



## Team Progress Updates

### Van Andel Research Institute-SU2C Cancer Epigenetics Dream Team:

#### “The Epigenetics Dream Team II”



Building on the successes of the original SU2C Epigenetics Dream Team, the team is continuing to apply epigenetic therapies in combination with other treatments to multiple types of cancer, with clinical trials in three categories: immune sensitization, chemo sensitization, and novel target strategies.

In its immune sensitization work, the team has combined epigenetic agents with immune checkpoint therapy in lung, blood, and multiple solid cancer patients.

The team's chemo sensitization strategy involves testing a new epigenetic agent on chemotherapy-resistant colorectal cancer.

And the novel targeting strategies category comprises two projects: a trial using an epigenetic agent with a PARP inhibitor in acute myeloid leukemia patients, and a study of combining a vitamin C supplement with epigenetic agents in blood cancer patients.

The team has reported the following progress:

#### **December 2017**

- Enrolled 67 patients with advanced colorectal cancer in a clinical trial testing the epigenetic drug guadecitabine.
- Enrolled 20 MDS/AML patients in the clinical trial combining an epigenetic drug with vitamin C. The Team has observed that a single 500 mg Vitamin C tablet given daily was sufficient to restore normal vitamin C blood levels in the patients.
- Enrolled 15 patients with AML in a Phase I clinical trial where the safety of combining an epigenetic drug and a PARP inhibitor, is being tested. Extended survival has been observed in 4 patients.
- Continued clinical trials in lung cancer and MDS.

#### **June 2017**

- Continued to enroll patients in clinical trials.
- Completed enrollment in EVITA pilot project of randomized vitamin C supplementation in combination with epigenetic therapy in MDS and AML patients.

#### **December 2016**

- Continued to move forward with clinical trials in lung cancer, MDS, colorectal cancer, and AML, and the EVITA project on Vitamin C supplementation.





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### June 2016

- Continued to move forward with trials in lung cancer, acute myeloid leukemia, and myelodysplastic syndrome, testing whether epigenetic agents can sensitize the tumors to subsequent treatment.
- Began preclinical phase testing of an inhibitor of a gene called the enhancer of Zeste 2 polycomb repressive complex 2 subunit (EZH2i) in combination with chemotherapy in small cell lung cancer cell lines and mouse models. EZH2 is frequently over-expressed in a wide variety of cancer types.
- Began preclinical work on EVITA (Epigenetics, Vitamin C, and Abnormal Hematopoiesis). In this project, the Team will evaluate whether supplementation with Vitamin C (to restore normal Vitamin C levels) will improve the effects of epigenetic therapy in patients with MDS/AML.

### December 2015

- Enrolled patients in a clinical trial to test a combination of epigenetic agents to see whether they sensitize lung cancer patients to immune checkpoint therapy.

### June 2015

- Finished Phase I of a trial in colorectal cancer (begun during the first iteration of the Dream Team) to determine safety, efficacy, and appropriate dosing of combined SGI-110 and irinotecan.