*Include 3 bullets (< 30 words total) per slide – the most important messages associated with the particular slide*

Team name: Astrodepressants

Date updated: 10/10/2019

|  |  |
| --- | --- |
| S1: Title  & Elevator Pitch/Headline | * Antidepressants Targeting Astrocytes |
| S2: The problem and who has it | * 50% of people with depression do not respond to current antidepressants. * Current generic and branded antidepressants take 3 weeks to exert their effects, often requiring the prescription of other drugs. * All drugs in the market target neurons but there are no drugs targeting other brain cells. * NMDAR antagonist Ketamine has demonstrated rapid antidepressant effects, but side effects and abuse potential limit broad utility |
| S3: The solution | * Developing antidepressants that target Astrocytes, which are brain cells that activate neurons by releasing neurotransmitters into synapses. |
| S4: Product (how it addresses the problem) | * Selectively reducing astroglial release of neurotransmitters results in a decrease in NMDAR activity and antidepressant effects, which are as fast as ketamine´s but without its side effects. |
| S5: Technology | * Small molecule (Rx3B) which binds to the target protein, has effects *in vitro* at nM range and induced antidepressant effects when administered systemically in rats that underwent chronic restraint stress. |
| S6:  Competing approaches | * Esketamine is a version of ketamine that can be administered nasally. It has been approved by the FDA recently, but still requires to be administered by a doctor. |
| S7:  Traction | * Funding: $700K in non-dilutive grants. * We have published over 7 papers on the role of our target in psychiatric disorders, including depression, anxiety and memory. * We have setup active collaborations on this topic with several labs in Chile, Belgium, Germany and France. |
| S8:  Team | **Investigators:**   * Dr. Jimmy Stehberg (*in vitro*, *in vivo* models). * Dr. Felipe Simon (*in vitro* screening). * Dr. Danilo González (In sillico work; small molecules).   **Collaborators:**   * Fraunhofer IME, Germany. * UGhent, Belgium (Luc Leybaert). * KULeuven, Belgium (Geert Butynck). * UDD, Chile, (Mauricio Retamal).   **Advisors:**   * Nancy Levy * Francisco Chiang * Amanda Wagner |
| S9:  Closing |  |