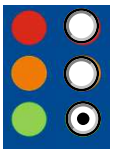
Promotionsprojekt (ID =5389_1)



Thema/Titel des Projekts (max. 200 Zeichen)
HIV Beyond Suppression: Linking minimal Viral Persistence, Immune Dynamics, Aging, Cellular Dysfunction, and Non-AIDS Comorbidities in older Long-Term ART Patients

Art des Projekts / des Vorhabens

☑ experimentell	☐ patientenorientiert
☐ experimentell- grundlagenwissenschaftlich	☐ statistisch
☐ experimentell-tierexperimentell	☐ statistisch-theoretisch
☐ klinisch	☐ theoretisch
☑ klinisch – experimentell	☐

Fachgebiet

Fachgebiet 1 Fachgebiet 2	Fachgebiet 3

Forschungsschwerpunkt

Forschungsschwerpunkt	Forschungsschwerpunkt

Graduiertenkolleg / School

Graduiertenkolleg / School	Graduiertenkolleg / School

Durchführungsort (Zentrum, Institut/Klinik)

Beschreibung und Zielsetzung des Forschungsprojekts

The development of combination antiretroviral therapy (cART) has revolutionized HIV treatment, extending life expectancy of HIV-positive individuals to nearly that of HIV-negative peers. However, limited in-depth virological and immunological data exists for people on long-term ART (>10-20 years) and effects of different viral suppression levels.
Despite ART success, long-term treated individuals face higher rates of non-AIDS comorbidities (cardiovascular disease, cancer, liver/kidney disease, bone disorders, neurocognitive decline) compared to age-matched HIV-negative individuals, possibly indicating accelerated aging.
These age-related diseases likely stem from multiple factors including HIV-associated immunological dysfunction and long-term antiretroviral therapy toxicity. This project will investigate immune dysfunction, mitochondrial toxicity, genotoxicity, and inflammation driving these pathologies in older adults with HIV.
We have access to a unique UKE sub-cohort of older HIV patients with longitudinal viral suppression and immunology data, plus PBMC samples collected over 10-20 years. Key

Aufgaben und Methoden

Tasks of the MD student: The MD stipend candidate will complete the existing clinical database and combine it with the microbiology dataset serum samples and the PBMC biobank. Patient samples of the quoted subgroups will be prospectively drawn and the student will establish and perform various immunological assays, including ELISA, multiplex cytokine assays, ddPCR, and T and B cell phenotypic flow cytometry. Focus will be on analyzing the size of the viral reservoir and lymphocyte activation , function (including mitochondrial markers, exhaustion and differentiation) within the immune compartment.

Anforderung an die Bewerber:innen:

Team spirit, good communication skills and commitment are desirable

Voraussichtlicher Beginn:	01.04.2025
Voraussichtliche Dauer des Projekts (in Monaten):	18
Davon in Vollzeit:	fulltime is optional
Einbindung in Forschungsbesprechungen, Vortrags- und Seminarreihen:	Weekly Labmeetings
Finanzielle Fördermöglichkeit:	DZIF scholarship (~1000€/month for 1 year)
Betreuer:in des Promotionsvorhabens:	Prof. Dr. med. Julian Schulze zur Wiesch
Co-Betreuer:in:	Dr. rer. nat. Philip Hartjen
Ansprechperson:	Prof. Dr. med. Julian Schulze zur Wiesch, Dr. Hartjen
E-Mail-Adresse(n):	p.hartjen@uke.de, j.schulze-zur-wiesch@uke.de
Instituts- oder Klinikwebseite:	https://www.uke.de/kliniken-institute/kliniken/i.-medizinisc

Gewünschte Bewerbungsunterlagen:

Coverletter, CV

Bewerbungsfrist:	15.3.2025