



General Programmatic Terms and Conditions (PTCs) for the National Evolutionary Synthesis Center (NESCent)

Issued Pursuant to the NSF Proposal and Award Policies and Procedures Guide (PAPPG), (NSF 08-01), Effective January 5, 2008

1. **Key Personnel:** Except for the principal investigator(s) (PIs) or co-PIs identified in this award, requests to make any changes to personnel, organizations and/or partnerships specifically named in the proposal, that have been approved as part of this award, shall be submitted in writing to the cognizant NSF Program Official for approval prior to any changes taking effect. Requests for prior approval of changes to the PI(s) must be submitted through FastLane for review by the cognizant NSF Program Official and approval by an NSF Grants Officer.

2. **Program Description:** NESCent's scientific mission is to advance synthetic research that addresses fundamental questions in evolutionary biology. Synthetic research in evolutionary biology includes integrating novel data sets and models to address important problems within a discipline, developing new analytical approaches and tools, and combining methods and perspectives from multiple disciplines to answer and even create new fundamental scientific questions. The Center facilitates such synthetic research by providing an environment for fertile interactions among scientists, state-of-the art informatics tools for use by the broad evolutionary biology community, and education and outreach programs to broaden participation in synthetic evolutionary biology.

The current plan, summarized below establishes a baseline for Center activities over the next 5 years; updates and improvements are anticipated under the leadership of the Directors and Advisory Boards.

- a. Working Groups, catalysis meetings and other activities supported by the Center will continue to originate primarily from the broad research community, including evolutionary biologists, computer and information scientists, and scientists from diverse other disciplines relevant to evolutionary biology.

- b. Some smaller number of catalysis meetings will be targeted. The intention of these is to:
 - 1) integrate evolutionary biology with new disciplines and approaches;

- 2) fund activities of an applied nature (global change, agriculture, and medicine);
- 3) bring new groups of scientists together;
- 4) combine science, informatics and education in new ways.

Three Center-generated catalysis meetings will be supported during years 2-4 of this renewal award. Topics will be selected in consultation with the Advisory Board.

- c. A small number of major initiatives will be supported. Prospectuses for these will differ from normal applications in three ways:
 - 1) they will focus on a targeted topic that will be determined in consultation with the Advisory Board;
 - 2) they will be required to span multiple activities (staff, postdoctoral fellows, sabbatical scholars, working groups, catalysis meetings, graduate student participation) around a common theme;
 - 3) a pre-prospectus will first be solicited, followed by a full application. There will be two calls for targeted initiatives in years 1 - 3. Topics will be selected in consultation with Advisory Board.
- d. NESCent will continue the expectation that all data and software created through NESCent-sponsored activities be made publicly available. Specifics of this policy will remain available at http://www.nescent.org/informatics/data_software_policy.php.
- e. Prospectuses for Center activities (working groups, catalysis meetings, sabbatical scholars, postdoctoral fellows) will be encouraged in the areas of science education, science journalism, citizen science, and science pedagogy. These will go through the normal evaluation process.
- f. New assessment activities:

Tier 1 assessment includes general statistics on demographic diversity, funding patterns, products (publications, grant proposals, collaborations, etc.), disciplinary diversity, citation impacts, quality of informatics and logistic support to resident staff, scientists and sponsored projects, the production of open-source software and database production for the research and education communities and other activities outlined in NESCent's response to the site review team's report. These data will derive primarily from the administrative data base. Data on these activities will be collected and analyzed annually and presented to NSF as part of the annual report.

Tier 2 assessment is summative, and will evaluate results of Center activities after their completion. Results may include changes in patterns

of collaboration, disciplinary association, publication, or the initiation of new initiatives. A specific plan and protocol for summative assessment will be in place by the end of year 2 of funding. This plan and results of these activities will be presented to NSF as part of the annual report.

Tier 3 assessment is a formative analysis of the effectiveness of various Center activities in promoting collaborations and interdisciplinary research that leads to novelty. A specific plan and protocol for formative assessment will be complete by the end of year 1 activities. This plan and summaries of ongoing work will be presented annually as part of NESCent's annual report to the NSF.

3. **Project Governance:** The Awardee will ensure that an efficient and effective project governing structure is in place throughout the award period to support all critical or significant project activities. Among the governing components will be:

a. **PI/Director:** The Director will oversee all Center activities and serve as the intellectual leader of the Center. He or she will be responsible for overall project management; coordination of activities among all Center participants; ensuring yearly project goals and milestones are met; submission of annual progress reports at least 90 days prior to the end of each funding period; and coordination of other activities both nationally and internationally.

Responsibilities include:

- 1) primary point of contact with NSF for all Center related matters;
- 2) execution of the Center's established policies for conflicts of interest and data management and sharing;
- 3) coordination of activities among all participants and institutions;
- 4) strategic planning, establishment of yearly project goals and assessment milestones;
- 5) submission of annual project reports at least 90 days before the end of each funding period; these should include a work plan for the coming year;
- 6) communication with the cognizant NSF Program Official to provide notifications of Advisory Board meetings and updates on assessments of progress against specified goals for each arm of Center.

b. **Associate Directors:** Associate Directors will have primary responsibility for direct oversight of science and synthesis, informatics, and education and outreach activities. They will assist the Director with major strategic planning efforts, new initiatives, and Center outreach and community relations.

c. **NESCent Advisory Board:** The NESCent Advisory Board will provide advice on scientific merit of prospectuses for the different Center activities, as well as broad advice on Center initiatives programs. It will aid in strategic planning and serve as a link between the Center and the wider scientific community. New members of the Board will be nominated by the current Board, the NESCent operations committee and NSF program officers, and will serve a term of 3 years. The members of the Board will elect a Chair and a Vice-Chair to each serve a 2 year term. These officers will:

- 1) serve on the NESCent oversight committee,
- 2) be responsible for drafting a report on major recommendations following the meeting,
- 3) oversee the selection of their replacements.

d. **Operations Committee:** This committee is composed of the NESCent Director and Associate Directors, three at-large members representing each of the participating universities, and one postdoctoral fellow. The committee's responsibilities include to:

- 1) Participate with the Directors in planning and evaluating NESCent initiated activities, including major science, education and outreach, and informatics initiatives;
- 2) Discuss and offer final approval for all funding recommendations brought forth by the Center Director and Associate Director for science and synthesis following review by the Science Advisory Board;
- 3) Serve as mentors for postdoctoral fellows. The Center's postdoctoral mentoring plan will remain available at http://www.nescent.org/Documents/NESCent_Postdoc_policy.pdf
- 4) Contribute, as appropriate, to broader Center outreach activities.

4. **Governing Requirements:** The Awardee will ensure efficient and effective performance of all project responsibilities by the governing components through the award period. The Principal Investigator (PI) will cooperate and coordinate with the cognizant NSF Program Official by:

- a. providing advance notification of all Advisory Board meetings;
- b. providing written copies of Advisory Board meeting reports within three weeks of the conclusion of each meeting;
- c. compiling and contributing data and information needed to assess scientific progress and administrative effectiveness of the Center in achieving its strategic goals;

- d. participating in NSF-initiated reviews conducted via telephone or site visit, as needed, during the course of the project.

5. **Reporting Requirements:** The Awardee will provide ad hoc and regular reports as designated by the NSF cognizant Program Official with content, format, and submission timeline established by NSF. The Awardee will submit all required reports via FastLane using the appropriate reporting category; for any type of report not specifically mentioned in FastLane, the Awardee will use the 'Interim Reporting' function.

Annual reports and the final report shall include information related to:

- a. lists of Center participants during the previous annual funding period, including but not limited to working group and catalysis meeting attendees, postdoctoral fellows, sabbatical scholars, and graduate students. Information will include demographic data and disciplinary background;
- b. descriptions of all working group and catalysis meetings, including activity title, principle investigators, participant lists, and also web links to abstracts and annual reports and products;
- c. descriptions of projects undertaken by sabbatical scholars or other long-term visitors including web links to abstracts and annual reports and products;
- d. descriptions of projects undertaken by postdoctoral fellows including web links to abstracts and annual reports and products;
- e. lists of all publications and products from Center activities within the past year;
- f. highlights of working groups and catalysis meetings, particularly those with relevance to policy makers and general society;
- g. descriptions of informatics activities, education activities, and outreach activities;
- h. participation of minorities and members of underrepresented groups in all Center activities;
- i. unanticipated collaborations, research projects, and other endeavors enabled or stimulated by the Center;
- j. quantitative and qualitative analysis of Center activities and impacts as specified in assessment section (under Program Description 2.f.);

- k. problems likely to delay accomplishment of annual, strategic goals;
- l. workplan and timetable (milestones) for coming year.

6. **Ongoing Project Oversight:** The Awardee will ensure full commitment and cooperation among the governing structure components and all project staff during all NSF project management and oversight activities. The Awardee will ensure availability of all key institutional partners during any on-site review as well as timely access to all project documentation.
- a. NESCent Oversight Committee will provide independent evaluation of the performance of the Director and Associate Directors, and oversight of the Center's strategic and financial planning. The group will be composed of a senior representative from each University, as well as the Chair and Vice-Chair of the Advisory Board. It will be appointed by the Vice Provost for Research at Duke University, who will serve as ex-officio member of this committee. A summary of each annual assessment will be provided to NSF.
 - b. NSF will conduct annual site reviews to determine the effectiveness of the Center and its value to the scientific community. One or more of these reviews may consist of a short visit to the Center by the managing Program Officer or a reverse site review held at NSF. Early in the award's fourth year, a team of expert reviewers will visit the Center to evaluate its performance. Site reviews will consider the quality of the scientific activities that the Center has enabled, the Center's scientific profile, the quality of activities addressing societal needs, the change in culture of the research communities across evolutionary biology, the quality and utility of informatics activities and products, and the impacts of education and outreach activities. Other Center activities considered will include administration and management, partnerships, and participation by minorities and members of underrepresented groups.
 - c. During each year of the project, the NSF will evaluate the project to determine whether to continue to support full operation of the Center, or to decrease funding in order to phase out NSF support. If a decision is made to phase out NSF support of the Center, NSF will negotiate a six-month phase-out plan with the Awardee. The phase-out plan will give strong consideration to non-cancelable commitments made by the Center prior to the decision to phase out the Center. Such commitments would include but not be limited to 2-month post doctoral appointments and faculty sabbatical research appointments.