

## Sample Position Description Format for Post Doctoral Positions

Research Associate, GS-11/12

### **Factor I - Research Assignment**

**A. Assigned Responsibility:** Identify the organization, location, and general area of work, including the scope and research approach. Note: Most Postdocs will work on a specific, narrow piece of research supportive of a component of a CRIS project.

**Example:** The incumbent will be assigned to the Insect Pathology Program, located within the USDA-ARS Plant Protection Research Unit, Ithaca, NY. The incumbent will conduct cellular and molecular level studies of entomopathogenic fungi being evaluated and used as biological control agents for agriculturally important insect pests. The assignment is to use molecular and genetic approaches to 1) study expression, regulation and function of fungal genes or gene products that affect insect infection or toxemia; 2) discover and manipulate fungal genes affecting sporulation, storage longevity or environmental stability; or 3) determine levels of genetic stability, gene expression and gene flow within fungal populations.

**B. Research Objectives and Methodology:** Describe: (1) the specific objectives within the assigned area of responsibility which will be pursued **for the next 2 to 3 years**, and (2) the methodology to be used.

**Example:** One objective for the incumbent is to identify mechanisms of fungal pathogenicity and virulence. The incumbent will participate as a team member in the selection and development of appropriate fungi and target insects for study. Genetic approaches will be utilized. Another objective will be to develop molecular markers or probes for use as a tool for studies of fungal gene flow and epizootiology. Possible methods include nucleic acid fingerprinting using analysis of polymerase chain reaction products or restriction fragments, and other contemporary technologies.

**C. Expected Results:** State the expected results and the impact on science or technology that will result from successful completion of the research described in B above.

**Example:** The research is expected to improve our understanding of the mechanisms of fungal infection at the cellular and molecular levels. In addition, the work will identify genetic components of fungal strains that may be subject to improvement through selection or engineering. Finally, the development of suitable techniques to 1) distinguish among field-collected fungal strains and 2) deploy and recover marker strains will facilitate the use of native and introduced fungi in insect pest management schemes.

**D. Knowledge Required:** Explain the professional knowledges required to perform the duties of the assignment. Note: Our appointing authority requires that the individual possess a Ph.D. State required knowledges as succinctly as possible.

**Example:** "This position requires a Ph.D. in entomology, biology, microbiology or a related field. Knowledge of current methods used in fungus biology, including techniques used in molecular biology, genetics, and biochemistry is highly desirable."

**E. Supervisory Responsibilities:** The incumbent may provide intermittent technical guidance to graduate students and technical support staff.

## **Factor II- Supervision Received**

**A. Assigned Authority:** The specific problem is normally assigned by the supervisor with general instructions as to scope and objectives of the study.

**Example:** The research problems are determined by the supervisor and discussed with the incumbent. The incumbent is expected to plan and conduct experiments; analyze, evaluate and interpret the results; and prepare reports of the results in the form of manuscripts for publication in peer-reviewed journals and presentations at scientific meetings.

**B. Technical Guidance Received:** Describe the **technical** supervision received. Technical refers to the theoretical, experimental, and practical aspects of **planning** specific research activities in the assigned area of responsibility.

**Example:** Guidance will be provided by the supervisor and will consist primarily of defining research problems, guidance in planning experiments, and review and discussion of results within the context of team research goals. Colleagues and collaborators will be consulted as needed.

**C. Review of Results:** Describe the supervision received to analyze, interpret, and report results, and the nature and extent of the supervisor's review of manuscripts.

**Example:** Results and manuscripts will be reviewed by the supervisor. In addition, appropriate colleagues will be chosen with whom to review and discuss results and manuscripts. Manuscripts will be submitted to the Research Leader for administrative review and approval.

**D. General Supervision:** Describe the supervision received, such as frequency and nature of contact with the supervisor, and any authority to make changes in the program or commit resources (personnel, supplies, equipment, budget, etc.).

**Example:** The incumbent works under the supervision of the Lead Scientist, who is responsible for the overall leadership of the Insect Pathology project and for the supervision of all support staff associated with the project.

## Factor III- Guidelines and Originality

**A. Available Literature:** Indicate the extent to which literature applies to the assigned area, the specific objectives currently being pursued, and the methodology being used.

**Example:** There is an extensive body of literature on insect pathogenic fungi, but very little pertains to the specific objectives of this project. Some organism-level studies of fungal infection mechanisms have been conducted, but few involve identification of virulence mechanisms. Literature on the molecular and cellular biology of these fungi is limited, addressing only one or a few species. Furthermore, there is little published information on the cellular and molecular mechanisms of fungal infection of insects.

**B. Originality Required:** The originality required is primarily in the development of a complete and adequate research design for the specific project based on sound professional judgement in selecting and adapting from available possible methodology and techniques that are those best suited to the immediate problem.

**Example:** The assignment requires a working knowledge of fungus cellular and molecular biology, spore germination and host penetration. The incumbent must be able to apply this knowledge to the system described and adapt the technology that exists for manipulating other fungi.

### **OTHER CONSIDERATIONS** (Check if applicable)

- Supervisory Responsibilities (EEO Statement)
- Training Activities - Career Intern, Student Career Experience Program
- Motor Vehicle or Commercial Driver's License Required
- Pesticide Applicators License Required
- Safety/Radiological Safety Collateral Duties
- EEO Collateral Duties
- Drug Test Required
- Vaccine(s) Required
- Financial Disclosure Required
- Special Physical Requirements/Demands
- Position is located at a Biocontainment Facility
  - incumbent escorts visitors in the laboratory area and/or works with high consequence pathogens

Other: