

Past:

On March 5th, 2017 - a team led by UCSD student Benyam Alemu won the inaugural UC Health Hack. After a conversation with Mike Reid in November 2017 - they decided to create a health technology business we now call Theravision Health Informatics. On July 26th, 2018 - Theravision received written confirmation they owned 100% of the IP they developed.

Later in 2018 when the preliminary demo for ArtWalk underwhelmed, Ben decided to self-study software engineering to redesign the product. He shifted his career, began diligent study 7 days / week and finished the project in order to meet his commitment to UCSD Health (and himself).

Present:

As part of the journey to commercialize ArtWalk, Ben also deeply studied clinical research. This included completing 10 CITI clinical research certificates and reading several books on the topics. He serves as Principal Investigator (PI) of the ArtWalk Dept of Surgery clinical trial.

As Ben waits through the 3-6 month period of an IRB approval, he is actively seeking for a way to further implement his newfound technical and clinical trial skills. How can he use his limited time to better heal and delight patients?

Over MLK weekend (January 16th - 18th), Ben created the Umano Laboratory for Digital Health (umanolab.org) - an online research group and web application. It is enhanced during off-work hours, evenings and weekends. Much of its governance is inspired by an award-winning nonprofit organization Ben co-founded in May 2014, known as SENDforC (www.sendforc.org).

Future:

The goal of the Umano Lab is to develop an incentive structure that would reward talented open source engineers for volunteering time to pilot new therapeutic technology that doctors and nurses propose. This is done in a way that does not require a UCSD Health budget.

Ben's personal goal is to prove therapeutic software can be created and validated - just like ArtWalk. He also seeks to use this intense training to grow as a young software engineer and PI; by racking up many publications, clinical trials, ROI case studies and deploying technologies for many hospitals. This will allow him to benefit his home institution while developing his entrepreneurial track record beyond SENDforC and Theravision.

He will also use these experiences to foster a deeper innovation culture across UCSD Health.

Benefit for UCSD Health:

- Patients benefit with new therapeutic technologies and UCSD Health can offer enhanced patient experiences in a competitive San Diego healthcare marketplace.
- New software is built for free (enormous saved expense, estimated: \$100 / hr of salaries).
- Nurses are eligible for promotions by completing CN3 and CN4 certifications.
- Academic professors get free web and mobile apps, they can use in IRB clinical trials.
- UCSD Health boosts its innovation culture, in the vein of the UC Health Hack and our recent guest speaker: Dr. Thomas Maddox's Healthcare Innovation Lab.