Field Research Safety Guidelines

Overview

The field research safety guidelines provided herein are intended to provide assistance to principal investigators (PI), research supervisors, postdoctoral associates, technicians, other employees, graduate students, and undergraduate students with the primary motivation of promoting safety and minimizing risks associated with the execution of research activities in a field setting. Field research inherently is associated with an elevated risk of harm compared to routine activities. Fieldwork is an important part of teaching and research at The University of Texas at Austin. Since field research activities take you off campus, this guide is intended to supplement your plans and prepare you for health and safety complications you might encounter in the field.

This document is organized into several distinct sections. The first section covers “General guidelines” to assist you before you leave, while you are doing fieldwork and with emergency medical care. “Physical & Environmental Hazard” sections address specific hazards that you may encounter in the field. By looking at these hazards, you can assess the risk associated with your fieldwork and develop a practical “Safety Plan”. “Animal-related hazards” include a listing of “what to do if encountered” as well as preventive measures. Finally, “infectious diseases” that present a hazard are listed with exposure routes, symptoms and preventive measures. The last section of this guide provides you with resources both on campus and outside the university.

General Field Safety Guidelines

The following safety guidelines are presented for any type of fieldwork in any location. Of course, each fieldwork outing is unique and the best way to address your specific hazards is to prepare your own “Safety Plan”.

For more specific information on fieldwork hazards and precautions, talk to your supervisor or contact Environmental Health & Safety (EHS), TexasGlobal or University Health Services Travel Health. Also, before your trip contact Travel Management Services and the Office of Accounting Travel Services for information on travel authorization and reimbursements. Contact information for all these UT offices is presented in the resources section of this Guide.

A. Prior to Travelling

One of the most important phases of your fieldwork experience is planning and preparation before you leave. Here are some suggestions for a safe trip:

Prepare a Safety Plan

Prepare a written Safety Plan of your trip. Provide a copy to each member of your team and leave a copy with a responsible party. Include the following:

a. Your itinerary: Locations, arrival and departure dates, names, addresses and phone numbers of all fieldwork participants.

b. Contact person: Name and phone number of a person to contact in case of emergency- a spouse, parent or friend, as well as a campus contact.

c. Activities: General nature of activities being conducted.
d. Local contacts: Names of people at or near your fieldwork site who can reach you if necessary, as well as your check-in/check-out arrangements. Print a map to nearest 24-hour health care provider.

e. Possible Risks: Potentially hazardous plants, animals, terrain and weather conditions where you plan to work. Complete a “Field Research Safety Plan”. A simple template for a Safety Plan is presented below.

As you prepare your plan, talk with other fieldworkers, local residents, and authorities, such as state and national park services’ personnel who may be able to provide you with helpful information.

A template for a Safety Plan is presented below and may be used by the PI or Project Lead, to assist with the development of your specific plan. The completed Safety Plan should be shared with all the members of the field research team and kept on file on campus. Multiple trips to the same location can be covered by a single Safety Plan. The Safety Plan should be revised whenever a significant change to the location, the team or scope of field work occurs. EHS is available to assist in completion or review of the Safety Plan; (512)471-3511.
# University of Texas at Austin

## Field Research Safety Plan

**Principal Investigator:**

**Department:**

**Phone Number:**

**E-mail Address:**

**Dates of Travel:** (List multiple dates if more than one trip is planned)

**Location of Field Research:**

- **Country:**
- **Geographical Site:**
- **Nearest City:**
  - (Name, Distance from Site)
- **Nearest Hospital or Medical Clinic:**
  - (Location, Distance from Site)

**Field Research:** (Please include a brief description of the field work).

**University Contact:**

- **Name:**
- **Phone:**

**Local (Field) Contact:**

- **Name:**
- **Phone:**

**Emergency Procedures:** (Please include detailed plans for field location including evacuation and emergency communication; *Include a separate sheet if necessary*).

**First Aid Training:** (Please list any team members who are first aid trained and the type of training they have).

**Physical Demands:** (Please list any physical demands required for this field research, e.g., Diving, Climbing, Temperature Extremes, High Altitude).

**Risk Assessment:** Please list identified risks associated with the activity or the physical environment (e.g., extreme heat or cold, wild animals, endemic diseases, firearms, explosives, violence). List appropriate measures to be taken to reduce the risks; *Include a separate sheet if necessary*.

<table>
<thead>
<tr>
<th>Identified Risk</th>
<th>Control of Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td></td>
</tr>
</tbody>
</table>

**Travel Immunizations:** (Please list required immunizations/prophylaxis.) Contact CHS (512)475-8301 for assistance.

**Field Team Membership** (Please list the names of all members of the field research team, and identify the Field Team Leader.)
Hazard Identification and Control

EHS has multiple tools to aid in risk management available within the “Injury and Illness Prevention Program”. The Job Hazard Analysis (JHA), Risk Assessment Tool (RAT), and Standard Operating Procedure (SOP) process flow is an interdependent framework that helps ensure workplace safety. Each step of the process relies on the previous one, creating a comprehensive approach to hazard identification and control. The JHA provides the first step to the risk assessment, which in turn informs the development of effective control measures in the SOP. By completing a JHA, you can identify the specific hazards associated with a job, while the risk assessment helps you evaluate the likelihood and severity of those hazards as well as the hierarchy of controls. This information is critical for developing effective control measures that are outlined in the SOP. By following this process flow, you can create a safe and healthy workplace that minimizes the risks associated with job-related hazards. These resources can be found below.

Get Your Vaccinations and Make Medical Preparation

If your trip involves travelling outside of the country, you should contact University Health Services, Travel Health, TexasGlobal or another travel health clinic to learn about the required and recommended vaccinations for your location. Some countries require proof of vaccinations prior to entry. A travel appointment should be scheduled as far in advance as possible since some vaccines are given as a series over a six-month period. Consider taking a CPR/First Aid class through UT Health Promotion Resource Center, Travis County EMS or the Red Cross.

All UT Austin employees and students are required to comply with the mandatory International Travel Process. If planned destinations appear on the restricted regions list, you must apply for and obtain travel approval from the International Oversight Committee (IOC). Requests for travel approval to a Restricted Region must be submitted at least five weeks prior to the anticipated date of travel. All university employees and students traveling abroad on university business – regardless of destination – are also required to register their trip in the UT Austin International Travel Registry (ITR), which automatically enrolls travelers in emergency assistance and overseas insurance through On Call International, as mandated by UT System. On Call International provides assistance 24 hours a day, ranging from the simplest task of a doctor referral to the most complex medical emergency evacuation to ensure you receive medical treatment consistent with international standards of care. Overseas insurance is charged at a rate of $19/week on student What I Owe accounts (including graduate student employees); all other employees are enrolled at no cost to the individual traveler.

Assemble Your Safety Gear

Assemble safety provisions and check everything before you leave. Safety provisions may include:

- First aid kit and first aid manual. These should be taken on any trip.
- Medications you regularly take (if your medication involve syringes or liquid preparations, consider carrying a note from your physician documenting your need for such due to airline or country specific restrictions)
- Allergy treatments (if you have allergies)
- Sunscreen and hat
- Water purification tablets or filter devices
- Vehicle emergency kit
- Flashlight
- Flares (Do not take on plane)
- Two-way radio (if you will be working alone in an isolated or dangerous area)
- Personal protective equipment for fieldwork activities (safety glasses/goggles, gloves, hard hat, sturdy work boots, etc.). EHS can recommend protective equipment depending on your activities.
- Tool to remove fishhooks from skin if using hooks for fishing
- Seasickness tablets (be aware of drowsiness side effects)

Other Potential Actions

- Research involving animals, including wild animals, requires registration with and approval from the Institutional Animal Care and Use Committee (IACUC). Research involving microorganisms requires registration with and
approval from the Institutional Biosafety Committee (IBC). You may also need to consult with the Institutional Review Board or other committees depending on the nature of your research. Please see the resources section for more information.

- Shipping specimens/materials to and from the field may require additional training, special packaging and paperwork for shipping. Contact EHS-hazmatshipping@austin.utexas.edu for additional guidance.
- Contact the Office of Employee Benefits or the Vice President for Student Affairs to obtain information about travel insurance and waivers.
- Ask your health insurance provider about how your coverage applies to medical treatment in the fieldwork locale, should that become necessary.
- Be sure to evaluate the risks associated with driving. Consider taking a defensive driving course and working with a local guide or driver.

B. While in the field

1. Fieldworkers should check in with their group office regularly, and should advise the group office of any changes in schedule or points of contact.
2. Fieldworkers should also inform someone of their work locale (for example, local search and rescue personnel, police, sheriff, or motel employee) each day about the daily fieldwork location and the approximate time of return.
3. After each day’s work, the fieldworkers should notify the contact when they return.
4. The local contact should be provided with the telephone numbers of people to call (group office, university contact, etc.) if the workers do not return or report in within a predetermined interval of the scheduled return time.
5. Whenever possible, fieldwork activities should be done in teams of at least two people. The “buddy” system is the safest way to work. Always make sure your supervisor knows where you will be and when you will return.

Physical & Environmental Hazards

Potential Fieldwork Hazards and Special Circumstances

This list is by no means exhaustive. Each field site has its own set of unique conditions and potential hazards that should be discussed with the research advisor and team. Each principal investigator should develop field safety guidelines for the students/employees involved in fieldwork and discuss specific strategies for avoiding or mitigating field hazards.

All-Terrain Vehicles: All users should be properly trained (and where required, licensed) in the safe use and operation of vehicles that may be used in the field.

Animals/Wildlife: Particularly when working in remote areas, animals/wildlife may be of particular concern. Each field location will have its own unique fauna and the potential threat posed by these animals should be considered. Particular attention should be paid if working in an area during mating season or when offspring are present, as these situations may make certain animals more likely to be aggressive. If the field work involves intentional animal handling, hazards such as bites, infection, etc. should be addressed.

Biological Hazards: Contamination of air, water and food sources by local bacteria and viruses should be considered. Immunization may be considered for things like tetanus or other diseases if engaged in activities that put researchers at greater risk. Routine prevention measured should be taken, such as dressing to avoid tick exposure, mosquitos, etc. Consider the potential for water-borne diseases, have access to clean water, or take appropriate steps to use personal water purification devices while working/camping. Be aware of insect borne disease such as Zika, etc. and review protective strategies.

Boating Safety: All users should be properly trained in the safe use and operation of boats. Personal floatation devices must be available for all passengers and must be worn at all times when in a boat. Safety should be considered not only while on the open water, but also during docking procedures, as this is often when accidents and injuries can occur.
Cellular Access: When working in a rural area, be aware that cell phone coverage may be limited, and not available for emergency assistance. Also, consider that not all rural areas have 911 emergency phone numbers in place. If this is the case, know the direct phone number for local emergency services such as ambulance, fire, police and update the field communications plan accordingly.

Chemical Safety: If working with hazardous chemicals while in the field, all precautions should be taken that would normally be taken in a University of Texas research lab. Proper personal protection should be worn (gloves, goggles, face shield, etc.) and proper ventilation should be available. Additional safety precautions may need to be considered if transporting chemicals to a field site. There may be additional requirements for the transportation of chemicals contact EHS-hazmatshipping@austin.utexas.edu for additional guidance. Also consider what waste disposal procedures may need to be in place and reach out to EHS-HazardousMaterials@austin.utexas.edu for assistance.

Electrical Hazards: Consider any electrical hazards that may be present at a field site, including high voltage power lines, etc. Research equipment/instrumentation should be checked for signs of wear prior to deployment in the field (frayed lines, stripped wires, etc.). Care should be taken when operating electrical equipment near water sources.

Environmental Hazards: Natural environment and weather conditions may pose a hazard to personal safety. Each field site will have its own unique set of conditions that may need to be considered. The principal investigator should discuss potential hazards with personnel prior to field deployment. Issues of concern may include the potential for hyperthermia, hypothermia, sunburn, dehydration, high altitude (altitude sickness), frostbite, etc. Proper personal gear should be available appropriate to the field site and its weather/environmental conditions.

Equipment Hazards: Equipment used in the field such as chainsaws, pumps, motors, etc. may pose a safety hazard if not operated properly. All users should be trained in the safe operation of any equipment to be used in the field.

First Aid: First aid kits should be available at all field sites and should be routinely checked for adequate supplies and expired materials. Each principal investigator should decide on whether all field team members need to be certified in first aid procedures (e.g. Red Cross certification).

Navigation/Remote Sites: Adequate navigational equipment should be available if travelling to remote sites. All users should be familiar with the use of the equipment (e.g., GPS units).

Social/Cultural Consideration: If the field work has the potential for interaction with people of other cultures team members, the principal investigator is responsible for the training of field personnel with respect to relevant social or cultural considerations.

Animal Related Hazards

There are many general safety hazards pertaining to animals and other indigenous creatures that exist in nearly every location worldwide. All field researchers, regardless of the work location, should familiarize themselves with the vertebrate and invertebrate animals they may encounter in their field location. Below are some examples of animal-related hazards to consider.

<table>
<thead>
<tr>
<th>Concern</th>
<th>Hazard</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large or Dangerous animals</td>
<td>Physical injury (bite, kick, gore, maul), death</td>
<td>Large cats, bears, sharks, crocodiles</td>
</tr>
<tr>
<td>Venomous animals (actively inject toxins through fangs, stinger, or spine.)</td>
<td>Mild discomfort to paralysis and death</td>
<td>Rattlesnake, Black widow spider, scorpion, cone snail, jellyfish</td>
</tr>
<tr>
<td>Poisonous animals (deliver toxins through inhalation, absorption through the skin, or after being ingested.)</td>
<td>Mild discomfort to paralysis and death</td>
<td>Cane toad, Pufferfish, blister beetle</td>
</tr>
<tr>
<td>High-rabies risk animals</td>
<td>Disease (rabies)</td>
<td>Bat, raccoon, fox, coyote, skunk</td>
</tr>
<tr>
<td>Domestic animals</td>
<td>Physical injury, allergic reaction, disease</td>
<td>Dog, cat, horse, cow, sheep, pig</td>
</tr>
<tr>
<td>Zoonotic diseases</td>
<td>Disease through ingestion, inhalation, bite from virus, bacteria, parasites, fungi</td>
<td>See table below</td>
</tr>
</tbody>
</table>
Insect bites | Disease, allergic reaction, infection, local reaction | Mosquito, tick, flea, kissing bug
Large-scale die off | Disease, biotoxicity, pollutant, environmental influences, climate | Algal bloom, thermal stress

**Infectious Diseases**

Diseases caused by viruses, bacteria, fungi, and parasites are ubiquitous worldwide. This guide is not intended to cover every health risk in every location, but it provides information about some more common diseases. Always check with your health care provider, University Health Services or another travel health clinic before travelling out of the country to learn about specific health risks for the region in which you will conduct your research. All field researchers, regardless of the work location, should read through this section to learn more about some general diseases that exist worldwide.

<table>
<thead>
<tr>
<th>Type</th>
<th>Location</th>
<th>Exposure Route</th>
<th>Symptoms</th>
<th>Prevention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campylobacter</td>
<td>Worldwide</td>
<td>Foodborne – poultry products, unpasteurized milk or water contaminated <em>Campylobacter</em></td>
<td>Diarrhea - Gastrointestinal symptoms - Fever</td>
<td>Always cook food thoroughly - Never drink water from an impure source - Do not drink unpasteurized milk Wash hands with soap and water frequently</td>
</tr>
<tr>
<td>Cholera</td>
<td>Africa, Asia, Latin America</td>
<td>Foodborne – poultry products, unpasteurized milk or water contaminated <em>Vibrio cholera</em></td>
<td>Diarrhea - Gastrointestinal symptoms</td>
<td>Always cook food thoroughly - Never drink water from an impure source - Wash hands with soap and water frequently</td>
</tr>
<tr>
<td>E. coli O157:H7 and Shiga toxin-producing Gastroenteritis</td>
<td>Worldwide</td>
<td>Foodborne – beef, unpasteurized milk, unwashed raw vegetables, water contaminated with Escherichia coli</td>
<td>Diarrhea - Gastrointestinal symptoms</td>
<td>Always cook food thoroughly - Never drink water from an impure source - Wash hands with soap and water frequently</td>
</tr>
<tr>
<td>Hepatitis A (Vaccine Available)</td>
<td>Worldwide (underdeveloped countries)</td>
<td>Foodborne – water, shellfish, unwashed raw vegetables contaminated with Hepatitis A virus</td>
<td>Diarrhea - Gastrointestinal symptoms</td>
<td>Obtain a vaccine - Always cook food thoroughly - Never drink water from an impure source - Wash hands with soap and water frequently</td>
</tr>
<tr>
<td>Histoplasmosis</td>
<td>Worldwide (especially Miss. &amp; Ohio River Valleys)</td>
<td>Inhalation of fungus <em>Histoplasma capsulatum</em> from soil contaminated with bat or bird droppings</td>
<td>Mild flu-like - Rarely can be acute pulmonary histoplasmosis</td>
<td>Use caution when disturbing dry soils or working near bat or bird droppings - Personal protective equipment may be needed</td>
</tr>
<tr>
<td>Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome (HIV/AIDS)</td>
<td>Worldwide</td>
<td>Being exposed to blood or body fluids infected with HIV - Having sex or sharing needles with someone infected with HIV</td>
<td>May have flu-like symptoms 14-60 days post infection - Attacks the immune system, may eventually result in opportunistic infections or cancers</td>
<td>Follow Bloodborne Pathogen training when handling any unfixed human blood or tissue - Do not engage in risky activities</td>
</tr>
<tr>
<td>Disease</td>
<td>Location</td>
<td>Mode of Transmission</td>
<td>Symptoms</td>
<td>Prevention</td>
</tr>
<tr>
<td>---------</td>
<td>----------</td>
<td>----------------------</td>
<td>----------</td>
<td>------------</td>
</tr>
<tr>
<td>Influenza (seasonal)</td>
<td>Worldwide</td>
<td>Inhalation of influenza virus - Contact with birds or other animals infected with influenza</td>
<td>Fever (usually high) - Headache - Extreme tiredness - Dry cough - Sore throat - Runny or stuffy nose</td>
<td>Annual flu vaccination - Cover your nose and mouth with a tissue or your elbow when you cough or sneeze - Wash hands with soap and water frequently - If you are not near water, use an alcohol-based hand cleaner - Try not to touch your eyes, nose, or mouth – Avoid people who are sick</td>
</tr>
<tr>
<td>Salmonellosis</td>
<td>Worldwide</td>
<td>Foodborne – beef, poultry, milk, eggs, unwashed raw vegetables contaminated with salmonella bacteria</td>
<td>Diarrhea - Gastrointestinal symptoms</td>
<td>- Always cook food thoroughly - Wash vegetables before consuming - Wash hands with soap and water frequently</td>
</tr>
<tr>
<td>Typhoid Fever (Vaccine Available)</td>
<td>Worldwide</td>
<td>Foodborne – food and water contaminated with Salmonella typhi</td>
<td>Diarrhea - Gastrointestinal symptoms</td>
<td>Obtain a vaccine - Always cook food thoroughly - Never drink water from an impure source - Wash hands with soap and water frequently</td>
</tr>
<tr>
<td>Tetanus (Vaccine Available)</td>
<td>Worldwide</td>
<td>A wound that is infected with Clostridium tetani; tetanus toxin is produced by the bacteria and attacks nerves</td>
<td>Early symptoms: lockjaw, stiffness in the neck and abdomen, difficulty swallowing - Later symptoms: muscle spasms, seizures, nervous system disorders</td>
<td>Obtain a vaccine for tetanus every 10 years or immediately following a suspect wound or injury - Once the disease starts it must run its course</td>
</tr>
<tr>
<td>Typhus Fever</td>
<td>Worldwide</td>
<td>Infection from bite of lice, fleas, ticks, or mites infected with Rickettsiae species</td>
<td>Headache - Fever - Rash</td>
<td>Use insect repellent - Wear long sleeve shirts - Tuck pants into boots</td>
</tr>
<tr>
<td>Leptospirosis</td>
<td>Worldwide</td>
<td>Ingestion, swimming, or other activities in water contaminated with Leptospira</td>
<td>Flu-like - Occasionally more serious symptoms</td>
<td>Use care when working in the water, especially after a flooding event - Avoid entering the water with open wounds</td>
</tr>
<tr>
<td>Norovirus</td>
<td>Worldwide</td>
<td>Foodborne - food, water, surfaces, or objects contaminated with Norovirus - Direct contact with another person who is infected</td>
<td>Nausea, vomiting, diarrhea, stomach cramping - Some people also have a low-grade fever, chills, headache, muscle aches, malaise</td>
<td>Wash hands with soap and water frequently - Wash fruits/vegetables, and steam oysters - Clean and disinfect contaminated surfaces immediately after illness using a bleach-based cleaner - Remove and wash contaminated clothing or linens</td>
</tr>
<tr>
<td>Valley Fever</td>
<td>America semiarid regions</td>
<td></td>
<td>Flu-like (fever, cough, rash, headache, muscle aches) - Occasionally, chronic pulmonary infection or widespread disseminated infection when digging</td>
<td>Stay inside during dust storms in areas where Coccidioides fungus is present - Keep doors and windows tightly closed</td>
</tr>
<tr>
<td>Disease</td>
<td>Location</td>
<td>Mode of transmission</td>
<td>Symptoms</td>
<td>Prevention</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>---------------------------</td>
<td>-----------------------------------------------------------</td>
<td>--------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------</td>
</tr>
<tr>
<td>St. Louis Encephalitis</td>
<td>North and South America</td>
<td>Mosquito-borne infection from the bite of a mosquito infected with St. Louis Encephalitis virus</td>
<td>Mild - fever and headache - Severe - headache, high fever, neck stiffness, stupor, disorientation, coma, tremors, convulsions, muscle weakness, paralysis, and rarely death</td>
<td>Use insect repellent - Many mosquitoes are most active at dusk and dawn, consider staying indoors during these hours - Wear long sleeves and pants - Avoid areas of standing water where mosquitoes breed</td>
</tr>
<tr>
<td>Lyme Disease</td>
<td>United States, Europe, and Asia</td>
<td>Infection through the bite of a tick infected with Borrelia burgdorferi (U.S.), Borrelia afzelii, or Borrelia garinii (Europe)</td>
<td>Spreading rash (&quot;bullseye&quot;) - Early symptoms: flu-like - Later symptoms: arthritis and neurologic problems</td>
<td>Avoid tick infested areas - Wear long sleeves and pants - Use insect repellent - Check clothing and hair for ticks and remove any ticks</td>
</tr>
<tr>
<td>Hantavirus Pulmonary Syndrome (HPS) – Sin Nombre Virus</td>
<td>North America</td>
<td>Inhalation of dusts or aerosols from the infected rodent’s feces, urine, or saliva - Vector: Deer mouse (peromyscus maniculatus)</td>
<td>(Early, 1-5 weeks) fatigue, fever, muscle aches, chills, headaches, dizziness, sometimes abdominal problems - (Late, 4-10 days after early) coughing, shortness of breath</td>
<td>Avoid contact with rodents, especially their feces - See section on dealing with rodent-infested areas</td>
</tr>
<tr>
<td>Arenavirus (White Water Arroyo)</td>
<td>North America</td>
<td>Inhalation of dusts or aerosols from the infected rodent’s feces, urine, or saliva - Vector: Woodrats (Neotoma fuscipes) and other Neotoma species</td>
<td>Fever - Headache - Muscle aches - Severe respiratory distress (occasionally)</td>
<td>Avoid contact with rodents, especially their feces - See section on dealing with rodent-infested areas</td>
</tr>
<tr>
<td>West Nile Virus</td>
<td>North America</td>
<td>Mosquito-borne - Infection from the bite of a mosquito infected with West Nile Virus - Handling infected birds - None in most people ~80% - Mild - fever, headache, body aches, nausea, vomiting, and sometimes swollen glands or a rash on the chest, stomach and back; - Severe - high fever</td>
<td>None in most people ~80% - Mild - fever, headache, body aches, nausea, vomiting, and sometimes swollen glands or a rash on the chest, stomach and back; - Severe - high fever</td>
<td>Use insect repellent - Many mosquitoes are most active at dusk and dawn, consider staying indoors during these hours - Wear long sleeves and pants - Avoid areas of standing water where mosquitoes breed - Don’t handle dead birds with your bare hands</td>
</tr>
<tr>
<td>Plague</td>
<td>Worldwide</td>
<td>Flea-borne - from rodents infected with Yersinia pestis</td>
<td>Flu-like - Non-specific - Swollen</td>
<td>Use care when working in areas where plague is found - Use caution when working with wild rodents</td>
</tr>
<tr>
<td>Disease</td>
<td>Risk Areas</td>
<td>Mode of Transmission</td>
<td>Symptoms</td>
<td>Prevention and Control</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>-----------------------------------</td>
<td>---------------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Rabies (Vaccine Available)</td>
<td>Worldwide</td>
<td>Infection from bite of an animal (e.g., raccoons, skunks, bats, foxes, coyotes, dogs, cats) infected with the rabies virus - Bat bites are difficult to see and may not be felt. Exposure is also possible</td>
<td>Fatal (within days of the onset of symptoms) without immediate treatment - Early symptoms: fever, headache, malaise - Late symptoms: insomnia, anxiety</td>
<td>Obtain a vaccine if you will be working with high rabies risk species - Use extreme caution handling these animals - Vaccinate pets - Do not handle or feed stray animals or wild mammals</td>
</tr>
<tr>
<td>Dengue Fever</td>
<td>Africa, Southeast Asia, China, India, Middle East, South and Central America, Australia, and the Pacific Islands</td>
<td>Mosquito-borne - Infection from the bite of a mosquito infected with 1 of 4 dengue viruses</td>
<td>Flu-like - Sudden, high fever - Severe headache - Pain behind eyes - Nausea/vomiting - Rash</td>
<td>Wear long sleeves and pants - Use insect repellent - Use a mosquito net</td>
</tr>
<tr>
<td>Malaria (Preventable with Drugs)</td>
<td>Central and South America, Hispaniola, Africa, India, South Asia, Southeast Asia, the Middle East, and Oceania</td>
<td>Mosquito-borne - Infection from the bite of an infective female Anopheles mosquito - Blood transfusion - Contaminated needles/syringes - May take 10 days to 1 year for symptoms to appear</td>
<td>Flu-like, fever, sweats, chills, headache, malaise, muscle aches, nausea, vomiting, jaundice</td>
<td>Use a mosquito net - Use insect repellent - Take Antimalarial drugs (visit your health care provider 4-6 weeks before travel) - Wear long sleeves and pants</td>
</tr>
<tr>
<td>Severe Acute Respiratory Syndrome (SARS)</td>
<td>Occurred in 2003 in North America, South America, Europe, and Asia</td>
<td>Close person-to-person contact - Inhalation of respiratory droplets produced when an infected person coughs or sneezes - Touching surface or object contaminated with infectious droplets and then touch mouth, nose, or eye(s)</td>
<td>Begins with a high fever (&gt;100.4°F [38.0°C]) - Headache - Malaise - Some have mild respiratory symptoms at the outset - 10-20% have diarrhea - After 2 to 7 days may develop a dry cough - Most develop pneumonia</td>
<td>Wash your hands with soap and water frequently or an alcohol-based hand rub - Travelers to China should avoid live food markets and contact with civets and other wildlife</td>
</tr>
<tr>
<td>Yellow Fever (Vaccine Available)</td>
<td>South America and Africa</td>
<td>Mosquito-borne - Infection from the bite of a mosquito infected with Yellow fever virus</td>
<td>Flu-like - Jaundice - Can be fatal</td>
<td>Visit doctor at least 10 days before travel for vaccine - Wear long sleeve shirts and pants - Use insect repellent - Use a mosquito net</td>
</tr>
</tbody>
</table>

**Resources**
There are many resources available that may provide more in-depth information regarding your research environment. Please use the references in this section for further information on many of the topics discussed in this booklet.

A. On Campus

- **Environmental Health & Safety**: EHS is available for various hazard information and hazard evaluations.
  - (512) 471-3511 https://ehs.utexas.edu/
- **Environmental Health & Safety**: Injury and Illness Prevention Program.
- **HealthPoint Occupational Health Program**: OHP is available for guidance on treating and reporting work-related injuries or exposures.
  - (512) 471-4647 https://hr.utexas.edu/current/services/occupational-health-program
- **University Health Services**: UHS is available for an online travel health course, travel vaccinations and other health related information.
  - (512) 475-8301 https://healthyhorns.utexas.edu/
- **Animal Resources Center**: is a tremendous resource for knowledge about animals and provides care for animals housed on campus.
  - (512) 471-7534 https://research.utexas.edu/arc/
- **Institutional Animal Care and Use Committee (IACUC)**: Research with animals, including wild animals, must be review approved by the committee prior to beginning research. Information is available from the Office of Research Support
  - (512) 471-8871 https://research.utexas.edu/ors/animal-research/
- **Institutional Biosafety Committee (IBC)**: Research with microorganisms (including isolating, concentrating, culturing or growing field samples) or recombinant DNA must be reviewed and approved by the committee prior to beginning research. Information and forms are available from the Office of Research Support.
  - (512) 471-8871 https://research.utexas.edu/ors/rdna-and-biosafety/
- **Travel Management Services**:
  - (512) 471-6641 https://travel.utexas.edu/
- **Study Abroad Office**: For study abroad information.
  - (512) 471-6490 https://global.utexas.edu/abroad
- **Vice President for Student Affairs**: For student travel policy, travel authorizations, authorizations for emergency medical treatment, and special events insurance.
  - (512) 471-1133 https://studentaffairs.utexas.edu/
- **Workers Compensation**: Human Resources is available for questions about workers’ compensation coverage and injury reports.
  - (512) 475-8099 / toll-free 1-800-687-4178. https://hr.utexas.edu/manager/wci

B. Off Campus

- **First Aid/CPR Training**: First Aid and CPR training are available from a number of locations*, including University Health Services.
  - (512)475-8252
- **General**: The Centers for Disease Control and Prevention (CDC) offers a website that describes many topics related to travel, both domestic and international:
- **The Texas Department of State Health Services Infectious Disease Control Unit** offers information about infectious diseases.
  - (512)458-7676 http://www.dshs.state.tx.us/idcu/
Trip Safety Checklist for the Principal Investigator or Project Leader

☐ Complete Field Research Safety Plan

☐ Provide a copy of the Plan to all members of the team and your supervisor

☐ Get your vaccinations early and comply with the mandatory International Travel Process

☐ Assemble your safety gear including first aid kits

☐ Obtain any required approvals from research committees
☐ Obtain travel insurance information
☐ Be sure health insurance will cover everyone in your team
☐ Develop a check-in or buddy system while you are in the field