One of the holy grails in medicine is to achieve tissue regeneration. Traditionally involving complex manipulation and manufacturing of cells outside of the body, stem cell approaches are very promising. Avoiding the complexity, we have focused on delivering combinations of small molecules to target stem cells and progenitor cells in the body. Through this work we identified small molecules that can regenerate hair cells in the inner ear to functionally restore hearing. Hearing loss affects hundreds of millions of people and cochlear implants and hearing aids have severe limitations. This platform technology formed the basis for a startup company called Frequency Therapeutics in 2015 that IPOed on the NASDAQ in 2019. The company advances regenerative small molecule therapeutics through targeting and manipulating stem cells and progenitor cells \textit{in situ}.
11:30am - 11:50am

**Startups**

- **Cellino**: Image-guided, laser-driven manufacturing of iPSCs and iPSC-derived tissues
- **Kypopen**: High-efficiency delivery of mRNA, DNA, and CRISPR Cas9 RNP to primary cells
- **Immunai**: Comprehensive mapping of the immune system with single-cell biology and AI

Danny Wells
Scientific co-founder of Immunai