

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 photosynthetic bacteria 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: 2004-2014

1. Produced vaccines in tobacco plants, bacteria and viruses to combat Ebola and other infectious diseases
2. Identified links between microbial gut composition and autism
3. Developed world's first mobile metabolism tracker
4. Discovered risks and impacted state and federal policy associated with antimicrobial ingredients personal care products
5. Used "DNA origami," to build 3-D nanostructures for future biomedical and energy applications
6. Developed new methods to lower the costs and increase production of high-energy, renewable biofuels
7. Detected cancer and other medical conditions earlier by developing immunosignature (a person's immune system profile) technology
8. Conducted studies on an international space station to enhance the efficacy of vaccines
9. Ushered into clinical trials a vaccine against pneumonia in newborns
10. Advanced personalized medicine by improving technology for reading a person's DNA profile

Relentless learning, teaching, growing

700 faculty, staff and students cross traditional boundaries to find unexpected answers.

At any given time, more than **200** students are engaged in research contributing to discovery and innovation.

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

engage with ASUBiodesign on



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