

**BIOMEDICAL DATA SCIENCE
PRESENTS:
BIODS 260
10/20/22 1:30PM-2:55PM
MSOB X303 (SEE ZOOM DETAILS BELOW)**

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TITLE:

The Spatial Landscape of Progression and Immunoediting Data-Driven Science of Wellness and Prevention: A 2nd Human Genome Project

ABSTRACT:

The vision of this project is that we will develop the infrastructure to employ a data-driven (genome/phenome analyses) approach to optimizing the health trajectory of individuals for body and brain. We have two large populations (5000 and 10,000) that have respectively validated this approach for body and brain health, respectively. These studies have led to us pioneering of the science of wellness and prevention as I will discussed in the lecture. This million-person project, termed Beyond the Human Genome, has led to the creation of a non-profit, Phenome Health, which has acquired key partners for execution of this ambitious. We are approaching the Federal Government for funding for this project, as we did for the first Human Genome Project. This project is one of perhaps 10 or so 500,000 to one million person projects world-wide and it is unique in that it will carry out deep longitudinal phenome analyses, it will return results to participants and it is creating the infrastructure to spread this approach across the US and world healthcare systems. This project will lead to a powerful data ecosystem that will generate new knowledge about medicine, will catalyze the initiation of many start-up companies and will pioneer a paradigm shift in healthcare from its current disease orientation to a wellness and prevention orientation, the largest paradigm shift in medicine ever.

SUGGESTED READING:

- [TA wellness study of 108 individuals using personal, dense, dynamic data clouds; 2017; ND Price et al; Nature Biotechnology](#)
- [Multi-Omics Resolves a Sharp Disease-State Shift between Mild and Moderate COVID-19; 2020; Y Su et al; Cell](#)
- [Multiomic blood correlates of genetic risk identify presymptomatic disease alterations; 2020; M Wainberg et al; Proceedings of the National Academy of Sciences](#)
- [Untargeted longitudinal analysis of a wellness cohort identifies markers of metastatic cancer years prior to diagnosis; 2020; AT Magis et al; Scientific Reports](#)

Zoom Link: <https://stanford.zoom.us/j/92874055477?pwd=aThzNmpmNEQ1L2FjV0E5ZXF5SDR1UT09&from=addon>