RP01 for the treatment of Renal Cell Carcinoma

A therapy at the Intersection of
Systemic Metabolism and Tumor Metabolism

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High-impact Scientific Publications

[Lists of scientific articles and images]

Outstanding Collaborations

[Images and mentions of collaborations]

Research Attracted Pharma Collaborations/Awards

[AstraZeneca, Gilead]
The Global Market for Renal Cell Carcinoma

- RCC Market accounts for >90% of Kidney Cancers
- is expected to REACH $3.24 billion in 2025
- mAB market is PROJECTED to be $1.77 billion in 2025
- only 26 treatments in DEVELOPMENT for kidney cancer in US (end-2020)
- highest INCIDENCE rate in North America and West Europe
Renal Cell Carcinoma patients lack effective therapies

Current therapies have side effects and frequent resistance, with limited efficacy.

We aim to develop the first RP01 neutralizing antibody for the treatment of renal cell carcinoma
RP01 is increased in RCC patients and cause tumors in mice

**RP01 is increased in RCC patients**

- **High BP01** is associated with worse survival
- **RP01 increases renal gluconeogenesis**
- **Increased RP01 cause RCC tumors in mice**

### Levels of RP01 in Serum (pg/ml)

- **Low RP01** (n=49)
- **High RP01** (n=49)

### Renal glucose production (%)

- **8 hr fasted**: + + +
- **RP01**: - + +
- **Propranolol**: - - +

### Tumor number

- **P=0.0003**
The development of an RP01 neutralizing antibody is key for a solid POC. We have a clear GO / NO GO strategy.
**Future Plans with Blavatnik Fund**

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<td>Develop RP01 neutralizing antibody (RP01 ab)</td>
<td>Test if RP01ab reduces renal gluconeogenesis</td>
<td>Evaluate RP01ab’s efficacy against RCC mouse models</td>
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<td>External CRO</td>
<td>Fasting/diabetic mouse models</td>
<td>Xenograft tumor studies w/ RP01-high RCC human cell lines</td>
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<td>Spontaneous RCC mouse models</td>
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| Funding Timeline | $60K 6 months | $240K 6 months | Long-Term Proof of Concept |

**Longer Term Plan:**
We aim to form a metabolic oncology NewCo from this and other projects with related programs from Yale Collaborators.
RP01 blocking antibody has NO direct competitors

- There are NO THERAPEUTIC blocking antibodies for RP01 developed or in development

- Approved DRUGS for RCC have limited efficacy in ADVANCED DISEASE

- Increased circulating RP01 is IMPLICATED in other diseases

  - Future Market Opportunities:
    - Muscle-manifesting mitochondrial disorders
    - Chronic hyperinsulinemia, obesity, insulin resistance, T2D
    - Coronary heart disease
Thank You!

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