

Spring 2026

ANTH3321 / 5321 Topics in Anthropology: Genes, AI, and Human Futures

Teacher: [Prof. TAM Man Kei](#)

Every Thursday

Lecture: 10:30am - 12:15pm (Venue: UCA_312)

MA tutorial: 12:30 - 1:15pm (Venue: UCA_312)

UG tutorial: 1:30 - 2:15pm (Venue: UCA_102)

The Human Genomes Project (HGP) has reconfigured humans as genomes encoded by DNA sequences, creating new forms of knowledge and burgeoning research fields. In the (post)genomic era, life scientists' practices are not confined to microscopes and laboratories. Artificial intelligence and machine learning models driven by big data are transforming the study of biological life. They are also involved in assembling genomic sequence databases and developing new algorithms to help us understand and rethink who we are as humans. What are the implications of novel biotechnology and technoscience for the future of humanity?

Meanwhile, life scientists who study genomes from all the microorganisms inhabiting the human body have moved beyond the idea of genes as the "book of life" to focus on interactions and influences among microbes within and beyond individual hosts. The human body is viewed as a symbiotic system containing a multitude of microbes, thereby introducing an ecosystemic understanding of life and health. When science blurs the boundary of humans as individual organisms, how should we think about microbial interconnections across diverse hosts and habitats?

More practically, when life science, biotechnologies, and AI are taken as strategic fields of economic and political investments, how are our concept and practice of health being reshaped through the governance of uncertainties by states, the calculation of health normalities and risks by new apps, and biomedical innovations by pharmaceutical companies? Can genomic science help us anticipate the next pandemic or tackle public health threats such as antimicrobial resistance?

This course covers the following topics. Tentatively, two field trips will be organized.

Part I- The Post-Genomic Era and AI-driven technologies

Week 1-Introduction: HGP and its aftermath

Week 2-Science as social practices, laboratory as an ethnographic site

Week 3-Study of life in the postgenomic era, data-centric biology

Part II- Human, microbes, and environment

Week 4-Human-microbes relationship

Week 5-Early-life microbiome, epigenetics, and the burden on mothers

Week 6-“One Health” approach: pandemics and anti-microbial resistance (AMR)

Week 7-“One Health” approach: malnutrition and obesity in a globalized world

Part III- State and biocapital

Week 8-Translational knowledge, academic capitalism, and scientific entrepreneurship

Week 9-Biocapitalism: precision medicine, and Health-AI

Week 10-Biocapitalism: alternative medicine, Chinese medicine

Week 11-AI-driven crisis: data centre and climate change

Week 12-Conclusion

(Preliminary Version as of 4 November 2025)