



**Application Number / Title:** 23005 - Genome-wide association study of cutaneous malignant melanoma

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**Keywords provided by the Applicant PI to describe the research project:** Cancer, melanoma, GWAS

### **Application Lay Summary:**

**1a:** We have run a new genome-wide association study (GWAS) of cutaneous malignant melanoma in Mediterranean populations and would like to use the UK Biobank GWAS data as a replication set. The ultimate goal is to conduct a meta-analysis of melanoma GWAS of our Mediterranean populations, the UK Biobank data and other three previously conducted GWAS studies.

**1b:** This proposal is health-related (melanoma). It will meet the UK Biobank's stated purpose of public interest since it will contribute to the understanding of the etiology of melanoma and can be used to build polygenic score for melanoma risk prediction models, which could be applied to identify at-risk subjects who would benefit from more melanoma-related screening.

**1c:** We will take advantage of already genotyped data to identify genetic variants associated with melanoma risk. We will then combine summary results of this analysis to the results obtained with a similar analysis across different populations. The combined data will increase the likelihood to identify new genetic melanoma risk variants.

**1d:** We will use data from all cutaneous malignant melanoma cases (currently 3350) and the remaining full cohort (~500,000) with cancer information data (or ICD codes to define cancer subtypes). We will exclude the subjects with other cancers and use the remaining subjects as controls.