is an investigational cancer immunotherapeutic that has been shown to reverse resistance to PD-1 therapy in some patients. Checkmate is a privately held company headquartered in Cambridge, MA.
Information regarding Checkmate is available at www.checkmatepharma.com.

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CONTACTS:

Company Contact:
Checkmate Pharmaceuticals, Inc.
Art Krieg, MD, CEO
akrieg@checkmatepharma.com

Media Contact:
MacDougall Biomedical Communications
Karen Sharma
781-235-3060
ksharma@macbiocom.com