

probe the physical properties of complex molecules. He invented an Anti-Brownian Electro kinetic trap (ABEL trap) capable of trapping and manipulating individual fluorescent molecules in solution at room temperature. The ABEL trap uses high-speed fluorescence microscopy to track the Brownian motion of a single fluorescent molecule. A feedback circuit applies carefully timed electric fields to the solution to induce an electrokinetic drift cancels the Brownian motion.

Current research in the Cohen Lab focuses on application of the ABEL trap to bimolecular systems, as well as the development of new tools and method for probing weak protein-protein interactions and ultrafast dynamics of molecules inside of cells.

Mr. Benjamin Rapoport is MD-PhD student pursuing his MD in the Health Sciences and Technology Program at Harvard Medical School, as well as his PhD in Electrical Engineering at MIT. He received his AB in Physics and Mathematics and AM in Physics from Harvard in 2003, and MSc in Mathematical Biology from Oxford in 2004. Ben is interested in designing and neurosurgical implanting electronic interfaces with the brain and nervous system, such as neural prosthetic devices for the paralyzed and disabled, which can repair and augment neurologic function. His current work is on algorithms and ultra-low-power electronic architectures for decoding neural signals in the context of fully implantable brain-machine interfaces.

During their stay in Liberia, the below activities will fine part of their visit.

- 1. Monday, June 8: Lecture session at BWI
- 2. Tuesday, June 9: Lecture session at BWI
- 3. Wed, June 10 : Team meeting @Congo Town Residence
- 4. Thurs, June 11 : All University Science Teachers @MOE
- 5. Friday, June 12 : Liberian Women in Science and technology
- 6. Sat, June 13 : University of Liberia Science Teachers @Fendell Campus
- 7. Sunday, June 14: Team Meeting with I-Help local team
- 8. Mon. June 15: LU Science Students@Fendell Campus
- 9. Tues, June 16 : All High School Science Teachers (Tubman High)
- 10. Wed, June 17 : Medical/Pharmacy School @Medical School
- 11. Thurs, June 18 : Travel to Ganta
- 12. Fri, June 19 : All Ganta Science Teachers
- 13. Sat, June 20 : Travel Back to Monrovia
- 14. Sun, June 21 : Departure date





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