

# Aptamers – the ‘animal free’ alternative to antibodies

Aptasol are seeking partners to help develop and to adopt their animal-free aptamer technology to replace the use of antibodies generated *in vivo*.

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## What could the Solution be used for?

We provide synthetic nucleic acid aptamers that can be used to replace animal-derived antibodies in almost any application. Current applications include:

- **Imaging experiments:** fluorescence, bright field and phase contrast, IHC, ICC
- **Quantification:** ELISA (or ELONA), homogeneous assays etc.
- **Rapid diagnostics:** Lateral flow devices, biosensors, electrochemical detection, nano-wires
- **Binding studies:** Dot blots, western blots, label free detection, SPR, Biolayer Interferometry
- **Purification:** affinity chromatography

## Need for collaboration

We are seeking partners in the following areas:

1. Partners who want to try aptamers in traditional assay platforms

We aim to replace animal-derived antibodies in a wide range of applications and assays where they are ordinarily employed. We are seeking collaborators to demonstrate the use of aptamers in these applications.

2. Partners to help develop novel applications for aptamers

We are also developing new aptamer selection processes to expand our customer offering. A key area of interest here is the development of aptamer reporter molecules for important proteins, significant co-factors as well as metabolites and other small molecules, including drugs.

## 3Rs impact assessment

In 2013 in Great Britain alone, nearly 10,000 procedures were carried out in animals, including rodents, rabbits, ferrets, birds and non-human primates, to create monoclonal and polyclonal antibodies. It is not unusual for tens of animals to be sacrificed for each selected antibody; for example, multiple mice are often immunised in order to ensure success. Additionally, the failure rate of antibody projects for certain targets is high, leading to multiple attempts when antibodies are not found, further increasing animal use.

By replacing antibodies with aptamers we can replace the animal requirement altogether.

To find out more or to connect with the technology developer contact [crackitenquiries@nc3rs.org.uk](mailto:crackitenquiries@nc3rs.org.uk)

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aptasol

start with the end in mind

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