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**Title:** Genetic analysis of ethnicity of sarcoidosis patients in the Netherlands

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**Body:** Introduction: Sarcoidosis is a multisystemic granulomatous disorder with a highly variable clinical manifestation and disease outcome, especially between distinct ethnic groups. Prevalence in African-Americans is relatively high and they are more often affected by a severe and chronic form compared with Caucasians. About one third of Caucasian sarcoidosis patients show an acute form with a good prognosis, called Lofgren's syndrome. The aim of this study is to investigate whether sarcoidosis and Lofgren's syndrome occur in genetically different groups Methods: Four hundred and ninety-seven sarcoidosis, 119 Lofgren's syndrome patients and 439 controls were characterized for 10 Single Nucleotide Polymorphisms that captures most of the population structure present when trying to differentiate between different populations. Population structure analysis were performed on controls, sarcoidosis and Lofgren's syndrome patients, using the HapMap population as reference. Results: The Hapmap samples clustered in three distinct populations: Caucasian, African and Asian. The controls clustered within the Caucasian hapmap population area. About 98% of the Lofgren's syndrome patients were clustered in the Caucasian area, whereas only 85% of the sarcoidosis patients are in this area (p= 0.000134). Of the sarcoidosis patients 12% were found within the African cluster and 3% within the Asian cluster. Conclusions: In conclusion Lofgren's syndrome patients in the Netherlands are of caucasian descent, whereas patients with non-Lofgren's sarcoidosis are ethnically diverse. Because of this multi ethnicity case control association studies in sarcoidosis are prone to be affected by population stratification.