Background

iNKT cells combat disease through direct and indirect mechanisms.

1. Invariant Natural Killer T (iNKT) cells are key effectors and regulators of immune responses, making them an ideal immunotherapy.

MINK Manufactured iNKT cells

MINK Therapeutics: iNKT cell-based allogeneic drug product -agent 797-

• Proprietary critical reagents and process enable manufacture of 95% pure iNKT cells with retained potency before and after cryopreservation.

• Off-the-shelf, scalable, on-lot when the patient needs them.

• Early-phase manufacturing capacity for in-house production of >100,000 doses/year.

Table 2: Summary of characteristics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>All patients (n=13)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>Median (range) 69 (60-77)</td>
</tr>
<tr>
<td>Sex, n (%)</td>
<td>Male 7 (54%) Female 6 (46%)</td>
</tr>
<tr>
<td>Treatment</td>
<td>Tocilizumab 11 (85%) Steroids 2 (15%)</td>
</tr>
<tr>
<td>AEs</td>
<td>No neurotoxicity or cytokine release syndrome observed</td>
</tr>
</tbody>
</table>

In cancer, iNKT cells rewire the tumor microenvironment. Specifically, they:

- Promote polarization of tumor-associated macrophages to a M1 phenotype.
- Deplete tumor-associated neutrophils.
- Reduce activity of myeloid-derived suppressor cells (MDSC).
- Induce an A32 mediated positive feedback loop which boosts the activity of other tumor-derived iNKT cells.
- Act as master regulators of immune cells.
- Recruiting and transdifferentiation of natural killer (NK) cells and T cells.
- Protect airway epithelial cells from damage.

In viral lung disease, iNKT cells:

- Induce maturation of immature DCs.
- Recruit NK cells and cytotoxic T cells.
- Control secondary bacterial overgrowth through cytokine secretion.
- Reduce activity of myeloid-derived suppressor cells.
- Clear inflammatory monocytes.
- Indicate rapid translocation of iNKT cells from blood into tissue.

Perfector mutant analysis of marker in donor patient and control

- Recombinant human cytokine (rhIL-7) administered with or without Tocilizumab

Conclusions

- Agent 797 [15] demonstrates a pronounced survival rate of 77% in mechanically ventilated elderly patients with COVID-ARDS and can be administered to 1x10^9 cells/dose with no DLRs, no neurotoxicity, and no cytokine release syndrome.

- MINK has established a proprietary manufacturing process and critical reagents to facilitate rapid iNKT cell production and global distribution at scale; cells are potent before and after cryopreservation and available when needed.

- Clinical trials in patients with solid tumors +/- CPIs, multiple myeloma, and viral ARDS are underway. Engineered CAR-iNKTs and iNKT engagers will advance to IND starting in 2022.

- MINK developed a digital PCR-based method to characterize agent 797 in patients; analysis of tissue distribution, persistence, and functional capacity of agent 797 are underway.

- MINK established a xenograft model for the study of agent 797 to recapitulate human iNKT cell distribution and evaluate efficacy in tumor models [poster #205].