Late-Breaking Abstract Reporting SRA737 Preclinical Activity in CCNE1-Driven and PARPi-Resistant Cancers Accepted for AACR 2018 Annual Meeting

VANCOUVER, March 14, 2018 /CNW/ - Sierra Oncology, Inc. (Nasdaq: SRRA), a clinical stage drug development company focused on advancing next generation DNA Damage Response (DDR) therapeutics for the treatment of patients with cancer, today announced that late-breaking preclinical results for its Chk1 inhibitor, SRA737, have been accepted for presentation in a poster at the American Association of Cancer Research (AACR) Annual Meeting 2018 being held in Chicago, Illinois from April 14-18. These data demonstrate that SRA737 is active as monotherapy in both *CCNE1*-driven cancer models and in cancer models resistant to poly ADP-ribose inhibitor (PARPi) therapy.

"Approximately 20% of high grade serous ovarian cancers harbor *CCNE1* amplification. These tumors do not harbor BRCA mutations and are generally resistant to PARPi therapy and platinum-based chemotherapy, leaving these patients with limited treatment options. *CCNE1* amplification is known to increase replication stress, making these tumors highly reliant on Chk1, a key regulator of the replication stress response, for survival," said Dr. Fiona Simpkins, Assistant Professor of Obstetrics and Gynecology at The Perelman School of Medicine, University of Pennsylvania, Philadelphia, Pennsylvania. "Consistent with this reliance on Chk1, we observed inhibition of tumor growth in an aggressive *CCNE1*-driven patient-derived xenograft. Interestingly, we found that SRA737 also demonstrates monotherapy activity in homologous recombination deficient tumor cells that have acquired resistance to either PARP inhibitors and/or platinum agents. These results reinforce that SRA737 is a promising drug candidate warranting clinical evaluation in these settings."

The company recently announced that its ongoing monotherapy Phase 1/2 trial for SRA737 was being expanded to include an additional genetically-defined cohort, targeting enrollment of 20 patients with *CCNE1*-driven ovarian cancer. Beyond ovarian cancer, *CCNE1* overexpression is prevalent across a number of tumor types under evaluation in Sierra's ongoing clinical development program, including non-small cell lung, colorectal, bladder, and cervical cancer.

Sierra Oncology also recently announced an agreement with Janssen Research & Development, LLC for the supply of TESARO's ZEJULA® (niraparib), an orally administered PARPi, facilitating the initiation of a combination trial of SRA737 with niraparib in patients with prostate cancer expected in the fourth quarter of 2018. The trial is to be led by Professor Johann de Bono, Regius Professor of Cancer Research, Head of the Division of Clinical Studies and Professor in Experimental Cancer Medicine at The Institute of Cancer Research and The Royal Marsden NHS Foundation Trust.

Poster Title: The novel oral Chk1 inhibitor, SRA737, is active in both PARP inhibitor resistant and *CCNE1* amplified high grade serous ovarian cancers
Session Title: Late-Breaking Research: Experimental and Molecular Therapeutics 3
Session Date and Time: Tuesday, April 17, 2018 from 1:00 PM - 5:00 PM Central Time.
Location: Poster Section 43
Poster Board Number: 9
Permanent Abstract Number: LB-265

The Poster will be available April 17, 2018 on the company's website at www.sierraoncology.com.

About Sierra Oncology
Sierra Oncology is a clinical stage drug development company advancing next generation DDR therapeutics for the treatment of patients with cancer. Our lead drug candidate, SRA737, is a potent, highly selective, orally bioavailable small molecule inhibitor of Checkpoint kinase 1 (Chk1), a key regulator of cell cycle progression and the DDR Replication Stress response. SRA737 is currently being investigated in two Phase 1/2 clinical trials in patients with advanced cancer: SRA737-01, a monotherapy study evaluating SRA737 in patients with tumors identified to have genetic aberrations hypothesized to confer sensitivity to Chk1 inhibition via synthetic lethality; and SRA737-02, a drug combination study evaluating SRA737 potentiated by low-dose gemcitabine. Sierra is also preparing for potential clinical studies of SRA737 in combination with other agents where there is a strong biological rationale for synergy with Chk1 inhibition, such as immune oncology therapeutics and other DDR inhibitors including PARP inhibitors.

Sierra Oncology is also advancing SRA141, a potent, selective, orally bioavailable small molecule inhibitor of Cell division cycle 7 kinase (Cdc7) undergoing preclinical development. Cdc7 is a key regulator of DNA replication and is involved in the DDR network, making it a compelling emerging target for the potential treatment of a

broad range of tumor types. For more information, please visit www.sierraoncology.com.

Cautionary Note on Forward-Looking Statements

This press release contains forward-looking statements within the meaning of the "safe harbor" provisions of the Private Securities Litigation Reform Act of 1995, including, but not limited to, statements regarding Sierra Oncology's anticipated clinical development and timing, and potential benefits of Sierra Oncology's product candidates. All statements other than statements of historical fact are statements that could be deemed forward-looking statements. These statements are based on management's current expectations and beliefs and are subject to a number of risks, uncertainties and assumptions that could cause actual results to differ materially from those described in the forward-looking statements. Such forward-looking statements are subject to risks and uncertainties, including, among others, the risk that Sierra Oncology may be unable to successfully develop and commercialize product candidates, SRA737 and SRA141 are at early stages of development and may not demonstrate safety and efficacy or otherwise produce positive results, Sierra Oncology may experience delays in the preclinical and anticipated clinical development of SRA737 or SRA141, Sierra Oncology may be unable to acquire additional assets to build a pipeline of additional product candidates, Sierra Oncology's third-party manufacturers may cause its supply of materials to become limited or interrupted or fail to be of satisfactory quantity or quality, Sierra Oncology's cash resources may be insufficient to fund its current operating plans and it may be unable to raise additional capital when needed, Sierra Oncology may be unable to obtain and enforce intellectual property protection for its technologies and product candidates and the other factors described under the heading "Risk Factors" set forth in Sierra Oncology's filings with the Securities and Exchange Commission from time to time. Sierra Oncology undertakes no obligation to update the forward-looking statements contained herein or to reflect events or circumstances occurring after the date hereof, other than as may be required by applicable law.

SOURCE Sierra Oncology

For further information: James Smith, Vice President, Corporate Affairs, Sierra Oncology, 604.558.6536, investors@sierraoncology.com