



SAGETIS BIOTECH

JULY 2012

July, 2012

Non-Confidential

OUR COMPANY

Founded in April 2010, our team has been working on our technology for 4 years.

We are a spin-off from IQS (University Ramon Llull) based in Barcelona.

- Lab. Facilities in IQS
- Office in Barcelona Activa

We are a drug delivery company that is focused on developing technologies that enable drugs to cross the Blood-Brain Barrier.

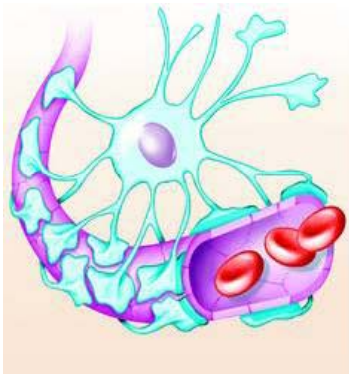
VALUE PROPOSITION

“Provide a solution to a major bottleneck for pharmaceutical companies when developing new drugs for CNS diseases”

**Crossing the Blood Brain
Barrier**

CURRENT CHALLENGE & PROPOSED SOLUTION

THE BLOOD-BRAIN BARRIER



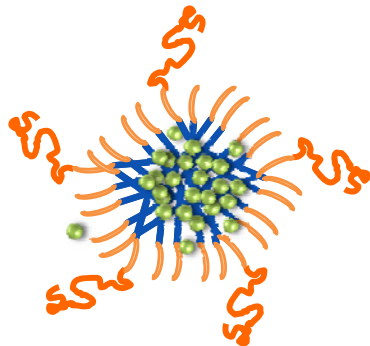
The **Blood Brain Barrier** (BBB) is a separation between the circulating blood and the cerebrospinal fluid

- It limits the free exchange between blood and brain tissue
- It acts as a **self-protection for the brain** against damaging chemicals

Only certain types of molecules can cross the BBB

- Only **2% of small molecules**
- Almost **no large molecule**

This leads to VERY FEW VALIDATED CANDIDATES!!!

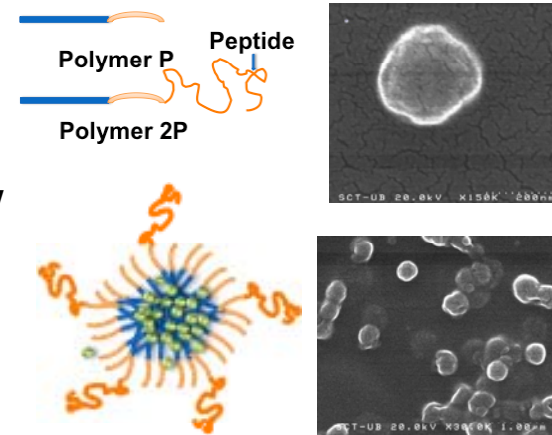


We have developed a universal drug delivery technology based on biodegradable nanoparticles. These nanoparticles allow for:

- **Enhanced Brain uptake**
- **Release of a loaded API in a sustained way**
- **Protection of the API inside the nanoparticle while circulating in the blood stream**

TECHNOLOGY PLATFORM

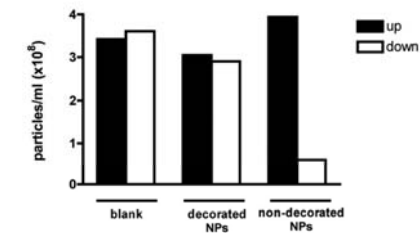
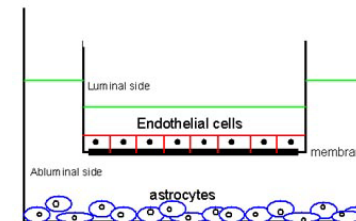
- **Peptide coated nanoparticles (NP) that cross BBB through a transcytosis mechanism**
- **Nanoparticles made with polymer that combines rigid hydrophobic polyester moiety with flexible hydrophilic PEG chain**
- **Negatively charged, particle sizes between 100-200 nm with low Polydispersion index**
- **Broad range of loadable API**
 - Lipophilic to hydrophilic
 - Proteins, peptides, genetic material
- **2 different ways to obtain NP**
 - Nanoprecipitation (lipophilic API)
 - Double emulsion (both hydrophilic and lipophilic API)
- **Possibility to use different peptides and molecules outside, thus enabling a very versatile targeting strategy**
- **Nanoparticles can be freeze dried or frozen**
- **Drug load up to 10%, dissolved inside nanoparticles (lipophilic compounds)**



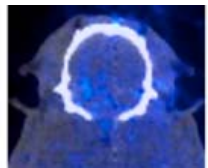
BBB PASSAGE

In vitro BBB model barrier

- In vitro model has shown viability and it is working well.
- 3 kinds of wells were tested
 - 1 with no barrier
 - 2 with barrier
 - 1 with non-decorated nanoparticles
 - 1 with peptide-decorated nanoparticles



In vivo BBB passage



- Study with radiolabelled NP
 - Images confirmed passage
 - K_i (Unidirectional index rates) determined:
 - Peptide coated NPs: Values as good as or better than highest found in literature

GRACIAS POR SU ATENCIÓN!!!