Anti-PSMA x Anti-CD3 ADAPTIR™ Molecule, ES414, Inhibits Tumor Growth In Vivo in Mouse Models of Prostate Cancer

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ADAPTIR Therapeutics

Mechanism of Action

Multiple bispecific antibody fragments have been shown to bind/activate T cells in vitro and activate the target tumor in vivo. ADAPTIR molecules redirect T cell activity against tumor cell targets. ADAPTIR molecules are bispecific antibody-like therapeutics containing two sets of binding domains linked to immunoglobulin-like protein (scFv-scFv). ADAPTIR molecules are bispecific antibody-like therapeutics containing two sets of binding domains linked to immunoglobulin-like protein (scFv-scFv) that recognize tumor cell targets. ADAPTIR molecules are bispecific antibody-like therapeutics containing two sets of binding domains linked to immunoglobulin-like protein (scFv-scFv) that recognize tumor cell targets.

In Vivo Efficacy Model: C4-2B

Treatment Groups (n=12):

1. Control
2. T cells + 1 μg ES414
3. T cells + 3 μg ES414
4. T cells + 30 μg ES414

Table 1. Study Day 54 Serum PSA

<table>
<thead>
<tr>
<th>Treatment Group</th>
<th>Serum PSA (ng/mL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>22.0 ± 3.2</td>
</tr>
<tr>
<td>T cells + 1 μg ES414</td>
<td>12.8 ± 2.1</td>
</tr>
<tr>
<td>T cells + 3 μg ES414</td>
<td>9.1 ± 1.5</td>
</tr>
<tr>
<td>T cells + 30 μg ES414</td>
<td>3.1 ± 0.7</td>
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</tbody>
</table>

In Vivo Pharmacokinetics in BALB/c mice

<table>
<thead>
<tr>
<th>Study Day</th>
<th>Mean Conc. (μg/mL)</th>
<th>Std Error</th>
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</thead>
<tbody>
<tr>
<td>0</td>
<td>30</td>
<td>5.0</td>
</tr>
<tr>
<td>12</td>
<td>10</td>
<td>2.0</td>
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<tr>
<td>24</td>
<td>3.0</td>
<td>0.5</td>
</tr>
<tr>
<td>48</td>
<td>1.0</td>
<td>0.2</td>
</tr>
</tbody>
</table>

Summary

- In Vivo Efficacy: ADAPTIR antibody fragment platforms enable redirected T cell activity in vivo to achieve potent tumor growth inhibition.
- ADAPTIR molecules are bispecific antibody-like therapeutics containing two sets of binding domains linked to immunoglobulin-like protein (scFv-scFv).
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Conclusions

- ADAPTIR molecules are bispecific antibody-like therapeutics containing two sets of binding domains linked to immunoglobulin-like protein (scFv-scFv).
- ADAPTIR molecules are bispecific antibody-like therapeutics containing two sets of binding domains linked to immunoglobulin-like protein (scFv-scFv).
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References


ADAPTIR Molecule

ADAPTIR Technology

ADAPTIR™ is the new trademark for Emergent BioSolutions Inc.’s modular protein technology that was previously identified using the SCORPION™ (multi-specific antibody) platform.

Prostate cancer is the most common cancer in men. Although screening, radiation, surgery and hormone ablation therapy have been effective for many patients, a significant segment of patients develop recurrent, metastatic disease. Due to the high frequency of recurrent prostate cancer and the fact that patients can eventually develop resistance to all therapies, there is a need for new approaches to control disease progression.

Introduction


Emergent Product Development Seattle LLC, Seattle, WA, USA