

**P004** Supporting the discovery of potent and selective inhibitors of the novel target for immunosuppression, Monocarboxylate Transporter 1 (MCT1): the impact of molecular biology on drug discovery

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In recent years molecular biology has played an increasingly important role in the process of drug discovery. We describe the impact of molecular biology on a program to discover inhibitors of a novel target for immunosuppression, the monocarboxylate transporter MCT1 (SLC16A1).

Molecular biology has been successfully applied to MCT1 target identification and validation; the initiation of an MCT1 high throughput compound screening campaign; the development of tools and assays to investigate compound potency and selectivity; and the identification and generation of MCT family members from multiple species in the support of compound efficacy, pharmacokinetic and safety studies.

These approaches have significantly facilitated the identification of compounds that are the first examples of highly potent and selective inhibitors of the MCT1 transporter.