**Funding Source:** Wellcome Trust

**Proposed start date:** 01.10.2024

**Eligibility:** UK applicants only

**Department/School:** Leicester Diabetes Centre (Population Health Sciences)

**Supervisors:** Prof. Sam Seidu ([sis11@le.ac.uk](mailto:sis11@le.ac.uk)) Prof. Louise Goff ([louise.goff@leicester.ac.uk](mailto:louise.goff@leicester.ac.uk)), Dr Yogini Chudasama ([yc244@leicester.ac.uk](mailto:yc244@leicester.ac.uk))

**Project Title:** Ethnic Disparities in Type 2 Diabetes: Investigating the Impact of different pharmacotherapeutic agents on Glycaemic Control among Black Population

**Project Description:** This project addresses Type 2 Diabetes (T2D) disparities among minority ethnic groups, specifically focusing on the black population. Research shows that minority ethnic groups face a higher risk of T2D and experience a more aggressive onset compared to white Caucasians. While T2D in South Asians and white Caucasians has been studied extensively, our understanding of T2D in the black population is limited. The research investigates insulin secretory deficiencies in early-stage T2D among black individuals, possibly linked to beta cell fatigue. The project suggests that early intervention to preserve insulin secretory capacity, like using insulin therapy, may help slow T2D progression in black populations. Surprisingly, the impact of ethnicity on these aspects remains largely unexplored, despite evidence supporting the benefits of early intensive insulin treatment in T2D management. This project aims to assess the impact of T2D, metabolic and anthropometric characteristics, and different therapeutic approaches on glycaemic control among black individuals compared to other ethnic groups. To achieve these, we will use evidence synthesis, qualitative study design, and real-world data analysis, including the Clinical Practice Research Datalink (CPRD). This research can uncover tailored treatment strategies to address T2D disparities and improve long-term glycaemic control in newly diagnosed black individuals with T2D.

**References:**

1. Tillin T, Hughes AD, Godsland IF, Whincup P, Forouhi NG, Welsh P, et al. Insulin resistance and truncal obesity as important determinants of the greater incidence of diabetes in Indian Asians and African Caribbeans compared with Europeans: the Southall And Brent REvisited (SABRE) cohort. Diabetes Care. 2013 Feb;36(2):383–93.

2. Cignarelli A, Genchi V, Perrini S, Natalicchio A, Laviola L, Giorgino F. Insulin and Insulin Receptors in Adipose Tissue Development. Int J Mol Sci. 2019 Feb;20(3):759.

3. Osei K, Schuster DP. Ethnic Differences in Secretion, Sensitivity, and Hepatic Extraction of Insulin in Black and White Americans. Diabet Med. 1994;11(8):755–62.

4. Stefan N, Stumvoll M, Weyer C, Bogardus C, Tataranni PA, Pratley RE. Exaggerated insulin secretion in Pima Indians and African-Americans but higher insulin resistance in Pima Indians compared to African-Americans and Caucasians. Diabet Med. 2004/09/24. 2004;21(10):1090–5.

5. Hannon TS, Bacha F, Lin Y, Arslanian SA. Hyperinsulinemia in African-American adolescents compared with their american white peers despite similar insulin sensitivity: A reflection of upregulated β-cell function? Diabetes Care. 2008 Jul;31(7):1445–7.

6. Li Y, Xu W, Liao Z, Yao B, Chen X, Huang Z, et al. Induction of Long-term Glycemic Control in Newly Diagnosed Type 2 Diabetic. Diabetes Care. 2004;27(11):2597–602.

7. Weng J, Li Y, Xu W, Shi L, Zhang Q, Zhu D, et al. Effect of intensive insulin therapy on beta-cell function and glycaemic control in patients with newly diagnosed type 2 diabetes: a multicentre randomised parallel-group trial. Lancet (London, England). 2008 May;371(9626):1753–60.

8. Ryan EA, Imes S, Wallace C. Short-term intensive insulin therapy in newly diagnosed type 2 diabetes. Diabetes Care. 2004 May;27(5):1028–32.

**Funding details:**

*Students on this programme will be supported by a generous funding package. This will include:*

* *Postgraduate research fee waiver at standard College of Life Sciences UK rates for three years of the PhD*
* *Wellcome Trust stipend covering your salary for all three years of the PhD*
* *Research grant for training, research and travel costs*

**Entry requirements:**

Applicants are required to hold/or expect to obtain a UK Bachelor Degree 2:1 or better in a relevant subject. UK Bachelor Degree 2:2 may be considered, subject to approval from the Dean of the Doctoral College.

The University of Leicester [English language](https://le.ac.uk/study/research-degrees/entry-reqs/eng-lang-reqs) requirements apply where applicable.

This programme is open to:

* allied health professionals
* nurses
* midwives
* junior doctors
* general practitioners

Fellows recruited to the programme must be practicing healthcare professionals and be registered with a national professional regulatory body (e.g. the General Medical Council, Health and Care Professions Council) in the UK/Republic of Ireland.

Medical graduates must be registered on a UK/Republic of Ireland specialist training programme or must be a registered GP.

All fellows must have completed their undergraduate degree and be registered with the relevant professional body.

**Application advice:**

For full application advice, please go to: <https://le.ac.uk/study/research-degrees/healthcare-inequalities/application-help>.

To apply, please go to: <https://le.ac.uk/study/research-degrees/funded-opportunities/leicestershire-healthcare-inequalities-improvement-dtp>

With your application, please include:

* Full up to date CV
* Personal statement of 700 words (excluding references). For detailed instructions on what we will be looking for in your personal statement and your CV, please review the guidance here: <https://le.ac.uk/study/research-degrees/healthcare-inequalities/application-help>. **Please do not exceed the word limit, as your application may be delayed.**
* Degree Certificates and Transcripts of study already completed and if possible transcript to date of study currently being undertaken
* Evidence of English language proficiency if applicable
* In the reference section please enter the contact details of your two academic referees in the boxes provided or upload letters of reference if already available.
* A filled out Widening Participation Questionnaire

In the funding section please specify that you wish to be considered for **Wellcome Trust LHII DTP**

In the proposal section please provide the name of at least one or at most two of the projects you are interested in (please indicate title and name of supervisor). The first project you list will be taken to be your preferred choice.

Upload the Widening Participation form (found on the above link) to the proposal section

**Project / Funding Enquiries to:** [**lhiip@leicester.ac.uk**](mailto:lhiip@leicester.ac.uk)

**Application enquiries to** [**pgradmissions@le.ac.uk**](mailto:pgradmissions@le.ac.uk)