Immuno-Oncology Platform - Proprietary Models (MDI)

Field of Application

Immune-modulating therapies are becoming increasingly important for treatment of cancer. Syngeneic tumor models provide a functional immune system to assess novel immunotherapeutic approaches. While classic syngeneic mouse models are based on the implantation of cultured cells, ProQinase' mouse-derived isograft (MDI) tumor models are propagated as tumor pieces in mice only. Hence, the major advantage of these novel tumor models is the preservation of primary tumor phenotype and intratumoral immune cell populations. The MDI tumors were derived from spontaneous tumors or carcinogen-induced tumors of mice.

Our Service

- MDI tumor models:

<table>
<thead>
<tr>
<th>#</th>
<th>Model</th>
<th>Origin</th>
<th>Creation</th>
<th>RNA-seq</th>
<th>anti-PD1</th>
<th>anti-CTLA-4</th>
<th>Combination</th>
<th>therapeutic window</th>
<th>relevant immune cells</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>JA-0009</td>
<td>adenocarcinoma</td>
<td>spontaneous</td>
<td>yes</td>
<td>low</td>
<td>low</td>
<td>low</td>
<td>2 weeks</td>
<td>M2 macrophages</td>
</tr>
<tr>
<td>2</td>
<td>JA-0017</td>
<td>spontaneous</td>
<td>ongoing</td>
<td>nd</td>
<td>nd</td>
<td>nd</td>
<td>&gt;6 weeks</td>
<td>nd</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>JA-2011</td>
<td>sarcoma</td>
<td>carcinogen</td>
<td>yes</td>
<td>low</td>
<td>low</td>
<td>nd</td>
<td>2 weeks</td>
<td>neutrophils</td>
</tr>
<tr>
<td>4</td>
<td>JA-2019</td>
<td>carcinogen</td>
<td>ongoing</td>
<td>high</td>
<td>high</td>
<td>nd</td>
<td>2 weeks</td>
<td>MDSCs/Tcells</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>JA-2041</td>
<td>carcinogen</td>
<td>ongoing</td>
<td>moderate</td>
<td>moderate</td>
<td>nd</td>
<td>3 weeks</td>
<td>MDSCs/Tcells</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>JA-2042</td>
<td>carcinogen</td>
<td>yes</td>
<td>moderate</td>
<td>moderate</td>
<td>high</td>
<td>2 weeks</td>
<td>Treg cells</td>
<td></td>
</tr>
</tbody>
</table>

- Characterization
  - all models were histologically characterized
  - growth curves were established for all models
  - all models were tested with reference compounds
  - RNA sequence data are available for selected models

- Flow Cytometric Analysis
  - Analysis of tumor infiltrating leukocytes and cells isolated from spleen and lymph nodes
  - Multicolor 17 marker panel: T cells, MDSCs, Macrophages, NK cells, B cells, DCs
  - Customized staining procedures are possible.

- Standard Study
  Comprises among other things: (i) Tumor implantation; (ii) Measurement of animal weight (3x / week); (iii) Determination of tumor size by calipering

- Optional Services
  (i) Blood sampling; (ii) Characterization of abundance and relative distribution of different immune cell subsets in the tumor and lymphatic tissues by flow cytometry (iii) paraffin embedding of tumor tissue or organs; (iv) Histological & pathological analysis; (v) Cytokine determination; (vi) Provision of tumor tissue for target validation; (vii) Magnetic resonance tomography; (viii) PET/CT.

ProQinase disclaims any warranty explicitly or implied that the use of this service is free from third party intellectual property claims unless this is explicitly stated.