

DEVELOPMENTAL STEPS FOR CHAPTER FOURTEEN:

1. List the Project/Performance Sites for your project. Prepare a Project/Performance Site profile for each.
2. Appreciate that the *Facilities & Other Resources* and *Equipment* sections for each project/performance site will be where reviewers get most of the information that they will use to evaluate the Adequacy of Facilities core review criterion as it relates to your proposal. *Accordingly, give this part of the application the time and effort it deserves.*
3. Inventory and characterize the physical resources that are assigned to you at the primary location using the subheadings for the *Facilities & Other Resources* section that are described in this chapter.
4. Repeat the preceding process for each additional project/performance site. Include at the other sites only those things that are relevant to the project.
5. Be sure to include ‘minor’ equipment (cost < \$5K) in your description of facilities under each of the subsections.
6. Write an italicized sentence after each subsection that conveys how what is described supports the prospects for success of the project.
7. Inventory and characterize the physical resources at the primary location, including minor equipment, to which you have either shared access or that are available to you through institutional core facilities.
8. Make a separate inventory of major equipment (cost \geq \$5K) to which you have access at the primary location, either on a dedicated or shared basis.
9. Obtain a letter of support from anyone who has agreed to share major equipment with you.
10. If the research proposed requires human subjects, thoroughly document in the “Clinical” subsection the demographics of the population and characterize your access. If clinical facilities will be needed, detail their characteristics, including relevant minor equipment.
11. If other vertebrate animals will be used, describe the facilities in which they will be housed and cared for, and indicate important qualifications of the veterinary personnel (ACLAM diplomate, etc.)
12. Inventory and characterize the intellectual resources/relevant collaborations that are either located in your immediate research environment, at the other project/performance sites, and that are available at other institutions through your wide-area network.
13. Characterize facilities and/or equipment that will facilitate communication between geographically separated members of the research team and/or collaborators.
14. If you will be working with what qualifies as a Select Agent, make sure that you describe the relevant bio containment facilities that will be needed.
(<http://www.cdc.gov/od/sap/docs/salist.pdf>),
15. For each project/performance site, write an overview paragraph titled ‘Environment - Contribution to Success.’ Insert this paragraph at the beginning of the *Facilities & Other Resources* section for each project/performance site.
16. If you are a New/Early Stage Investigator, make certain that you include a second ‘overview’ subsection that provides objective evidence of your institution’s commitment to your success as a researcher. Title it, ‘Institutional Commitment to ESI.’
17. Create the *Facilities & Other Resources* and *Equipment* sections as separate PDF files. Upload these files into your application by clicking the relevant “Add Attachment” button, after which you browse to where you have saved the file and then click “Open.”

EXAMPLE OF FACILITIES & OTHER RESOURCES SECTION

FACILITIES & OTHER RESOURCES – NAME OF PRIMARY PERFORMANCE SITE

Laboratory: The PI is assigned a 1200 sq ft laboratory that is located in departmental space, adjacent to his office. It is subdivided into a general purpose area (800 sq ft), a positive-pressure cell-culture room (200 sq ft), a medium preparation area (100 sq ft) and a walk-in cold room (100 sq ft). Minor equipment (cost < \$5K) in this space includes: *These laboratory facilities were specifically designed and equipped to support the continuum of research for which the project proposed here is the next step.*

Animal: Specific pathogen-free mice (C57BL6) will be purchased from the Jackson Laboratory, a supplier known for the high quality and reliability of the animals it provides. They will be housed in the institution's AAALAC-accredited animal-care facility, which is in a dedicated building adjacent to the one that houses the PI's laboratory (see above). Two veterinarians, both ACLAM diplomats, oversee care and staff training. Cages will be located on laminar-flow racks in a 100 sq ft room dedicated to this project. In addition to oversight by a board-certified laboratory-animal veterinarian, all animal technicians are rigorously trained and certified. Microbiological, clinical pathological and necropsy diagnostic facilities are available on site, with back up from the State's veterinary diagnostic laboratory. *Success of the proposed research is critically dependent on the acquisition and maintenance of mice in a pathogen-free state.* The facilities described will help assure such quality.

Clinical: Not applicable.

Computer: The PI has two computers: (1) Dell PC located in the PI's office (Windows 7 Professional); and (2) an HP Pavilion dv7000 quad lap-top with both PAXit and Scion Image 4.2 image analysis software. Each technician and student is equipped with a similar laptop, and all computers have Microsoft Office. Skype for Windows (business version) telecommunication software and equipment is on hand for all members of the research team. *The combination of these information technologies contributes to the potential for success by assuring both efficient data handling and optimal communication among members of the research team.*

Office: The PI's 144 sq ft office is adjacent to his laboratory. It is equipped with desk, credenza, desk and task chairs, two 4-drawer filing cabinets and hardwired high-speed access. There is also access to the Internet through the University's wireless network. The students' / technician's shared office space, which is 356 sq ft, has similar access and is equipped with four individual desks, four task chairs and four 2-drawer filing cabinets. *These facilities assure that the PI and his immediate research team will have the necessary space in which to formulate experiments, analyze results, and prepare manuscripts for publication.*

Other Resources:

- Flow Cytometry Core Facility located on same floor as the PI's laboratory. He has access by appointment on a fee-for-service, 24/7 basis. The facility contains a total of 800 ft², which is divided into two analytical suites and an adjoining room for sample preparation.

The latter contains Zeiss bright-field, fluorescence, and phase-contrast microscopes, as well as a dissecting microscope and Conner desk-top centrifuge. The director of the facility, Michael Legge, is certified by Accuri, the maker of the cytometers in the facility (see *Equipment* section). A certified technician is available to assist investigators with use of cytometers, if needed. This core has been designated as a reference facility by the American Cytometric Society. *Availability of this core contributes greatly to the potential success of this project, which includes flow cytometry as a core analytical approach.*

- Intellectual/Collaborative Resources: The following are funded investigators in the PI's research environment who are doing research that is complementary to what is proposed here. *They provide invaluable constructive criticism and informal intellectual input, without which the proposed project would have far less chance of success.*

<u>INVESTIGATOR</u>	<u>AGENCY</u>	<u>GRANT NUMBER</u>	<u>TITLE</u>
Jennifer D'Espagne	NIH/NIAID	R01AIXXXXXX	Innate Immune Responses Limiting Nosocomial Infections
Patrick Hayek	USDA	02XXX	Perinatal Responses to Staph Exposure from Maternal Mastitis
Steven McMullins*	USDA	02XXX	Bacterial Complications in Intestinal Obstructions in Large Animals
James Wherry	NSF	11XXXX	CAREER: Using phylogeny to track the inter-individual transfer of bovine gut bacteria
Geoffrey Teagarten	NIH/NCCAM	R01ATXXXXXX	Alternative Therapy for Nosocomial Staph Infections

* Dr. McMullins is appointed at the University of XXXXX, which is located in the same city fifteen miles from the PI's university. The PI and Dr. McMullins reciprocally attend each other's laboratory meetings on a bimonthly basis and are coauthors of several peer-review publications (see Biographical Sketch). The other four investigators are members of the PI's department.