inpart Industry Call for Opportunities

Molecular Strategies for Targeted Drug Delivery to the Joints

Our client, a global biotechnology company, is seeking novel approaches for **site-specific targeting of therapeutics to the joint, with a specific focus on cartilage tissues**. Approaches should enable therapeutics **delivered systemically to be targeted to joint tissues**. Enhanced delivery of oligonucleotides and biologics is of particular interest.

Approaches of Interest:

- Molecular approaches to achieve targeting to cartilage, specifically **chondrocytes**, or the endplate via systemic delivery is prioritised. Targeted delivery to joint connective tissue or the synovium is also of interest.
- Our client is interested in delivery of **oligonucleotides** (siRNA, ASOs, saRNA, aptamers, etc.), **biologics** (antibody formats, recombinant proteins, peptides, etc.) and **small-molecule** drugs.
- Techniques should achieve **site-specific targeting**, improve **biodistribution profile tailored to the joints**, and/or allow for **sustained/controlled release** to improve half-life within joint tissues.
- Low priority: Targeting of disease mechanisms, pathology or cell types within the joint (e.g. arthritis).

Joint Delivery Methods:

- **Targeting Molecules**: peptides, lipids, glycans, antibodies and fragments thereof, aptamers, small molecules.
- **Advanced Chemistries**: biorthogonal click chemistry, degradable linker chemistries for drug conjugates, biodegradable or stimuli-responsive prodrug chemistries (pH and enzyme responsive).
- **Delivery Vehicles or Formulations**: macromolecular drug nanocarriers (oligomeric, dendrimeric, and polymeric nanoparticles, lipid nanoparticles, and liposomes) and/or soluble bioconjugates consisting of peptides or antibodies and fragments thereof, small molecules, lipids, glycans, polymers, etc.
- **Opportunities should have *in vivo* data (rodent or non-rodent) showing targeting/sustained delivery to the cartilage**.

Out of Scope:

- Intraarticular injection to the joint capsule, or other non-systemic delivery methods.
- Approaches with only *in vitro* or *ex vivo* data.

Submission Information & Opportunity for Collaboration

Submission of 200–300-word briefs is encouraged, along with any supplementary information e.g. relevant publications, patents or slide decks. The team encourages including the proposed next steps in developing the research towards commercialization. In submitting to this campaign, you confirm that your submission contains only non-confidential information.

Our client is open to a range of collaboration opportunities, with the most appropriate outcome being decided on a case-by-case basis. Example outcomes include funded research collaborations and agreements or licencing of assets.

Opportunities sought

- Technologies
- Academics and expertise
- Centres of excellence
- Research projects
- Spinout companies
- Biotech assets

Submissions

Please submit relevant, non-confidential opportunities to **Karla Schramm** at **kschramm@usf.edu**

Deadline: **28th April 2025 - 4:59 pm GMT**

Have any questions?
Contact **Karla Schramm** at **kschramm@usf.edu**