FGF-21 for the treatment of Renal Cell Carcinoma

A therapy at the Intersection of Systemic Metabolism and Tumor Metabolism

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Business

High-impact Scientific Publications

Outstanding Collaborations

Research Attracted Pharma Collaborations/Awards
The Global Market for Renal Cell Carcinoma

- 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 FGF-21 neutralizing antibody for the treatment of renal cell carcinoma.
FGF-21 is increased in RCC patients and cause tumors in mice

FGF-21 is increased in RCC patients

High FGF-21 is associated with worse survival

FGF-21 increases renal gluconeogenesis

Increased FGF-21 cause RCC tumors in mice
The development of an FGF-21 neutralizing antibody is key for a solid POC.

We have a clear GO / NO GO strategy.
## Future Plans with Blavatnik Fund

### Longer Term Plan:
*We aim to form a metabolic oncology NewCo from this and other projects with related programs from Yale Collaborators*

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<th>Goal</th>
<th>Stage I</th>
<th>Stage II</th>
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<tr>
<td><strong>Goal</strong></td>
<td>Develop FGF-21 neutralizing antibody (FGF-21ab)</td>
<td>Test if FGF-21ab reduces renal gluconeogenesis</td>
<td>Evaluate FGF-21ab’s efficacy against RCC mouse models</td>
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<tr>
<td><strong>Method</strong></td>
<td>External CRO</td>
<td>Fasting/diabetic mouse models</td>
<td>Xenograft tumor studies w/ FGF-21-high RCC human cell lines</td>
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<td><strong>Funding Timeline</strong></td>
<td>$100K 6 months</td>
<td>$200K 6 months</td>
<td>Long-Term Proof of Concept</td>
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FGF-21 blocking antibody has NO direct competitors

- There are NO THERAPEUTIC blocking antibodies for FGF-21 developed or in development

- Approved DRUGS for RCC have limited efficacy in ADVANCED DISEASE

- Increased circulating FGF-21 is IMPLICATED in other diseases
  - Future Market Opportunities:
    - Muscle-manifesting mitochondrial disorders
    - Chronic hyperinsulinemia, obesity, insulin resistance, T2D
    - Coronary heart disease
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Thank You!

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