ARROW, the tool that drives the entire application and review process, has a lot of moving parts and ARROW project lead and user advocate, Debbie Morris, brings them all together. Just in case you don’t already know her, we introduce her in this issue.

We also share tips for getting the best out of ARROW and provide sneak peeks at some upcoming enhancements.

In this issue Gayle Orner, associate IACUC administrator, and Ricki Colman, long time PI and LSVC committee chair, offer solid advice on how to write a protocol that gets you through the review process and on to your research more quickly.
Meet Your ARROW Advocate

Debbie Morris, ARROW project lead, wants your feedback and ideas

Debbie Morris is our resident ARROW expert. She has been its project lead since the early days when she managed revision after revision of workflows and programming to arrive at a tool that respects PIs’ needs and at the same time abides by regulations and IACUC expectations and processes.

ARROW’s debut almost seven years ago wasn’t without detractors: “Nobody liked us at first,” Morris says, “but we worked hard to listen to input and make adjustments based on PI perspectives.” Morris meets frequently with the many other universities who also use Huron’s Research Suite, the software forming the backbone to ARROW, and is convinced we ultimately implemented one of the best online protocol application/review systems.

For example, “had we done like our peer institutions and not made customized changes, PIs wouldn’t be able to swap protocols, reviewer notes would not be archived, and when compliance agencies visit, we would have to waste reams of paper printing out all of our protocols for their review,” she says. “UW-Madison is the only institution that designed a tailored view for visiting regulators, so that they can view our protocols online.”

Morris’ tireless mission to create the ultimate ARROW is ongoing. She manages a spreadsheet and collection of folders filled with notes, feedback, and issues that she uses to direct development, routinely weighing each item’s importance and considering how the proposed change might impact other functionality downstream (ARROW comprises 20 pages of integrated workflows).

Each week she meets with programmers to discuss glitches and solutions, and plan for future ARROW enhancements based on changing programmatic needs, PI and committee wish lists, and programming difficulty.

Morris is also a protocol manager, helping PIs who submit protocols to SMPH and SVM committees with day-to-day ARROW questions. (Her colleague, Diane Johnson manages protocols for the LSVC and CALS committees.) In either role, she welcomes your feedback and ideas for improving ARROW. Send her a note and start a discussion: morris@rarc.wisc.edu.
Advice for Writing Effective Protocols

Ricki Colman and Gayle Orner weigh in on best approaches to writing protocols in ARROW

Ricki Colman is both a PI and the chair for the LSVC IACUC committee, so she has a well-balanced perspective of protocol submission and review via ARROW. She wants researchers to know that IACUC committee members are not experts in everything!

They need the right amount of information – not too much and not little – explained in clear and straightforward language. PIs could make their lives easier, she says, by “reading the directions and answering the questions we are actually asking. Don’t try to take the grant and somehow mash the sections into the protocol.”

Additional Colman tips:
* Explain why you are amending your protocol in the amendment summary. “I often see statements about where and what changes are being made with no explanation of why.”
* Enter your information just once in the most appropriate section. When you put the same information in multiple locations, such as animal numbers under Animal Numbers and Experimental Narrative, you run the risk of providing inconsistent responses.
* Avoid using specific information when it isn’t required, for example, specifying lactated ringers instead of just saying isotonic fluids or saying one ml of blood will be taken every 10 days instead of just saying blood sampling will occur within safety limits.
* Be sure your list of potential complications is complete.

“Make use of all your resources,” Associate IACUC Administrator Gayle Orner advises, emphasizing that RARC’s help comes in a variety of formats: the protocol section of the RARC website: rarc.wisc.edu/protocols.html; help text in the smart form itself (look for the circled “i” next to the question title); via its veterinarians, who will scrutinize your protocol during pre-review, of course, but are also willing to look it over again prior to submission to make sure you have the best chance at a successful review; and then through the IACUC office, made up of Orner, Debbie Morris, and Diane Johnson. The IACUC office staff can help you fill out tricky sections, teach you how to efficiently navigate ARROW, and troubleshoot glitches.

Additional Orner tips:
* If your protocol has many procedures, include a decision tree in your experimental narrative that shows how you will determine what any single animal may experience. Otherwise, reviewers may assume that an animal will go through all of the procedures.
* If your research project is complex, consider writing two or more smaller protocols. Protocols with a single well-defined research goal with experiments that clearly support this goal will be easier for the reviewers to understand, facilitating a faster review and approval.
* Although you can technically include more than one species or funding source on a single protocol, in at least two situations you are better off submitting multiple protocols:
  --If your research is funded by the Department of Defense. The DOD requires specific reports; you can more easily comply if it is the only funding source on your protocol.
  --If you have both USDA and non-USDA regulated species in your protocol. USDA veterinary medical officers can more efficiently review when USDA and non-USDA species are in separate protocols.
Tips for Working in ARROW

We have some hints to make your ARROW life easier

* Visit rarc.wisc.edu/protocols/arrow/arrow_tips.html for a comprehensive collection of tips for working successfully in ARROW. Our guidance is broken into different categories, so depending on where you are with your protocol, you can get hints for that particular step of the application process. Among other things, you can learn how to interpret where your protocol is in the review process, make non-review changes, share your protocol as a template, and print selected portions of your protocol.

*Consider writing your application in Word, pasting it in ARROW
If you write and review your protocol in Word – at least the more content-heavy sections -- prior to entering it into ARROW, you can assess consistency, accuracy, and readability before breaking it into different ARROW sections. Plus, saving your work in Word beforehand ensures that you have a back-up copy if you forget to save between ARROW pages or have internet disruptions. Formatting doesn’t always transfer well, but the bulk of your content will.

*Open multiple tabs so that you can ensure consistency
The information you provide in Significance, Experimental Narratives, and Procedures should provide a cohesive picture of your research. But because they are not next to each other in ARROW, you can easily end up submitting conflicting details. Consider opening separate tabs for each section that you are completing, so that you can compare sections to confirm consistency. This means, for example, that for a given surgical procedure, its purpose appears in Significance, its place in experiment design appears under Experimental Narrative, and its definition and complications appear in Surgical Procedures and Complications.

*Complete Substance Administration before Occupational Safety
The Occupational Safety pages depend on the information you fill out under Substance Administration. So complete Substance Administration first.

*Be on alert for ghosts. Ask for help to resolve.
Certain responses in ARROW, once given, will lurk in the background of your protocol, even when you have changed your response or RARC has eliminated the question. For example, maybe you used an anesthesia in your original protocol that you eliminated in your amendment. The information you provided about the anesthesia originally might still be attached to your protocol, even though you can’t see it.

Similarly, you might run into some snags when you use existing protocols as templates. Sometimes content from the template will stick around, even if you deleted it before you created the new protocol.

We call this lingering data “ghost data” and you might have some if you get warning messages when you save that aren’t relevant to the current version of your protocol. Only a programmer can eliminate ghost data. Contact Debbie Morris for advice on creating clean templates or to arrange ghost data eradication.
Future ARROW

The ARROW team will unveil two new enhancements by the middle of next year

Dedicated Research Core Sections
Researchers are not always certain where to describe collaborations with cores (hint: the description belongs in Experimental Narrative for now), so the ARROW development team is adding sections for adding core groups either as a transfer location or as study team members. 
Estimated delivery date: early 2021

ARROW Upgrade
Remember back in September when ARROW got a new streamlined look? It wasn’t all about aesthetics – although we hope you like the simplified user interface. Programmers were laying the foundation for bigger changes set to roll out next year.

Some time next summer, we will unveil some new ARROW features, including a static outline, so you will always have a you-are-here guide for navigation; the ability to view differences page by page; and review questions at the question level, instead of at the top of the page. We will let you know when we are close to launching these user-friendly enhancements.
Estimated delivery date: June 2021

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SUAs, Expired Drugs

two things that you need to know

Plan Ahead for SUA

Unless you are an MD or DVM, you are required to have a Special Use Authorization (SUA) from the State of Wisconsin’s Controlled Substance Board, along with a federal Drug Enforcement Administration registration, before working with controlled substances.

The Controlled Substance Board is five to six months behind in issuing SUAs, so keep that significant delay in mind when determining your study timeline.

Check for Expired Drugs

IACUC inspections have started again and the inspection teams will be checking for expired items in your lab and in animal facilities.

If you paused your research during pandemic-related restrictions, be sure to check expiration dates on substances you purchased before shutdown. Besides looking at drugs and experimental substances, also review dates on disinfectants, sutures, needles, eye ointment, and anesthesia vaporizers, as well as items related to human safety such as first aid supplies and fire extinguishers. And don’t forget to reestablish a weekly flushing schedule for your nearest eye wash station.

Contact the Animal Program Assessment Specialists at apas@rarc.wisc.edu for the Colored Dot ID system, an easy way to track what materials you need to discard. Visit rarc.wisc.edu/tools_and_guides/drugs/expired_drugs.html for more information about disposing expired drugs.