Executive Summary

**Company:** AfaSci, Inc., is a private biopharmaceutical company with a mission to discover and develop transformative medicines for neurological disorders with a focus on pain, epilepsy, and essential tremor. We are developing non-opiod, non-NSAID orally-available new analgesics for treatment of debilitating chronic pain and central nervous system (CNS) disorders.

**Platform Technology:** AfaSci has conducted its core drug discovery activities in house, including chemical design, electrophysiology, and in vivo pharmacology using established animal disease models. We are focusing on two main drug targets: (1) T-type Cav3 channels (Cav3), which are overactivated in chronic pain and a rare type of epilepsy, and (2) sEH, an enzyme involved in inflammation. We have conducted lead optimization to fine-tune the Cav3 vs sEH inhibition in each drug candidate to tailor their effects to restore CNS functions and achieve anti-inflammation in different disorders. Three lead preclinical drug candidates include:

- **AFA-281** dual-modulates Cav3 and sEH to treat chronic neuropathic and inflammatory pain. IND-enabling studies on AFA-281 are ongoing. IND application and clinical Phase I trials are planned for mid 2022.
- **AFA-279** mainly modulates Cav3 to treat a rare type of epilepsy and essential tremor. IND-enabling studies are planned for early 2022.
- **AFA-280** inhibits sEH to treat inflammatory pain and neuroinflammation; IND studies are planned for mid-2022.

**Intellectual Property:** AfaSci has a strong IP position and our granted patents have long patent life.

<table>
<thead>
<tr>
<th>Type</th>
<th>Status</th>
<th>Geography</th>
<th>Patent title</th>
<th>Assignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Composition of matter</td>
<td>Granted 2020 and 2021</td>
<td>US, Japan, South Korea, Russia, Mexico, Singapore, China (allowance)</td>
<td>Ion channel inhibitory compounds, pharmaceutical formulations, and uses</td>
<td>AfaSci</td>
</tr>
<tr>
<td></td>
<td>PTC pending</td>
<td>Europe and 9 other countries</td>
<td></td>
<td></td>
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<tr>
<td>Composition of matter</td>
<td>Granted 2019</td>
<td>US</td>
<td>Compositions and method for treating acute and chronic pain by localized antagonism of CGRP receptors, or combination with sodium channel inhibition or with anti-inflammatory agent</td>
<td>AfaSci</td>
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<tr>
<td>Method of treatment</td>
<td>Granted 2017</td>
<td>US</td>
<td>Tricyclic pyrone compounds reduce amyloid beta aggregates</td>
<td>AfaSci, KSU, UC Davis</td>
</tr>
</tbody>
</table>

**Market Opportunity**

- The global pain management drug market was valued at $71B in 2019 and is projected to reach $92B by 2027 with a compound annual growth rate (CAGR) of 3.8% from 2020 to 2027 (Allied Market Research).
- The global antiepileptic drug market was $16.6B in 2018 and is projected to reach $20.3B by 2026 with a CAGR of 2.4% (Fortune Business Insights).
- There are 7 million patients with essential tremor in the US, and effective treatment is lacking. Although the market size was $160M in 2020, it is projected to reach $216M by 2025 with a CAGR of 5.3% (Orion Market Reports). A new, safe, and effective essential tremor drug could grow this market significantly.

**Use of Proceeds:** AfaSci seeks $30M in Series A financing, in parallel to exploring opportunities for licensing and partnering with pharmaceuticals to advance our three preclinical drug candidates to clinical Phase I trials and proof of concept studies. The initial goal is to demonstrate each molecule's safety. The secondary goal is to investigate early efficacy in chronic pain. The third goal is to extend studies to other indications such as irritable bowel syndrome, hypersensitive coughing, and persistent itching, for which we have proof of concept in animal disease models.

**Management**

- Simon Xie, M.D. Ph.D., AfaSci’s Founder and CEO. He previously led mechanistic studies on novel antiepileptics and analgesics (e.g., lamotrigine and 4030W92), and ion channel drug discovery at GlaxoWellcome (GSK).
- Chih-Ping (CP) Liu, Ph.D. Member of the Board of Directors. He co-founded Bolt biotherapeutics and 4 others.
- Scientific advisors Prof. D. Yeomans, Prof. S. Shafer, and Prof. C. Bountra are key opinion leaders in the field.

**Exit Strategy:** Our exit strategy is flexible. We will consider all options including Initial Public Offering, Special Purpose Acquisition Company, or Merger and Acquisition.