

Over a Decade of Folding@home: how citizen science has lead to key new advances in biophysics and fighting disease

Vijay Pande

Stanford University, USA

On October 1, 2000, my group and I publicly released the Folding@home Distributed Computing Project, which has enabled us to build a tremendous computational resource – now more powerful than any traditional supercomputer — by rallying together the efforts of millions of computers throughout the world. Now, almost 15 years later, we have achieved many of the goals we set out to accomplish at that time, including key new advances in biophysics (especially in the areas of protein folding, misfolding, and conformational change) as well as new small molecule drugs candidates (especially in new areas of drug repurposing to rapidly develop small molecule drugs in an academic setting). Moreover, this new approach of bringing citizen scientists into cutting edge research has had its own impacts in many ways. Finally, I will conclude by talking about the future of Folding@home and where we hope to be in the next 15 years.