

Principal Investigator

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Summary of research

Key words: Diabetes

1a: This proposal seeks access to UK Biobank data to support efforts to identify genetic variants contributing to predisposition to T2D and related traits (such as the complications of diabetes), and to leverage those discoveries to obtain insights into disease biology and to drive translational developments.

The applicants are world-leaders in the genetics of T2D and related traits and have together played leading roles in the major global discovery efforts for these phenotypes. UK Biobank data offers many opportunities to augment, extend and enrich existing research in this area.

1b: The research we plan is entirely congruent with the stated aim of UK Biobank to improve "the prevention, diagnosis and treatment of a wide range of serious and life-threatening illnesses"

Diabetes was specifically listed as one of the target conditions for UK Biobank.

The mechanistic inferences that can be derived from well-powered and well-designed human genetic discovery efforts underpin efforts to offer improved strategies for prevention, diagnosis and treatment.

1c: We will start by searching for genetic differences that are associated with type 2 diabetes and/or related traits (initially at the baseline visit, and subsequently on follow-up). We will integrate the data provided by UK Biobank with other studies that we have conducted to extend the list of these genetic differences. We will then use this information to support efforts to identify pathways implicated in diabetes development, and to identify those which might be most suitable for therapeutic manipulation.

1d: We wish to study the full cohort.