

Designing a new approach to science. Discovering unexpected answers. Delivering solutions that work.

your health

We are working to prevent disease by developing safe and effective vaccines and predict or detect diseases at their earliest and most curable stage.

We are searching for answers to almost 100 diseases, including: autism, arthritis, Alzheimer's, cancer, cardiovascular, diabetes, influenza, malaria, multiple sclerosis, obesity, pneumonia, tuberculosis, Valley fever, West Nile and Ebola virus.

our planet

We are working to prevent further destruction and preserve our planet for the future.

- Cleaning harmful chemicals from drinking water
- Inventing more efficient solar and hydrogen technologies
- Creating a replacement for fossil fuels using and artificial "leaves"
- Designing systems to detect and monitor environmental contamination

a safer world

We are discovering new ways to protect people and the environment.

- Vaccines to combat the world's number one killer.
- Devices to quickly measure a person's level of exposure to radiation
- Technology to instantly and remotely detect the presence of biological hazards



Top 10 Biodesign Discoveries

1. Produced vaccines and therapeutics in tobacco plants, bacteria and viruses to combat Ebola, West Nile, pneumonia and other infectious diseases
2. Identified links between microbial gut composition, obesity and autism
3. Developed world's first mobile metabolism tracker
4. Identified human health risks that helped lead to federal ban of active ingredients in antimicrobial personal care products
5. Used "DNA origami," to build 3-D nanostructures for future biomedical, electronic and energy applications
6. Developed new X-ray laser technology to speed up drug discovery pipeline
7. Detected cancer and up to 50 medical conditions from a single drop of blood by developing immunosignature technology
8. Conducted studies on board the International Space Station to understand changes in microbial responses due to microgravity and astronaut health risks
9. Developed diagnostics for the earlier and more accurate detection of breast and pancreatic cancer, and worldwide epidemics such as Zika and tuberculosis
10. Advanced personalized medicine by improving technology for reading a person's DNA and protein profiles

Relentless learning, teaching, growing

1,000 faculty, affiliates, staff and students cross traditional boundaries to find unexpected answers.

At any given time, more than **300** students are engaged in research contributing to discovery and innovation.

Facilitating a convergence of the biosciences, engineering, medicine, computing, mathematics, and public policy

engage with ASUBiodesign on



Curious? Join us at www.biodesign.asu.edu