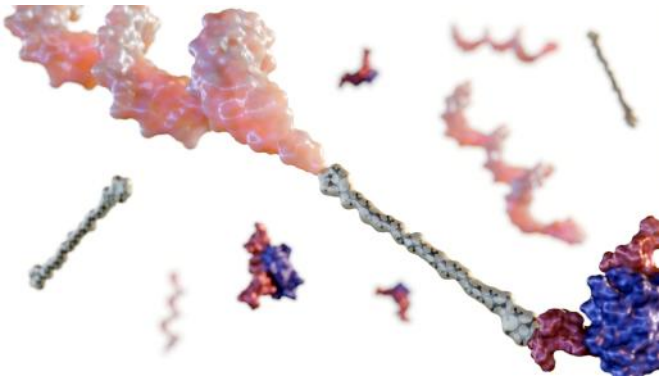
PROJECT NUMBER

16530, 17372

Novel variants of cell penetrating peptides to improve therapeutic delivery

A new CPP design optimises Arginine placement to boost delivery efficiency and minimise toxicity, resulting in significantly improved therapeutic delivery performance.

Applications: Drug delivery, gene therapy, diagnostics, RNA therapeutics, personalised medicine



Features	Benefits
A small CPP able to effectively transport other molecules into cells	Favourable efficacy of therapeutic delivery with good penetrance to a target cell of interest
Can be covalently linked to a range of therapeutic molecules	Enables delivery of varied therapeutic cargo molecules including, but not limited to antisense oligonucleotide therapies, targeting both systemic and rare diseases

Features	Benefits
Novel arginine rich and hydrophobic domains with improved characteristics	The position of the arginine residues determines efficacy/toxicity trade-off of CPPs, and arrangement is optimised for less toxicity compared to current CPPs as demonstrated in vivo after systemic delivery suggesting improved clinical applicability
Demonstrated efficacy in skeletal muscles both in vitro and in vivo with therapeutic cargo	Enables targeted therapies, such as for heritable genetic diseases of neuromuscular and musculoskeletal systems with proof-of-concept in a mouse model of Myotonic Dystrophy

Patented and Available for

- Co-development
- Consulting
- Licensing

To find out more, contact enquiries@innovation.ox.ac.uk and quote the project number.

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