Job Description for NIHR Academic Clinical Fellowship in Rheumatology IMT1-3

1. Job Title. Academic Clinical Fellow in Rheumatology IMT1-3

2. Duration of post. 3 years

3. Research institutions in which training will take place
UCL Centre for Rheumatology is a thriving research environment to support and mentor post-holders, with research facilities in the UCL Division of Medicine at the Rayne building. The ACF will join the high-quality rheumatology-training programme in the Department of Rheumatology at UCLH that regularly obtains the highest number green flags locally/regionally/nationally in GMC survey. It values teaching and training with consistently high feedback from trainees and has an excellent track record for furthering clinical and research careers in rheumatology.

4. Timetabling of clinical and research time
Block release for an average of three months per annum (25%) but usually grouped as one 6-month block for the first two years.

5. Description of research component of programme
Systemic lupus erythematosus (SLE) is a complex autoimmune disorder characterised by immune dysregulation and highly variable responses to B-cell-targeted therapies such as rituximab and belimumab. Despite their use, nearly half of patients fail to achieve a satisfactory clinical response. To improve treatment outcomes, belimumab was introduced following rituximab in our previous randomised clinical trial (RCT), the BEAT-Lupus trial. While this combination effectively reduced conventional disease biomarkers, such as IgG anti-dsDNA antibodies, it did not show a significant improvement in achieving major clinical responses compared to placebo (1).

Our discovery of IgA2 anti-dsDNA antibodies as a predictive biomarker for this combination therapy has led to the development of STRATIFY-Lupus, the first biomarker-enriched RCT in lupus. This fully funded trial is set to commence recruitment in October 2025, with a two-year recruitment period followed by one year of observation. Patients with high IgA2 anti-dsDNA levels will be randomised to receive either belimumab or placebo following rituximab. Meanwhile, those with low IgA2 anti-dsDNA levels, who are excluded from STRATIFY-Lupus, will continue to receive rituximab alone under standard NHS care.

This trial presents a unique opportunity to collect both cross-sectional and longitudinal clinical data, along with biosamples, within a controlled RCT environment. Additionally, the inclusion of a separate validation cohort of patients with low IgA2 anti-dsDNA antibodies allows for a direct comparison of treatments and an in-depth investigation into resistance mechanisms, enabling a comprehensive assessment of treatment response and resistance mechanisms.

IgA, a key regulator of mucosal immunity, remains underexplored in SLE. Both IgA subclasses bind commensal gut bacteria to maintain immune homeostasis; however, IgA2, which predominates in the colon, selectively targets certain bacterial genera and plays a critical role in class switching. Increasing evidence implicates gut dysbiosis in lupus pathogenesis, leading to its recognition as "linked intestinal bloom-related autoimmunity" (LIBRA) syndrome. Microbe-associated molecular patterns (MAMPs) and microbial metabolites can activate TLRs such as TLR7/8, particularly during dysbiosis or bacterial translocation,

driving innate immune activation. As a result, the microbiome emerges as a key modulator of immune homeostasis, shaping immune responses, disease endotypes, and treatment efficacy.

This project aims to bridge existing gaps by mapping the interplay between gut microbiome dysbiosis, metabolic reprogramming, and immune system dysfunction. By integrating multi-omics datasets, we seek to characterise immune cell profiles and proteomic landscapes that drive the emergence and clinical manifestation of distinct SLE endotypes, such as IgA2 anti-dsDNA, and their influence on treatment responses and therapeutic resistance.

To achieve this, we will combine shotgun metagenomics of faecal samples with flow cytometry of PBMCs, profiling innate and adaptive immune cells, including B cells, macrophages, neutrophils, and TLR expression. Additionally, inflammatory proteomics and microbiome pathway enrichment analyses will be employed to identify metabolic pathways and epitope-specific immune interactions, which will be validated through in vitro mechanistic assays. This research will define the immune and microbial signatures of resistance, advancing precision medicine and stratified therapy approaches in SLE.

STRATIFY-Lupus is led by Prof. Mike Ehrenstein (PI) and Dr Muhammad Shipa (Co-PI), supported by a dedicated research assistant, a clinical fellow, and a specialist nursing team, fostering a dynamic and supportive clinical-academic training environment. The Academic Clinical Fellow (ACF) will focus on flow cytometry of PBMCs from patients with low IgA2 anti-dsDNA, who are excluded from STRATIFY-Lupus. Additionally, the ACF will have the opportunity to work with the Wellcome Sanger Institute, assisting in faecal sample processing and microbiome sequencing. Wet lab sequencing will be conducted at Wellcome Sanger, leveraging existing financial and technical support, while bioinformatics analyses will be undertaken in collaboration with our team and Sanger's bioinformatics pipeline.

This fellowship offers an exceptional opportunity to gain expertise in immunology, microbiome research, and bioinformatics, contributing to the development of targeted therapies and precision medicine strategies in SLE.

6. Description of clinical training component of programme

The successful candidate with undergo their Internal Medicine Training in North Central sector in London; 25% of their time will be dedicated to research time which translates to 3 months in each year of IMY1-3 training years. Internal Medicine Training (IMT) forms the first stage of specialty training for most doctors training in physicianly specialties and will prepare trainees for participating in the acute medical take at a senior level and managing patients with acute and chronic medical problems in outpatient and inpatient settings. It is a three-year programme which will continue to develop doctors to become a medical registrar and provide them with the skills needed to manage patients presenting with a wide range of general medical symptoms with an emphasis on comorbidity and an ageing population. Although Academic trainees are supernumerary, experience managing the acute unselected take is mandatory as is experience in Intensive care Medicine, Geriatric Medicine and outpatients. Trainees will receive simulation training during their programme. The Annual Review of Competency Progression (ARCP) decision aid defines the targets that have to be achieved for a satisfactory ARCP outcome at the end of each training year for trainees in IMT and can be accessed via this link IMT ARCP Decision Aid 2019 (August 2026 update).pdf (jrcptb.org.uk).

Specific rotations and rotation locations will be devised with the IMT Training Program Directors based on the clinical training needs of the ACF and service needs.

The adult and adolescent rheumatology departments provide a general rheumatology and specialist service for patients with: - systemic lupus erythematosus and other autoimmune rheumatic diseases; recent onset inflammatory arthritis; osteoporosis; adolescent disease; and upper limb as well as chronic pain. There are also specialist clinics for patients being treated with biological (e.g., anti-TNF and rituximab) therapies. When

doing Rheumatology, along with three SpRs, one FY1 and an IMT2 the ACF will look after around ten adult and adolescent in-patients and become familiar with the management of a variety of common and less-common rheumatologic diseases with multiple organ pathology as well as the use of anti-rheumatic drugs including immunosuppressants. They will join four (general, specialist and adolescent) consultant ward rounds that take place each week providing opportunities to be taught about the clinical features of a variety of uncommon but serious diseases and new treatments used in their management.

Further clinical training will be provided during weekly musculoskeletal radiology meetings, small group tutorials, rheumatology grand rounds with clinical and research presentations from national and international speakers, as well as regular audit, clinical governance and departmental educational meetings.

7. Academic Programme Director name
Professor Ian Giles

8. Clinical Programme Director name
Dr Alexis Jones (Rheumatology TPD); Dr. Salim Cheeroth (NCL IMT TPD); Dr. Dipa Jayaseelan (University College London Hospital Local IMT TPD)

9. Programme contact for further information (phone or email)
Professor Ian Giles, i.giles@ucl.ac.uk

10. NHSE contact:
Specialty Team https://lasepgmdesupport.hee.nhs.uk/support/home
Recruitment Enquiries - https://lasepgmdesupport.hee.nhs.uk/support/home

11. Useful websites for further information IAT Guide | NIHR
https://www.nihr.ac.uk/explore-nihr/academy-programmes/integrated-academic-training.htm

12. Confirmation that the post attracts an NTN (A) - YES

This job description was prepared on 12th August 2026.