**ABSTRACT**

**SNS-595: A Novel S-Phase Active Cytotoxic Acts Synergistically With Cytarabine To Reduce Bone Marrow Cellularity And Circulating Neutrophils.**

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**INTRODUCED BY** Judith Karp, M.D., Division of Hematologic Malignancies, Sidney Kimmel Cancer Center, Johns Hopkins University

**ABSTRACT #2321**

**Immature Neutrophils**

<table>
<thead>
<tr>
<th><em>SNS-595</em></th>
<th><em>Ara-C</em></th>
<th><em>Vehicle</em></th>
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<tbody>
<tr>
<td>20 mg/kg q4d x 2</td>
<td>18% Cellularity</td>
<td>50% Cellularity</td>
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<tr>
<td>10 mg/kg q4d x 2</td>
<td>50% Cellularity</td>
<td>50% Cellularity</td>
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<tr>
<td>Vehicle</td>
<td>N/A</td>
<td>50% Cellularity</td>
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**Mature Neutrophils**

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<th><em>SNS-595</em></th>
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<tbody>
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<td>50% Cellularity</td>
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<tr>
<td>5 mg/kg q4d x 2</td>
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<td>50% Cellularity</td>
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**Peripheral Blood Reflects Bone Marrow Recovery**

The changes in bone marrow cellularity following treatment with SNS-595, Ara-C or the combination were reflected in peripheral blood. A significant decrease in white blood cells and platelets occurred following combination treatment. A significant decrease in neutrophils occurred for the single agents and the combination treatment. (Data are from Exp #1 and are the Mean ± SE. Images at 10 x magnification).

**METHODS**

**Hematology and Hemostasis**

- Blood counts were performed in accordance with protocols approved by the Sunesis Pharmaceuticals, Inc., Institutional Animal Care and Use Committee and in accordance with local and Federal Regulations.

**CONCLUSIONS**

- These studies clearly demonstrate that the SNS-595/Ara-C combination synergistically reduces bone marrow cellularity with a subsequent timely recovery using doses significantly below single agent MTDs

- These data suggest that the SNS-595/Ara-C combination may be an effective treatment for acute leukemias

- A phase Ib clinical trial with SNS-595 in combination with Ara-C will be conducted in 2007

**DISCUSSIONS**

- The combination of SNS-595 (50% MTD) with Ara-C (33% MTD) was synergistic, decreasing bone marrow cellularity to 26% or less (Data are from Exp #1 and are the Mean ± SE. Images at 10 x magnification).

- Complete bone marrow recovery was observed following treatment with SNS-595 in combination with Ara-C

- For the SNS-595/Ara-C combination, bone marrow ablation and recovery were reflected in peripheral blood.

**REFERENCES**


- [2] Karp J. Division of Hematologic Malignancies, Sidney Kimmel Cancer Center, Johns Hopkins University

- [3] ClinicalTrials.gov Identifier: NCT00350024