Emergencies

- Call 911 from any phone
- Then try to contact Ken (Cell: 859-797-0843)

Contact information

- Make sure that your contact information (cell phone, and emergency contact) is up to date in the Excel file at: Teams -> Campbell Lab -> Administrative Stuff -> Campbell lab contact info.xlsx

COVID-era

- During the COVID-era, follow all university procedures. These change regularly with the latest updates available at: https://www.uky.edu/coronavirus/
- Take time for self-care
- If you are at home, check in on Teams at least once per day to let people know what you are doing
    - Ken gets lonely if he doesn't hear from you

Safety

- If in doubt, ask!
- If you see somebody doing something that you think is unsafe, tell them - even if it's Ken!
- No food or drink in the labs.
- Don't put food or drink wrappers in the trash cans in the lab. (Use, for example, the conference room trash instead).
- Don't store personal stuff in the science fridges/freezers.
- Do not recap hypodermic needles.
- Do not use power tools in the machine shop without being trained by Ken.
- Wear safety glasses every time you even 'think' it might be a good idea.
- Be very careful with chemicals - make sure you know if something is particularly dangerous before you open it.
- Clean up spills immediately, particularly around the chemical balance.
- Make sure you know how to dispose of waste chemicals before you start something. Some things cannot go in the regular trash or down the sink.
- Wear long trousers, closed toed shoes, gloves, safety glasses and a lab coat when working with chemicals
- Always use universal precautions when working with human tissue
    - assume that every human sample is contaminated with an infectious disease such as HIV.

Weather

- If the university cancels or delays classes due to inclement weather (snow, ice, tornado, etc.), lab activities (weekly meetings, etc.) will be postponed.
- Note that the hospital normally remains open when the university cancels classes. That means that transplants / VAD surgeries might continue as normal. If you are on call for specimen procurement, use your judgment as to whether or not it is appropriate for you to come to campus to collect the specimen. It's important that you don't put yourself at undue risk coming to work solely for research-purposes.

Plagiarism / Fabricating Data

- There are NO circumstances in which it is acceptable to copy work from other people (e.g. from publications or the web) or to fabricate (or deliberately misrepresent) experimental data.
- Ken's tolerance for deliberate transgressions is less than zero
    - Scientific fraud hurts the lab
    - Scientific fraud hurts science
    - Scientific fraud hurts the patients we are trying to help.
    - You will be fired as quickly as university regulations permit.
- If you are in any doubt as to whether or not something is ethically inappropriate, speak to Ken, or any other appropriate faculty member/mentor/administrator, for advice.
- If you think Ken is doing something bad, ask him why he's doing x, and/or speak to other appropriate faculty member/mentor/administrator, for advice.

Training

- Before you start work in the lab in any capacity (even computer programming), complete the following training modules:
    - Chemical hygiene plan, https://ehs.uky.edu/classes/main.php?cClassID=9
    - Bloodborne Pathogens, https://ehs.uky.edu/classes/main.php?cClassID=2
    - Hazardous waste, https://ehs.uky.edu/classes/main.php?cClassID=8
    - Biosafety, https://ehs.uky.edu/classes/main.php?cClassID=12
    - Dual use research, https://ehs.uky.edu/classes/main.php?cClassID=107
    - Fire extinguisher use, https://ehs.uky.edu/classes/main.php?cClassID=13
- Then
    - print out your transcript as a PDF file, https://ehs.uky.edu/classes/transcript.php
    - upload to Teams->Campbell Lab/Safety/Files/Folder_with_your_name
- If you are going to handle human specimens as part of the Biorepository team (as Ken if you are not sure)
    - log into the Citi training sytem, https://ukidp.uky.edu/oxauth/login.htm, and complete
        - Biomedical (Biomed) Basic training
        - Good Clinical Practice training
    - print out your transcripts as a PDF file
    - upload them to Teams->Campbell Lab/Safety/Files/Folder_with_your_name
    - Work through the SOPs in
        - Teams->Gill CVBR / General / Files / SOPs
    - Complete the check list in
        - Teams->Gill CVBR / General / Files / Training / Cardiovascular Biorepository Training Checklist
    - Complete the Training log in
        - Teams->Gill CVBR / General / Files / Training / Cardiovascular Biorepository Training Log

Regulated Waste

Non-Hazardous

- Pipette tips must be discarded in a plastic lined cardboard box. The box should be sealed shut for pickup when full, do not empty the tips into a large bag.
- Petri dishes can no longer be placed in the normal trash. Add them to the pipette tip box or hazardous waste bag.
- Hazardous solid waste

- If there are no recognizable organs, waste must be autoclaved in an orange biohazard bag then placed into a large, black trash bag for pickup.
- For waste with whole body parts or quantities greater than 1 pint of human blood/tissue, place in a red biohazard bag then in a yellow biohazard bucket. The bucket can be obtained from the main autoclave room downstairs
- Uncapped hypodermic needles go in the plastic sharps container and should be sealed for pickup when ~75% full

Hazardous chemical waste

- Each chemical gets its own glass bottle labelled with the proper chemical name and "Hazardous Waste" Store the container in the Hazardous Waste cabinet (14B) in MN508.
- Do not date the waste bottle when it is started.
- When the bottle is ~90% full, contact the Hazardous Waste Tsar to create a disposal label and schedule pickup.

How we communicate

Since we collect hearts from the operating room, some of us need to communicate 24/7.

In order of “urgency”, here’s how we manage things.

- Text / voice to personal cell phone – used for urgent stuff that needs an answer “now”.
    - Lab policy is NOT to use personal cell phone numbers for routine lab stuff.
    - If you get a call / text from somebody in the lab, it’s important and they need your help - please try to answer it.
- Email / Teams – sort of interchangeable, although we are trying to use Teams more and more, and email, less and less 😊
    - Ken sends emails and posts messages on Teams when he’s working on something – that often includes nights and weekends. When you read the message, respond. That should be within a few hours during a working day, or the next working morning.
    - **<u>You are not expected to read email and Teams when you are not working.</u>**

When/how to contact Ken

- First, think what Ken would want me to do
- If you think it’s appropriate (which means anytime that safety or patients’ stuff is involved) call or text Ken (859 797 0874) at any time of the day or night.
- If it’s important but not critical, send a message to Ken on Teams. An example would be if it’s 3 am and you need answer by 10 am.
- Typically, Ken is pretty good at responding – even when he’s traveling.

- If you don’t get a response within a day, email him.

Lab Tidiness/Organization

Please try to keep the lab as tidy and organized as possible. Ken reserves the right to delegate specific "tidying" tasks to individual lab members. This should rarely be necessary if individuals take responsibility to clean up after themselves.

Documentation

It is critical that we keep track of all the experiments that we perform, and all the measurements that we make. We need to be able to duplicate experiments. To do that, we need to know exactly what we did the first time around.

The lab Teams system is part of our efforts to improve our documentation. If you develop a new protocol, please write it down and post it to the Teams system. (If you are a postdoc or graduate student, it's in your own interests to do this, because this way, you'll have a written protocol to take with you to your new position. If you're a tech, you must do it because Ken wants you to!)

If you have any doubts about whether you should write something down, do it, and better yet, do it in electronic form.

If you need help coming up with standard templates etc. for experiments, please see Ken.

Teams page

This file is hosted on the Campbell Lab Teams framework. The Teams system is not supposed to be a static website but rather a resource that is constantly evolving. If you develop a technique, or improve a protocol, update the Teams data so that other lab members can benefit from your discovery. If you do something that isn't listed, create a page to tell everybody about your brilliant work.

Hopefully, over time, we will develop a list of bullet-proof protocols that all of us can use to produce quality results. We don't want to waste time relearning the same lessons over and over again.

Time-keeping

In most circumstances, Ken will try to accommodate requests from lab members who want to work specific hours - precise start times, for example, can normally be negotiated. It is however important that everybody makes serious efforts to attend lab meetings and other events noted by Ken. It is also important that people try to work at least some "core hours" so that they can interact with other lab members.

Technicians work 40 hours per week. They have to swipe in and swipe out using the Kronos system (ask Mindy if you have questions about this) but they do not have to work exactly 8 hours per day. They could, for example, work 7 hours per hour on Monday, Wednesday and Friday and and a total of 19 hours on Tuesday and Thursday. All techs should try and arrange their schedule with Ken in advance. It's particularly important for technicians to let Ken know if they want to deviate from their normal schedule.

Graduate students and postdocs are not hourly positions. This means that people in these positions do not fill out hourly time-sheets and can plan their days according to their personal needs/current workload. Note however, that Ken expects students and postdocs to work considerably more than 40 hours per week. There will probably be occasions when 60+

hours a week are required in the run up to meetings, grant deadlines, qualifying exams. We are recognized as a hard-working lab, and we are relentless in our pursuit of excellence.

Time for reading and writing outside the lab

Ken recognizes that there are tasks that people might be able to perform more efficiently when they are not physically in the lab. Reading and writing are good examples - some people prefer to do them in places where they are unlikely to be distracted. This often means the person's home or a library.

The downside of reading and writing away from the lab is that it's easy to lose touch with other members of our group and/or the department. For example, other people might want to ask you a question, or need a few minutes of your help. If you're not there to assist, their productivity suffers. That hinders the lab.

Ken's default position is that people who are actively writing grant applications or papers can write away from the lab for up to 3 hours per work day. They should be in the lab the rest of the time, even if they think this slows down their writing.

If you want to deviate from this plan, please speak to Ken first. He's open to ideas and proposals but his first priority is the overall productivity of the lab, not the productivity of a specific person. We are all in this together!

Experimental skills

All of our experiments rely on core techniques. It's important that you master these before trying to perform real experiments. If you don't know how to do something, ask. This will reduce the amount of time and resources that we waste.

New members should work their way through the lab skills page.

Washing

Lab members should wash their own dishes - there are detailed instructions here.

Try to be a good lab citizen and wash more dishes than you yourself use.

Chemicals / Solutions

Making solutions incorrectly and contaminating stocks are the easiest ways to spoil experiments for everybody in the lab. It is very important that everybody takes care to "look after" our stock supplies and to make every solution as carefully and accurately as possible.

If there is any possibility that a stock has been contaminated, or that you have made a solution incorrectly, throw the stock/solution out and order/make new stuff. Ken would rather you did this 100 times when you didn't need to, than that you didn't do it once when you did!

Some guidelines.

- NEVER PUT CHEMICALS / SOLUTIONS BACK INTO STOCK CONTAINERS. Following this rule minimizes the chances of contaminating raw supplies.
- Write the "Received Date" on the label each time we get a new stock.
- Write the "Opened Date" on the label when you open a stock.
- If you empty a stock or powder bottle, or if you think it is close to being finished, you need to arrange for a replacement to be purchased. Enter the details on this Wiki page and try to remember to check the status later in the week. It is in your own interests to do so - you will find it VERY FRUSTRATING if you want to make a solution and we have run out of the necessary supplies.
- Clean the balance and the surrounding area after use.
- Label each solution that you make with your name, the type of solution and the date. For example, "Relax, Ken, 02 Sept, 2010", or "3 M HCl, Mike, 03 March 2015".

pH meters are temperamental. To minimize everybody's frustration:

- Calibrate the pH meter each time you use it and make sure that you seal round the storage tube with parafilm when you are finished.
- Do not leave the electrode exposed to air because it will dry out.
- pH standards need to be replaced every 2 weeks.
- Do not allow the pH meter to touch the sides or bottom of containers. Use the stand!

Policy for Relax and Ringer's solutions

- Relax and Ringer's solutions are something that many of us use on a regular basis. Unless there are very special reasons to the contrary (agreed in advance with Ken), everybody should be working from a communal supply. Thus there should only be one open bottle for each solution in the fridge at a time. (In other words, we shouldn't have Ken's relax, and Mike's relax and Leo's relax.)
- If think you are going to use Relax and/or Ringer's solutions, please try to coordinate with the other likely users and share your supplies.

Data analysis

- Analyze your experimental data as you collect it.
- Do not, for example, perform mechanical experiments for 4 weeks straight and then think about what you want to measure. You might discover that you haven't collected the appropriate data, or that your results are plagued by an artifact that makes the analysis difficult. Analyzing 'as you go' would have helped you discovery this wasted too much time.
- Similarly, look at your gels as you collect them. Do you have the right bands? Are they separated? Is the staining appropriate?

Computer Stuff

- Do not install new software without checking with Ken.
- Lab computers are not the place to store large quantities of personal music/videos etc.
- Files do not exist unless they are backed up.

- Do not leave our data on computers outside our lab. For example, if you scan a gel, bring the image file back to our lab on a CD or memory stick, or send it over the network to your desktop. If you leave data on 'outside' machines, we have no control over it. Somebody may delete it before you get the chance to copy it and it certainly won't be backed up in a useful way.
- Never use decimal points in file or folder names. This is because it can muck up many of our software packages (including MATLAB and SLControl). Remember that Windows treats anything after a . as an extension and uses this information to determine the file-type. This is a fundamental difference between Windows and Mac operating systems.
- Thus, c:\lab\data\ken\19_May_2015 instead of c:\lab\data\ken\05.19.2015

Email

- Within the lab use your uky.edu email address, not a personal one (like gmail.com or yahoo.com)
- Try to respond promptly (virtually always within 12 hours) to emails that contain requests from lab members. It's helpful to send this response even if it just says "I will get this to you by Monday at 5 pm"
- Don't use personal signatures (for example, "I love the Green Bay Packers") on a uky.edu account. Personal signatures are personal but email sent from a uky.edu address is representing the University of Kentucky.
- All external emails to collaborators with data/experiments Ken should be cc'd on email.

Lab software

The main software packages we use are listed below. Please do not use other packages without speaking to Ken first. In particular, do not make presentations in anything other than PowerPoint, or final versions of figures in anything that cannot be opened in an editable format in Inkscape. Breaking these rules makes it much harder to share figures and talks with other lab members.

- Microsoft Office (Word, Excel, PowerPoint)
- Adobe Acrobat
- Inkscape (as of March, 2018, trying to phase slowly from Adobe Illustrator)
- MATLAB
- SAS
- Python

Projects / papers / figures

The lab has tried various strategies over the years to simplify the process of writing papers and making figures. None have been perfect. One issue is that Ken seems to prefer complicated strategies that other people in the lab can struggle to replicate.

As of 07/30/2019, we're going to try this plan.

- Each project (for example, a paper) has its own GitHub repository in the CampbellMuscleLab system, which contains folders for:
    - Text (e.g. the Word file)
    - Summary data (e.g. Excel files)
    - Code
        - Analysis - stuff that is used analyze raw files and produce summary results
        - Figures - stuff that is used to make figures for final publications
    - Documentation
        - Links to big data files (e.g. SLControl records, images, etc.) - which should not be stored in GitHub
        - Detailed workflows explaining **every step in the analysis pipeline**. It should be possible to follow this documentation and remake every figure from scratch.

To aid reproducibility, figures aimed for publications should be made in MATLAB or Python. Ask Ken if you need help. All of the information required to generate each figure should be contained in the repository. This includes a few big files (e.g. images, or individual SLControl files) that might be used as illustrative examples.

Bigger datasets (e.g. hundreds of SLControl records) should be stored in

\\ukhcdata\research\Lab\Campbell-K\Lab\Lab_data \publications\your_project_folder_here

with links included in the documentation.

Meetings

Unless you have made explicit arrangements with Ken, you should attend:

a. Lab meeting: Wednesday's at 1:00pm via Teams. Lab members and rotating IBS students are required to attend. (1.5 hours, currently Wednesdays at 1 pm)

   Meeting structure –

1. Social start (5 minutes)
2. Weekly updates -Lab Archives notebook from all lab members not doing their deep dive.
3. Any general lab announcements (i.e., policy changes, upcoming meetings, etc.)
4. Discussion of weekly paper presentation based on rotation below. Presentations should be uploaded to labarchives.com no later than the Monday before lab meeting at 5:00pm to allow time for members to view. If you are unable to be present on your scheduled rotation, please let the Lab Manager know as soon as possible.
    a. Austin
    b. Greg
    c. Utku
    d. Andrew
    e. Mindy
    f. Ken

b. Two-on-one meeting with Ken and Lab Manager: Ken and lab manager like to meet with every permanent member of his lab once a week for feedback on his mentoring, to provide guidance for ongoing experiences, and to address any other issues that may arise. These meetings are scheduled by the Lab Manager and are

approximately 30 minutes long. This meeting also will ensure you have all the resources you need to be successful in the lab. This is a time to discuss supplies, policies, protocols, etc. You will also briefly share your lab notebook.
The REDCap agenda form should be completed prior to the meeting for Ken to view before the meeting (https://redcap.uky.edu/redcap/surveys/?s=9RDYA4WFP4).

c. Journal Club Meeting:
    1. Friday biweekly at 2:00pm via Teams. A trainee will pick a piece of literature and give a 30-minute presentation on the material following a 30-minute discussion. Trainees will rotate who presents every other Friday.
    2. Friday biweekly at 2:00pm via Zoom. An outside researcher is invited to give a talk/presentation on research they are working on. The talk is followed by a short discussion and time to ask questions.

Undergraduate researchers

We have a long track record of helping undergraduates to perform research. When we do this well, it benefits both our lab and the student. However, if it goes badly, undergraduate-driven research can eat up resources and fail to produce useful data.

This article has ten tips that should help us to be more successful.

https://journals.plos.org/ploscompbiol/article?id=10.1371/journal.pcbi.1005484

Expectations

The Campbell Lab aims for excellence. That requires commitment and dedication. Everybody in the lab is expected to do their job as well as they can.

The Campbell Lab is also a team. We rely on each other to maintain the shared resources, space, and the high expectations in the lab. Communication is essential- If you have a role (dishes, LN2, etc) that must be done regularly but you plan to be out of town or cannot physically get to the lab, you MUST communicate with your labmates so that they know to cover your role and/or that you have already covered the duty.

Specific productivity goals for technicians are decided on an individual basis with Ken. Minimum standards for postdocs and graduate students are outlined below.

After Postdocs and graduate students have been in the lab for 6 months (clock starts for graduate students when they pass their PGY 602 exam), they are expected to:

- Write at least one grant application every year unless they are already funded. Ken doesn't require that you are actually awarded the grant, though that is, of course, in everybody's interests.
- Submit at least one conference abstract per year for a meeting like Biophysics or Scientific Sessions.
- Write at least one manuscript per year. Ken doesn't require that it is actually accepted, though that is again in all of our interests.
- Note that the three written pieces above should be about a project driven by the postdoc or student. If, for example, somebody runs a single gel which is included as Fig 5 in a ten figure paper, this does not count as their

own manuscript. Postdocs and graduate students are not expected to work completely independently but they are expected to do the vast majority of the writing, the figure preparation and the data analysis.

- Postdocs and graduate students who are involved in the human tissue projects are also expected to take turns "on-call" for tissue harvest. This involves carrying the "bat-phone" 24 hours a day and going to the Operating Room to collect tissue from the surgeon if it becomes available.
- Unless there are unusual circumstances (for example, insufficient grant funding), postdocs and graduate students who meet or exceed the productivity standards outlined above can expect to go to at least one major meeting (e.g. Biophysics) at the lab's expense. If the lab has sufficient funds, it may be possible to go to more than one meeting if you have written an abstract for the event or are invited to present.
- Postdocs and graduate students who are making satisfactory progress can also expect to have one-on-one time (at least 30 minutes and sometimes more) with Ken each week. Ken will also try to make himself available for at least a short time each day to deal with problems as they arise.

Problems

Ken strives to run a lab that is transparent and fair. He wants everybody to work hard, but he also wants them to succeed with their personal goals. All that being said, stuff happens" and people can get upset. We work long hours and spend many nights in the lab and tempers can get frayed.

- If you are having a problem in the lab, the best first step is normally to speak to Ken.
- If your problem is with Ken, you might consider sending him an email to alert him that "stuff is not right" and that you would like to speak to him in confidence.
- If you don't feel comfortable doing that, you can email the Chair (currently Alan Daugherty) and ask to speak to him/her.
- You can also contact UK organizations, e.g. Institutional Equity or the UK Counseling Center. Note that if you choose that option, UK sometimes has a legal responsibility to initiate a formal investigation. These are appropriate and an important resource but might not be the best way of dealing with "somebody took my pipette tips". Use this approach when you need to but not without thought.

New Member To-Dos

To efficiently get up to speed with the tasks a new lab member must complete when joining the lab, we have compiled a list here.

- Complete the training under the first heading of the "Training" section, then follow the instructions for posting the certificate on Teams.
    - If you've talked to Ken and he's told you to complete the CITI training to be put on the IRB, then go ahead and complete it. Otherwise, if you're starting out shadowing specimen collections and Ken hasn't explicitly told you to complete the CITI training, wait until you and Ken have a conversation about it.
- Take a thorough look through this document. Lots of important information about the lab's policies concerning safety are located here. But beyond that, getting a feel for the lab culture through this document is also important.
- Add your name and an emergency contact to the "Contacts" excel file located in Teams -> Administrative stuff -> Campbell Lab Contact Info.
- It's been said in this document earlier but is worth repeating, if you have a question, please ask it! We strive to be a hard-working but inclusive lab. There is no such thing as a dumb question!