Frederick National Laboratory Advisory Committee
NCI Task Force to Evaluate the NCI/DOE Collaboration

Mission Statement

The National Cancer Institute (NCI)/Department of Energy (DOE) collaboration was designed to accelerate the use of high-performance computing, including artificial intelligence and deep neural networks. The NCI goal was to apply these innovations to better understand cancer biology with the long-term goal of developing effective cancer therapies, whereas the DOE goal was to leverage the innovations to assist in developing uncertainty quantification and in implementing an exascale computing infrastructure for cancer research (CANDLE). In addition, the collaboration consists of three pilot projects: 1) a molecular level pilot to characterize RAS membrane biology, 2) a cellular level pilot to develop predictive computational models of preclinical therapeutic response, and 3) a population level pilot for integrating, analyzing and modeling population information.

Based on the accomplishments and lessons learned during the first three years of the NCI/DOE collaboration, it is important to consider how the collaboration should evolve beyond the fourth and fifth year. As such, building on the recommendations of the Frederick National Laboratory Advisory Committee (FNLAC) ad hoc NCI/DOE Collaborations Working Group, the FNLAC will convene a task force to determine if the collaboration should continue and if so, what directions it should take. The task force is expected to include an in-depth technical review of all established projects as well as provide insights and observations on how the pilots, programs, projects, and collaborations, formed to date, have proceeded and indicate if the NCI/DOE collaborations should continue into years four and five and beyond.

The technical review will be critical in order to determine what end-point is appropriate in each of the efforts. In addition, the overall operation of the interactions, including that of the Governance Review Committee, will be considered to help determine whether this collaboration should become a sustainable and stable partnership.

The Task Force shall be composed of various NCI advisory board/committee members and individuals who represent a spectrum of oncology, computational biology, advanced computing, machine learning, data science, precision medicine experts and other ad hoc members as needed.

The Task Force will advise the Frederick National Laboratory Advisory Committee to the National Cancer Institute and the Director, NCI.