

## Novel Strategies for Targeted Drug Delivery to CNS, Bone, Cartilage, Skeletal Muscle and Kidney Tissues



Our client, a global leader in the rare disease space, is seeking novel strategies for **tissue-specific drug delivery to the central nervous system (CNS), bone, connective tissue/cartilage, skeletal muscle, kidney and heart tissues**. Key target cell types include (but are not limited to): CNS – neurons, microglia and astrocytes, muscle – myofibers and satellite cells, kidney – podocytes and tubular epithelial cells, bone and cartilage – mesenchymal stem cells, osteo- and chondro- progenitor cells and osteoblasts.

Approaches should be capable of delivering one or more of: viral and non-viral nanoparticles, oligonucleotides, mRNAs, biologics. Delivery of nucleic acids, proteins and antibodies are a priority. Technologies and approaches which can be applied to multiple/existing drug molecules, payloads or sites are of high interest. **Submissions should outline how the approach can achieve targeting one of the listed tissues**. The team is also interested in approaches that achieve improved/selective biodistribution profile, sustained release, increased efficacy or therapeutic index, and/or reduced toxicity.

### Approaches of Interest:

- Targeting molecules E.g., peptides, lipids, glycans, antibodies and fragments thereof, oligonucleotides, small molecules
- Advanced chemistries E.g., click chemistry, linker chemistries for drug conjugates, biodegradable or stimuli-responsive prodrug chemistries
- Delivery vehicles or formulations E.g., drug nanocarriers (inorganic, polymer, and lipid nanoparticles), exosomes, liposomes, *in situ* gels, micelles, micro fluids, dendrimers, emulsion particles, magnetic particles, microbubbles
- Novel delivery strategies or devices E.g., oral and injectable formulations, magnetic and microelectromechanical systems, implantable drug delivery devices

**Out of Scope:** Cell-therapy based solutions, and approaches for oncology or infectious diseases.

### Developmental Stages of Interest:







- Opportunities from early studies to phase III are within scope
- Opportunities should have *in vitro* validation of targeted delivery to one of the specified tissues. Approaches with *in vivo* validation in large animal models are of highest interest

### Submission Information and Opportunity for Collaboration

Submission of one-page, 200–300-word briefs is encouraged, along with any optional supplementary information e.g. relevant publications. The team encourages including any proof-of-concept data, along with your 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 online [here](#)

Deadline: **30th September 2024 - 10:59 pm GMT**

### Have any questions?

Contact our team at [discover@in-part.co.uk](mailto:discover@in-part.co.uk)