Drug Delivery through the Blood Brain Barrier
THE BBB – AN OBSTACLE FOR DRUG DEVELOPMENT

>98% OF DRUGS CANNOT CROSS THE BBB

DON’T CROSS THE BBB
(98% of small molecules)
DRUG DEVELOPMENT NOT POSSIBLE

CROSS THE BBB
(2% of small molecules)
DRUG DEVELOPMENT ENABLED
OUR DRUG CONTROLS THE MASTER SWITCH FOR THE BBB

“normal” guardLig signaling

→ BBB closed

D²B³-01*

→ BBB open

* Multi-jurisdictional patent protection (composition of matter and methods)
**D²B³-01**

**BRAIN SPECIFIC**

- **CUMULATIVE**
  - **TRANSACTION AND REVERSIBLE**
  - **SAFE**
    - guardR pathway disruption well tolerated in humans
    - low immunogenicity (human IgG2)

**CTRL IgG + Doxorubicin 2.5 mg/Kg**

- AUC : 13.58 ug/g.h

**ng (dye) / mg (organ)**

- Brain
- Lung
- Heart
- Kidney

**ng (dye) / mg (brain)**

- CTRL IgG + Doxorubicin 2.5 mg/Kg
- CTRL IgG

**ug (doxorubicine) / g (brain)**

- Time after ChemoTx injection (h)

**Baseline**

- Rapid onset in <1h
- Fully reversible in 6h

**Theoretical limit**

- 6 uG ChemoTx / g (brain)
D²B³-001 DELIVERS ACTIVE MOLECULES OF UP TO 70kDa

Brain Tumors (chemoTx)

Brain Infection (antibiotics, antifungals, metronidazole)

Neurodev. disorders (ALS, Prader Willi, Alan Hernon Dudley Syndrome, Angelman, ...)

Neurodeg. disorders (AD, Parkinsons, Huntingtons, ...)

Chronic pain (analgesics)

Brain Imaging (i.e. amyloid, cancer)

D²B³ delivery size range: 0 - 70 kDa
**BRAIN CANCER**

**D²B³-001 ENABLES CHEMO-Tx TREATMENT OF GLIOBLASTOMA IN MICE**

- **d0** Tumor injection
- **d7**
- **d14**
- **d21**
- **d28**

1. **ctrl Ab or D²B³-001**
2. **chemo Tx**

**MRI + Whole brain imaging**

- **Uncontrolled tumor growth**
- **High lethality**

- **Drastically reduced tumor growth**
- **Increased survival**
D²B³ BUSINESS STRATEGY

- Shared drug pipeline
- PHARMA PARTNERSHIPS
- EQUITY CAPITAL
- IN-HOUSE DRUG PIPELINE
- FOLLOW-ON INDICATIONS

Raising $15M

- 24 months runway
- CMC
- IND in < 18 months
- Initiate Ph1/2 clinical trial

D²B³

Shared drug pipeline

EQUITY CAPITAL

FOLLOW-ON INDICATIONS

PHARMA PARTNERSHIPS
WE ARE D$^2$B$^3$

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