



Defining Mission-Focused Research for the AZA Community

Developed by the Research and Technology Committee

Approved in 2013; Updated 2020

Mission-Focused Research includes any project undertaken by an AZA-accredited institution or certified related facility that:

- Involves application of the scientific method: it is basic or applied, involves systematic data collection and analysis of those data, draws conclusions from the research process, and is aimed at developing or contributing to generalizable knowledge
- Is primarily focused on studying questions relevant to the missions of an institution or the association, including conservation, animal care and welfare, biological science, social/human science, or education
- Includes but is not limited to any of the following:
 - Applied research that informs our understanding and management of animals, including reproduction, nutrition, epidemiology, sensory biology, physiology, population biology, behavior, welfare, etc.;
 - Basic research that focuses on increasing understanding of fundamental biological and behavioral principles, including evolutionary biology, physiology, etc.;
 - Research focused on species, habitat, or related conservation of those species or habitats;
 - Systematically-conducted surveys related to the areas above using scientifically validated methods
 - Systematic analysis of studbook data or other zoological records to answer research questions, as opposed to preparing annual management plans;
 - Research in conservation education, public engagement, behavior change, how our guests use and view institutions and their missions, and how institutions connect with their communities.
 - Systematic analysis of veterinary data to advance practices and care, including case study synthesis
- Takes place in a variety of settings including the wild, at zoological and aquarium facilities, across multiple facilities, in communities that institutions are collaborating with, or virtually

Contributions that can be counted and reported in the AZA Annual Research Survey include:

1. Direct costs of research which your institutional staff are conducting at your institutions, other institutions, in communities, or in the field, including:
 - a. Salary and benefit costs of staff involved in research projects (project managers, research technicians and assistants, etc.), reflecting time spent on all phases of the scientific process (grant-writing/donor interactions for the research project, project design, pilot testing, data collection, data analysis, summary of results for internal and external audiences), and presentation of results (e.g., manuscript preparation and conference presentations)
 - b. Value of donated volunteer time towards research projects, using state-specific hourly costs based on <https://independentsector.org/value-of-volunteer-time-2020/>

- c. Costs for new equipment, supplies, and travel directly associated with implementing the project
 - d. Consulting fees/lab fees for scientists assisting in the research process including study design, sample analysis, statistical analysis, etc.
 - e. Costs (food, housing, veterinary care, husbandry) associated with managing/maintaining a research colony that is maintained solely for the purposes of research, not as part of the institution's main animal collection
2. Direct costs of research conducted by outside scientists at your institution or utilizing samples collected at your institution (e.g., fecal or other biomaterials collection, behavioral observations of the animals or visitors, etc.):
 - a. Staff time (salary and benefits reflecting the percentage of time), and other expenses (food, research apparatus, etc.) incurred facilitating outside scientific studies in which the submitting institution is NOT the primary investigator
3. Research Training
 - a. Salary and benefit costs of staff involved in mentoring undergraduate, graduate, or post-graduate training focused on scientific research (if those costs are not already listed/recorded under an individual research project submitted by the institution)
 - b. Costs associated with training and administration of citizen science projects (if those costs are not already listed/recorded under an individual research project submitted by the institution)
4. Research Support – institutional investment in supporting research projects as defined above
 - a. Cash grants made for projects with a research focus
 - b. The value of any goods, equipment or supplies donated to research projects outside of the institution
 - c. Costs (salary, benefits, supplies) associated with testing field equipment that will be used in research projects (e.g. testing radio collars on zoo or aquarium animals to perfect fit, size, etc.)
 - d. Salary and benefit costs of person(s) managing research grants, reflecting percentage of time spent doing so
 - e. Salary and benefit costs of person(s) managing review of research in the institution, including any Institutional Animal Care and Use Committee, Research Committee, Institutional Review Board, reflecting percentage of time spent doing so
 - f. Salary and benefit costs for any staff serving on IACUC, Research, and IRB committees, reflecting percentage of time spent doing so
 - g. Travel costs associated with staff presenting research results at scientific meetings
 - h. Institutional support (direct and in kind) for hosting of scientific conferences focused on presentation of research results.
 - i. Publication costs (e.g. journal page fees) for research projects
5. Scientific scholarship support – institutional investment in peer-reviewed publications that do not fit the definition of Mission-Focused Research above (i.e., case studies which follow a formal research methodology, review papers, etc.), including:
 - a. Salary and benefit costs of staff involved in scholarly projects (project managers, research technicians and assistants, etc.), reflecting time spent on all phases of the scientific process (grant-writing/donor interactions for the project, design, data collection, data analysis, summary of results for internal and external audiences), and presentation of results (e.g., manuscript preparation and conference presentations)
 - b. Salary and benefit costs of staff involved in peer-review or editorial responsibilities for scientific journals
 - c. Value of donated volunteer time towards scholarly projects, using state-specific hourly costs based on <https://independentsector.org/value-of-volunteer-time-2020/>

- d. Costs for new equipment, supplies, and travel directly associated with implementing the project
- e. Consulting fees/lab fees for scientists assisting in the research process including study design, sample analysis, statistical analysis, etc.
- f. Publication costs (e.g. journal page fees) for scholarly projects
- g. **Note:** if an institution has many of these types of studies not connected to individual research projects, a single project called "Additional Publications" can be entered, with all publications for a given year represented.

Note: Projects that *should not* be included as Mission-Focused Research:

- Surveys for SSP masterplans or Animal Care Manuals (e.g. questions on diet, exhibit size, group composition, etc.) or for other use by an AZA program
- Space assessments for Taxon Advisory Groups or individual species management plans
- Requests for institutional records in order to update and publish studbooks or create management plans
- Requests for general veterinary information from veterinary advisors to AZA-managed programs (e.g. general information about health problems, numbers of deaths, descriptive necropsy results)
- Case Reports, and/or veterinary case studies that are descriptive in nature
- Student studies that are primarily for educational purposes (i.e. to train students in the process of doing research; you may count your mentoring time, but not the student's time)
- Market and operations research (focus groups, membership and visitor surveys, etc.) that are not being used to inform or evaluate mission-based activities – e.g. research focused on business operations rather than conservation, animal care, science, and education missions of institutions