The University of Florida’s Genetics Institute (UFGI) has over 200 faculty distributed across several Colleges. This meeting was the fourth annual review by the SAB to provide an external evaluation of the UFGI. At this meeting, we met with the members of the UFGI executive committee and with a number of Institute members engaged in collaborative science that crosses departments and colleges. As in our previous visits, the SAB was very impressed by the leadership that Dr. Ken Berns and the UFGI Executive Committee bring to the Institute and their commitment to excellence. Outstanding interdisciplinary, collaborative science has been fostered by the UFGI, as evidenced by each of the presentations that we heard through the meeting. The Institute has succeeded in creating and strengthening linkages in research and training across the University. The UFGI has enabled individual scientists and the University to achieve international prominence in the areas of biological, medical and agricultural genetics.

Opportunities in Computational Biology

The interdisciplinary science that was presented is impressive and indicates that the mission of the Institute is being fulfilled. Several key faculty hires in recent years have taken UF to a new level of biological research power. New science, new technologies, and high levels of external research support have come from these computationally sophisticated interactions that would not have occurred without the substantial commitment of UF, and especially the UFGI. An ever-expanding majority of the research that we have heard about at UF relies heavily on cross-disciplinary collaboration, high-throughput sequencing, and informatics support. The single deficiency identified in every presentation, and most of the genome-based biological and biomedical projects at UF, is the need for sufficient computational biology capacity.

The UFGI has taken a leadership position in helping to prepare UF for the unprecedented demands and opportunities coming from the exponential growth of data and consequent analysis. While the current UFGI infrastructure is adequate for maintaining today’s activities, it is not sufficient to meet next year’s requirements. Status as a first class research institution is only feasible with a state-of-the-art commitment to computational biology. The IT support staff
is performing at an exceptional level, but is right at the limit of its current capacity and does not provide any redundancy or stability in case of emergency. Planned hardware upgrades are also currently sufficient, but the need for new hardware and upgrades will grow dramatically in the next few years. UF must make a serious and enduring commitment to the computational biology that supports integrative science. The UFGI should be both a beneficiary of and contributor to this process. To accomplish this UF-wide goal, a senior leader will need to be identified and recruited as soon as possible. A strategic plan is needed immediately to guide the growth and integration of computational biology over the near term (one year) and longer term (5 years), with metrics for evaluation integral to the plan.

**Initiate a fully open (external and internal) search for a new UFGI Director**

As stated in last year’s report, Dr. Berns’ vision and leadership have been at the core of UFGI’s success. His contributions to the establishment, operation and growth of the UFGI have been crucial. Dr. Berns has indicated that he will step down as the Director by the summer of 2012. As we recommended last year, a search for the new Director should commence as soon as possible. Key attributes of a new Director should be a broad interdisciplinary approach to genetics research and an excellent track record of collaboration and mentoring trainees and junior faculty. Because of the importance of computational biology to the research goals of many in the Genetics Institute, we suggest recruiting a leader with some experience in computational biology. The focus of the search should of course, be determined by the search committee. The University administration should assemble an attractive package for this recruitment.

**Graduate Program**

The SAB met with the coordinator of the Genetics/Genomics graduate program, Wilfred Vermerris. Our overall impression is that the program continues to be a great success. While the program has recruited an exceptional cohort of training faculty and high quality students, we recommend that the UFGI make special efforts to increase the applicant pool and apply for federal support through training grants that will permit allocation of extra funds to student stipends and research. We do not support the suggestion that the Institute create a program for a professional masters degree in Genetics because the major training efforts should go to expanding and strengthening the existing Ph.D. program. The expertise and quality of the doctoral students that are being trained by the UFGI will create a cadre of scientists that are much in demand by industry, academia and the public sector in Florida, in the US and worldwide. We encourage the continued enforcement of the highest standards of performance and integrity in the graduate training program to maintain a high level of morale and an outstanding reputation for the program.
Annual Report

The Genetics Institute has research funding for UFGI faculty of $112,490,250. This sum supports high quality work addressing a broad range of projects in the fundamental and applied sciences. There is an opportunity to present an annual report that features this work, highlighting major new projects and recent accomplishments, in addition to summarizing the publications and presenting the faculty, staff and students. The report should be similar to those put out by other Institutes of similar size and productivity, but have a higher public profile. The report needs to be written at a general level that can be easily read by non-scientists. Such reports would help develop support for UFGI in the broader academic community, and the broader community of the city and state. Reports help to lay a foundation for long-term financial development. The Virginia Tech Bioinformatics Institute, the Noble Foundation at Ardmore Oklahoma, Cold Spring Harbor Laboratories, the Jackson Labs, and Woods Hole Marine Biological Laboratories, produce examples of such reports.