University of Georgia, Department of Genetics, Protocol for Safe and Inclusive Work Environments

Adopted May 2023

Objectives:

We aim to ensure that the Department of Genetics has protocols for enhancing safety and promoting equity and inclusion in research conducted off campus. For the purposes of this document, off campus work environments are defined as research activities, such as data and sample collection, that are outside of the traditional laboratory environment, and thus exposed to risks beyond the usual purview of a university setting. We recognize that some labs conduct much more extensive fieldwork than others, and that the effort taken to craft a **Safe and Inclusive Work Environment Plan** should be commensurate with the risks associated with specific research expeditions.

Risk assessment:

Every field excursion presents two types of risks. The first type of risk relates to conditions present at the locations of research, and could include, but are not limited to, venomous snakes, exposure to toxic plants (e.g., poison ivy, oak or sumac), perilous road conditions, unstable ground, and even low probability events such as volcanic eruptions. All researchers experience these same conditions, and the likelihood of different risks varies across sites. The second type of risk involves specific attributes, identities, or medical conditions of individual researchers, which increase the probability that specific individuals will experience negative outcomes, including racial or ethnic profiling, harassment or violence, police brutality, severe allergic reactions, etc. Such negative outcomes can range from unsettling to life threatening. Researchers associated with the Department of Genetics must assess both types of risk in planning off campus research, and must develop an adequate and appropriate plan to mitigate these risks.

At least 3 months prior to planned fieldwork, the supervisor and researcher should begin to generate the **Safe and Inclusive Work Environment Plan** (see Appendix A), with the understanding that specific details of the research plan may change. This plan will identify potential risks and hazards of research off campus and the likelihood of occurrence for these events. These risks and hazards will vary by location and person, and appropriate mitigation strategies need to be tailored to each individual in each off-campus work scenario. The researcher is invited - but not required - to self-disclose any factors that influence his/her/their risk in the field. The supervisor should recognize and respect that individuals vary in their level of risk aversion. The Department of Genetics acknowledges that individuals may be reticent to disclose medical or personal information that is pertinent to drafting a safety plan. The department seeks to accommodate all individuals who need to conduct off campus research, including people with disabilities.

For research that requires work off campus, supervisors should communicate that expectation prior to students joining their lab and they must make every effort to accommodate researchers' needs. No supervisor shall mandate that any individual must conduct off campus research alone. Furthermore, it is important for supervisors to communicate explicitly to researchers that individual safety is prioritized above research. We caution researchers not to succumb to the temptation to “push through” dangerous weather, injuries, or other unsafe conditions. Researchers should be prepared to leave a potentially dangerous situation without collecting data or samples.

The preferred off campus research work situation involves researchers working in teams of two or more people. However, we recognize that in some scenarios, an individual will need to

conduct work independently. In that case, a clear plan for effective communication needs to be established in advance. If the field location is outside of cell phone reception, other technologies such as satellite phones need to be provided to the individuals to communicate in times of emergency. It is strongly recommended that field researchers do not conduct work alone at night.

This **Safe and Inclusive Work Environment Plan** will be reviewed by faculty from the Genetics DEI committee, and could be sent back to the PI and field researcher for revision (see Appendix A). A lab may file a single **Safe and Inclusive Work Environment Plan** per project that can represent a general policy that applies across multiple excursions. In that case, however, details of specific trips must be supplied at least one week before the excursion. Personal information shared in the plan will be treated confidentially. Ultimately, the approved plan must be filed in the office of the Head of the Department of Genetics 4 weeks before the off-campus research begins. The field researcher must give explicit informed consent to conduct fieldwork based on the **Safe and Inclusive Work Environment Plan**.

Planning:

Researchers should acquire all safety supplies and equipment necessary before going into the field. The items and equipment will vary by researcher and location. It is advisable for researchers to brainstorm risks and their likelihoods with PIs/other researchers familiar with similar locations, research activities, etc. We encourage labs to consider the following while planning:

Permits: Permits or proper landowner permission are usually required to conduct research on public or private property. Carry a physical copy of your permits with you at all times in the field, so you can present them to a park ranger or land manager if needed.

Apparel: It's important to wear comfortable clothes that will protect you from injury or other harm. For example, long pants and closed-toe shoes can help prevent insect and snake bites. Appropriate apparel will vary by a number of factors, like location, time of day, etc. We encourage labs to invest in UGA apparel to demonstrate the institutional affiliation of field researchers. High-visibility garb is required if research occurs in areas where hunting is permitted. Additional recommendations are presented in Appendix B.

UGA vehicles and equipment: Sometimes members of the public may be suspicious of a person or group of people working outside without visible gear. If you have a university identification card, carry that with you. UGA vehicles can be used for travel to and between field sites. UGA magnetic decals can also be applied to personal vehicles.

Location: Off campus research is often done in wild areas off trails or in poorly trafficked areas; forested areas may be especially disorienting and difficult to navigate. It's best to plan your route before you leave; getting lost is stressful, even when fully prepared. Bringing physical maps and a compass is desirable, along with GPS units, and replacement batteries. We encourage researchers to familiarize themselves with the use of GPS or maps, and to be trained in orienteering if off-road or off-trail travel is necessary. Many smartphones allow users to share their current location or a specific location with others. If you have the opportunity to familiarize yourself with the area before you begin work, you should do so. Otherwise, make note of your surroundings when you arrive or as you travel to your field site. It may be helpful to pay attention to nearby gas stations, how populated certain areas are, or landmarks that will help you identify the site. You can also ask others who are familiar with the site for this information.

Health-related supplies: All individuals of the research team should have access to a comprehensive first aid kit that is fully-stocked with supplies necessary to mitigate risks inherent to the work locations. The first aid kit should be reviewed prior to the trip, and a checklist of contents prepared and inserted into the kit. If possible, during the field season, depleted first aid supplies should be replenished. Researchers should also carry any personal medical

equipment, like inhalers, medication, or epipens. If a member of the research team has specific health conditions that may require treatment in a remote area, other members of the team should be familiar with how to treat or assist those in need in case of emergency. Staying well-fed and hydrated is also imperative to quality work. While needs and preferences will vary on an individual basis, researchers should always come prepared with food and water.

Seasonal factors: Some risks may be seasonal, so you may have to adjust your plan at different points in the year. For example, in the summer, researchers can check the weather forecast to see how much water is necessary to remain hydrated. As conditions can change rapidly, we encourage researchers to wear layers and bring rain gear and additional insulating clothing to the field daily. In general, researchers should avoid extreme weather if it would be unsafe to conduct research. Researchers should prepare to encounter insects and other animals. If conducting work before sunrise or after sunset, flashlights or lanterns are necessary supplies. Researchers must look up when various hunting seasons occur in the work location and prepare accordingly with high visibility vests and hats, as well as avoiding research at dawn and dusk. These risks will vary by region; see Appendix C for more detail.

Resources and training:

The supervisor and the field researcher shall devise a plan to ensure that all team members have basic first aid training, and have specific training for the needs of individuals (e.g., use of an epi pen). Several training courses are recommended, such as self-defense, CPR, Stop the Bleed, and wilderness first responder training. Supervisors are encouraged to complete implicit bias training and other DEI coursework that can help familiarize them with hazards specific to students and postdocs from historically marginalized demographic groups (Bystander intervention) and for promoting access to researchers with disabilities (e.g., Powell et al., 2021).

Researchers conducting off campus work should have a roadside assistance plan and be familiar with basic vehicle maintenance. Researchers should also be aware that resources are available through the Genetics Department and UGA. For example, field vehicles can be rented through the University of Georgia Automotive Center, and the University can provide camping equipment through the Ramsey Center. The University of California's Field Operation and Safety Manual may prove useful in devising a field research plan.

Communication:

Research off campus requires communicating with various parties, such as lab members, stakeholders at the location (e.g. park rangers, private landowners), and the public. Potential health and safety concerns should be clearly communicated and addressed between researchers and supervisor(s) (for example, allergies, disabilities, or temporary illness). Especially in cases in which researchers are working independently, the researcher should communicate daily plans with a supervisor, including when and where the research will be conducted, and at what time the researcher will check in with the supervisor after work is completed. All parties should be aware of how to contact local search and rescue organizations if a researcher fails to check in at the appropriate time. In addition, researchers are encouraged to consider how to communicate safely and effectively with others outside of the research group. For example, communication about pronoun usage within and outside of the research group could enhance safety of all team members. Additionally, researchers should consider ways to communicate with the public about sensitive research topics such as endangered species or climate change research.

Four weeks prior to leaving for the field, a **Plan for Safe and Inclusive Work Environments** should be filed with the Genetics Department. This plan should include contact information for relevant stakeholders at the off-campus work location (e.g., park rangers, private landowners) and for at least one emergency contact for each off-campus researcher. Upon

finishing work for the season, safety and emergency response plans should be revisited and revised for future excursions, as necessary. In addition, off campus research teams should communicate their return to a supervisor or staff member associated with the Department of Genetics.

Supervisors are responsible for the safety of their off-campus research team. Supervisors should understand the strong power dynamic that can easily put students and research assistants at greater risk off campus. Experienced researchers can underestimate the risks to which new researchers may be exposed, along with their comfort levels in performing certain tasks. Members of the off-campus research team should be invited by supervisors to discuss their comfort levels during development of the research and emergency plans. These discussions should continue throughout the field season to ensure all members of the team feel safe while conducting research. It should be made clear to the team that individual safety comes before field research; thus, those who feel unsafe or unwell should communicate these issues with supervisors and feel confident in their agreed upon “no-go” plans to end research when necessary. As safety coordinators for their off-campus team, supervisors should also clearly communicate how to report Title IX violations, harassment, violence, or other serious safety violations including those made by the supervisor.

This plan was developed by Jill Anderson, Sam Day, Derek Denney, Inam Jameel, Kelly McCrum, Shaun McCann, Mia Rochford, and Andrea Sweigart, and based on Blonder (2022) and Ramírez-Castañeda et al. (2022).

References

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Appendices

Appendix A: Plan for Safe and Inclusive Work Environments

Objective: Before conducting any research off campus, the PI and research team should develop a set of protocols for the anticipated work. This plan applies to **all** members of the research team conducting research off campus, and should include, at minimum, a description of the research setting, assessment and mitigation of risks, a communication plan, and mechanisms for reporting and resolving issues of harassment. The plan should be submitted to the Genetics DEI committee for review 6 weeks prior to the initiation of off campus research. The final approved plan must be filed with the Genetics Department at least 4 weeks prior to the field season. The plan must include all of the following elements, but is not limited to these components, which will be available in an online form:

1) **Basic Information.** Who will be conducting the research, where, and for how long?

2) **Description of off campus research setting and assessment of risks.** Travel may be in very remote locations with limited access to assistance or gas stations. Risks could include travel through inhospitable terrain, and areas where a fieldworker might experience racism, homophobia, and/or transphobia. Possible additional safety hazards include car accidents, travel delays, animals in the road (e.g., hitting a deer), road hypnosis, over-exhaustion while driving, lack of food or water (e.g., if a car becomes disabled). The risk assessment needs to consider risks inherent to the specific field sites along with risks specific to each individual in the field team. If a field researcher is visiting multiple sites, assess risk at each location. Risks could include: extreme heat/cold, insect bites or threats from other wildlife (e.g., snakes, bears), poison ivy/oak/sumac, river crossings, risk of flash floods, mud (car can get stuck in a remote area), robbery/mugging, sexual harassment/assault, police intervention, aggressive members of the public. If fieldwork occurs in a site where hunting happens, the researchers must determine the dates of the hunting seasons. We encourage PIs and trainees to discuss strategies for increasing situational awareness while conducting research off campus. Furthermore, we encourage the PI and researcher to contact local park guards, rangers or other local authorities with a list of the fieldworkers, an itinerary for the fieldwork, and copies of permits.

3) **Mitigation strategies.** What are the strategies for mitigating these risks while traveling to and conducting research off campus? We note that authorization must be obtained to transport UGA equipment and computers to the field. This step protects researchers from loss or theft of equipment. Field researchers should be trained in the use of specialized equipment. The plan should include a list of the equipment that is necessary for successful completion of the study.

4) **Steps to nurture an inclusive work environment**. All team members need to feel safe, supported, and respected when conducting research off campus. What steps will you take to ensure that team members adhere to established codes of conduct and professionalism? The Association of Polar Early Career Scientists has an excellent code of conduct that can be easily modified.

5) **Communication plan**. Who will be the point of contact for daily safety check-ins? Does the check-in person know the contact information for local search and rescue groups if a researcher fails to check in at the predetermined time? The plan should describe expectations of communication or check-ins from the off-campus location to supervisor(s) at the home university or research station. When multiple researchers are together, the plan should include contingencies for if the team becomes separated. What is the plan for if a field researcher falls ill, gets into an accident or otherwise becomes injured? Who should be contacted in case of emergency? Emergency plans should clearly identify locations of nearby auto shops or tow trucks, and the closest hospitals or medical providers. The plan should list phone numbers for local emergency services, and evacuation or shelter plans for various field sites. What are the contingency plans if cell phone service is not available? What is the no-go plan for when to call off fieldwork due to inclement weather or other conditions? That is, under what conditions will fieldwork be delayed or temporarily canceled?

6) **Mechanisms for reporting, responding to, and resolving issues of harassment.** Harassment and assault are emergency situations in the field and should be addressed in the emergency response plan. To whom should researchers report title IX violations, harassment, assault, bullying or other safety violations? All members of the research

team should have access to this information and know how to report violations to the appropriate authority, including violations made by the supervisor(s).

7) **Agreement and dissemination.** All members of the research team should review the risk assessment and mitigation plan and answer these questions: Do you understand the risks (i.e., of going alone)? Do you give informed consent for conducting research off campus? Copies of the final plan should be provided to all members of the team.

After returning from the field, revisions should be made as needed.

Appendix B: List of PPE and Equipment

1. Comfortable apparel and shoes in good condition that are suitable for the location and weather. For example, many retailers sell lightweight, loose long pants for hiking that will protect you from insect bites while still keeping you cool and giving you a wide range of motion.
2. Visibility gear: This may include reflective vests, gear in hunter's orange or pink. You may still want to avoid doing work during hunting season or if you see or hear hunters nearby. This is also helpful when working in urban or more high-traffic areas.
3. Sun protection: Sunscreen, long shirts and pants, hats.
4. Individual essentials: Certain items (e.g., headlamp, water bottle, first aid gear) should be carried at all times. Researchers can determine their specific needs and incorporate these items into their carry kits.
5. Other: There are some items that could be of use, but may not be essential. Some examples include stand-to-pee (STP) devices, toilet paper, wet wipes/hand sanitizer, hand shovel, thermal blanket, pocket knife/scissors.

Appendix C: Infographics and materials that may be useful while traveling

Depending upon the fieldwork location, it may be important to:

- Know what to do if a researcher presents with symptoms of heat exhaustion or heat stroke.
- Make safety plans in wildfire prone regions.
- Regulate body temperature, especially while masking.
- Mitigate risks from biotic hazards.
- Have training in Bystander intervention
- Have training in self-defense

Research in urban areas: Research in urban settings often differs from work in more natural settings. For example, researchers may have to prepare for more extreme temperatures due to the urban heat island effect. Social safety considerations may also be different.

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