General remit

The successful candidate will be part of the Cardiovascular, Metabolic and Musculoskeletal Therapeutic Area Genetics group in the Regeneron Genetics Center (RGC).

The role will focus on the analysis and interpretation of large-scale sequencing and genotyping studies focused on continuous traits and disease outcomes in cardiovascular, metabolic or musculoskeletal medicine.

The successful candidate will work on (a) new gene discovery, and (b) validation of potential drug targets. The candidate will use genome-wide association approaches, gene- or pathway-centric genetic association analyses, meta-analysis of results across cohorts, Mendelian randomization or study designs that simulate randomized controlled trials.

There will be opportunities to interact with other teams within RGC or Regeneron that work on understanding biology using *in vitro* or *in vivo* animal models and on developing new medicines in the therapeutic areas of interest.

The world-leading scale and breadth of the data being collected at the RGC provides opportunities for research on a wide range of topics, spanning from continuous traits (e.g. circulating biomarkers, body fat, bone or muscle imaging) and disease outcomes (eg. diabetes, heart disease) collected across large cohorts including hundreds of thousands of individuals.

The successful candidate would be responsible to take the lead on a specific area of scientific work within the TAG team, systematically review and have command of the scientific literature on the topic, acquire and continue to develop their knowledge and skills, develop high-quality science in the areas of interest, and interact with a diverse group of colleagues at the intersection of human genetics, genetic epidemiology, disease biology, and drug development.

Specific scientific focus

This role will specifically focus on the discovery and validation of genes linking obesity and fat distribution with dyslipidemia, insulin resistance, risk of cardiovascular disease, type 2 diabetes and liver disease.

The post-holder will develop creative study designs and implement analytical and data mining approaches to maximize the discovery of protective genetic variants (eg. variants that convey resistance to obesity in an obesogenic environment).

The post-holder will work closely with functional modelling and biology teams within RGC and Regeneron to validate genetic results and translate newly identified genes into biological and medically-relevant insight. This will include aligning the gene discovery approaches to identify genes or genetic variants best suited for in depth functional follow-up and therapeutic translation (eg. genes highly expressed in the liver, etc).

Qualifications

Required:

- MD, PhD, or MD/PhD
- Background in genetic epidemiology, human or translational genetics
- Interest in cardiovascular, metabolic or musculoskeletal medicine
- Strong quantitative skills
- Strong motivation, resilience, hard working
- Strong communication and collaboration skills and attitude
- Commitment to the highest standards of scientific rigor and ethics
- One or two good-quality publications in the field as a lead author

Preferred:

- Experience working with large human genetics datasets
- Track record of high-quality published work
- Programming skills in STATA, R, Python or similar
- Statistical expertise

Review of applications will begin upon receiving. Interested individuals should send a CV and the names of three references to George Peterson (george.peterson@regeneron.com) with the email subject line "Post-doc Position".