



Lessons in Being Brave - Experiences from my AAALAC Fellowship Journey to the United Kingdom

By Valerie Hill, BS, CMAR, LATG

If you have not heard about it before, AAALAC International offers an International Fellowship Award to one recipient in the United States, and one from the United Kingdom. The selected fellows are provided with an all-expenses paid trip to the other country (US to the UK and vice versa) to visit prestigious biomedical research facilities and attend a national conference. How many times do you hear about opportunities that you think are beyond your reach and not even worth pursuing? This is what I thought each year when the AAALAC Fellowship Award announcement was presented to the laboratory animal science community. I am betting many of you can relate to the following internal monologues:

"I'm not the kind of candidate they are seeking."
 "They probably want to select a veterinarian."

"Traveling to another country is too intimidating."
 "There are too many other applicants."
 "I don't want to put myself out there."

At the University of Michigan Unit for Laboratory Animal Medicine (ULAM), we have an internal committee charged with collecting and discussing all award opportunities relevant to our diverse animal care team members. After a committee meeting where qualifications and potential candidates for the AAALAC Fellowship Award were discussed, I was approached by one of the members who asked if I would be interested in receiving a nomination. Admittedly, I needed to spend some time thinking about it. I read the requirements, consulted with several trusted colleagues, and discussed the opportunity with my family. Of all the times throughout my 25+ year career, I knew that now was the time to be brave, a

sentiment echoed by those around me.

The application required much self-reflection and, notably, the courage to put myself out there – to demonstrate an excitement and commitment to continue learning, regardless of my career stage. Between the time of my nomination submission in October and the award notification in January, many life changes occurred. We started building a new house, we were drafting our AAALAC Program Description, and I was covering for multiple positions while short-staffed. I was completely caught by surprise and in total shock when I received the email (which I must have read and re-read three or four times) from Kathryn Bayne, Chief Executive Officer for AAALAC International, that I had been selected for this tremendous honor.

Prior to embarking on my commitment to the AAALAC Fellowship journey, I had to consider my learning goals and how to best capitalize on this incredible opportunity. I spent time at various team meetings asking colleagues from across the university what they would like to know and what insights from the UK they would be most interested in learning. The list became quite long. As my itinerary began to develop, I focused on the specific questions I would ask of the various groups I would be meeting. Examples included:

- Are you “tunnel handling” for cage changing or for other reasons?
- Tell me about your public outreach and other processes involving transparency.
- Has the Openness Initiative made a significant impact?
- Who has ultimate oversight in the facility?
- Do you have tools for operationalizing program management data (e.g., electronic medical records, husbandry procedures, breeding records)?
- Is there acknowledgement and/or support for compassion fatigue?
- How are report metrics, such as compliance, used for benchmarking with other institutions?

When I reviewed my itinerary, my nerves came racing back. I would not consider myself an experienced traveler. To repel this anxiety, I broke down my schedule for each day I would be away from home. Where would I be each morning, afternoon, and evening? What did I need to prepare for the next day? How would I be traveling from location to location? Then, before I knew it, I was in London. Thankfully, I had a few days to adjust to the time change and explore a bit, including stumbling upon the St. Patrick's Day Parade (scoring 11 out of 10 for people-watching) before preparing for my Day 1 Visit at the Francis Crick Institute.



Photo 1: The Francis Crick Institute

In addition to The Crick, I also visited a variety of facilities during my first week: Defense Science Technology Laboratory (DTSL) Center for Macaques, Medical Research Council Laboratory of Molecular Biology (MRC-LMB), Understanding Animal Research, and the Kings College of London. It is nearly impossible to highlight all the cool experiences from that first week! I was introduced to a new species (for me, at least), the short-tailed opossum, for which The Crick has the only breeding colony in the UK. A few fascinating facts I learned about this species:

- Females have no pouch – pups carefully crawl up the belly of the dam, attach themselves to a teat, and stay there for weeks,
- They are smaller than an adult rat,
- They have very soft tails that are not fully prehensile.

I could have spent all day in the opossum room talking with the extremely skilled technician who handled this unique species with the utmost care. I also learned that The Crick's team (photo 1) uses an innovative database to directly connect with Transnetyx to track various data for their rodent colonies and monitor researcher-specific tasks. In addition to their wonderful facilities and staff, The Crick has also committed to



Photo 2: Highland sheep



Photo 3: The Mathematical Bridge

sharing their discoveries with the larger community via various outreach initiatives.

For my next stop, I took a short train ride to Salisbury to meet with the team at the Porton Down Center for Macaques, a government-managed facility also known as MRC. After passing through extensive security, I spent the day with three members of the team – Claire, Seb, and Katie – in a macaque production building. In addition to being fantastic hosts, it was clear to see the bond this special team shares with their animals; they know their tendencies and personalities and worked especially hard to maintain social groups together. All animals had access to a large floor-to-ceiling window that viewed the outdoors and locations to get away from the group or

partake in the many provided enrichment items. As soon as visitors walked into the main hallway, the animals would run to a large internal viewing window and use a handle to control a mirror that would allow them to see who was in the hallway and what they were doing. Watching them move the mirrors and follow your movements about the hallway was beyond adorable.

Like our National Institutes of Health in the US, the UK has government-funded facilities such as the MRC. The MRC funds projects all around the UK and is directly connected to various facilities. I visited two MRC sites, the first being the Babraham campus, where an absolutely wonderful team greeted me with information about their organization, highlights from their processes of setting team values, training personnel, and tracking metrics. I was also able to see a live demonstration using ultrasound to detect pregnancy in mice and estimate the date of parturition to assist in scheduling transport from the barrier for experimental work. The second MRC site I visited was a facility in Cambridge focused entirely on molecular biology. After a bit of dining and sightseeing with the MRC Team, I spent the following day with Alan Graham from the University of Cambridge.

We began the day with a brief tour around Cambridge, and then traveled to a farm facility where studies involve the gestational impacts of hypoxia during pregnancy and diet-induced obesity. The tails of this “wild strain” of highland sheep (photo 2) are not docked, and the animals are generally smaller. Most live in open paddocks, with some occasionally released to pasture. After the farm, we drove to Maddingley to visit a collection of highly enriched fish tanks containing various cichlids and flight pens for jays. Specific efforts to increase public understanding include increased access of speakers to schools so that teachers may request presentations by researchers or technician speakers specifically recruited and trained by the research community. These fascinating birds are excellent mimics of noises and voices and are involved in studies related to object recognition and caching.

Next, we visited the marmoset colony near the Veterinary College at Cambridge. One of only two breeding groups in the UK, this was also my first experience seeing such a large breeding facility for marmosets. The animals are in a building where there are a variety of neuroscience and behavioral studies taking place. As part of this innovative housing environment, the animals receive different enrichment items ranging from nesting boxes to interactive toys. On the way back to the train station, we stopped to see the Mathematical Bridge (photo 3) over the river Cam in Cambridge city center. Each fellowship winner receives a free weekend to further explore either Cambridge or London. While I



Photo 4: Kings College of London



Photo 5: Yeomen Warder (Beefeater) at Tower of London



Photo 6: Colobus monkey exhibit

chose to take my free weekend in London, there is certainly more to see in Cambridge (a suggestion for future fellows!).

On Friday, I took a walking tour of London on my way to meet Wendy, Hannah, and Kate from Understanding Animal Research. I spent several hours learning about their mission and strategic plans for the next few years, including opportunities to expand outreach and transparency efforts within the United States. I learned that the path to transparency continues to be met with some opposition, but that there is also growing support in the community for greater openness. Specific efforts to increase public understanding include increased access of speakers to schools so that teachers may request presentations by researchers of technician speakers specifically recruited and trained by the research community. The group has also focused on expanding their social media footprint, where they have seen increased interactions with posts that highlight the role that technicians play in advancing research. I continued across the river to the Kings College of London (photo 4) for a tour of their zebrafish facility. The facility at Kings College was exceptionally large and employed nine robots to feed an extensive row of tanks. Technicians are responsible for juveniles to avoid overfeeding. The level of trust and partnership between animal care staff and researchers at this facility was evident, and I was impressed by the systems they had in place to request animals and/or support from vivarium staff.

At the end of Week 1, I enjoyed a sense of relief for successfully navigating planes, trains, taxis, and the busy city streets of London's many boroughs, a sense of accomplishment for having toured many unique facilities, and appreciation for my wonderful hosts. When I was

not busy preparing for Week 2, I had a chance to spend my "free" weekend exploring London. On Saturday, I visited the Tower of London and met a true Yeomen Warder (photo 5). On Sunday, I visited the London Zoo to see their many progressive exhibits. Highlights of my time at the zoo include seeing the large area where the African wild dogs run and witnessing their keeper hiding all kinds of meat, bones, and other treats; walking through the middle of the black and white colobus monkey exhibit (photo 6), which has no fences, nets, or gates to separate visitors from the animals; and exploring the canal/sidewalk/bike path that runs through the middle of the zoo to allow members of the public to visit several exhibits free-of-charge.

I would be remiss if I did not also mention London's impressive public parks, where most residents walk their dogs off-leash. It was remarkable to see such a wide array of breeds all behaving amazingly well – not a single negative dog interaction and no running up to random strangers! The UK has not allowed ear or tail docking in dogs for many years, so it was also fascinating to see several common US dog breeds such as Dobermans and Fox Terriers in their "purest" versions.

I began the second week of my journey at the Sainsbury Wellcome Center, which was founded in 1936 by pharmaceutical engineer Sir Henry Wellcome. Sainsbury, which receives funding and support from the charitable Wellcome Foundation as well as others, is dedicated to collaborations supporting discoveries of how the brain elicits behavior. In support of this mission, my hosts (Sian, Tina, Joe, and Dario) showed me their state-of-the-art 3D fabrication and printing shop. I also visited one of their open field behavior environments where they mimicked approaching prey by allowing animals to



Photo 7: Celtic Manor in Newport South Wales



Photo 8: Good memories

demonstrate species-specific behaviors to dig for food and then retreat from a threat.

Tuesday, I traveled to the Institute of Animal Technology Congress, the UK equivalent of our National AALAS Meeting, via a beautiful train ride across England to the Celtic Manor (photo 7) in Newport South Wales. On the first evening, there was a kickoff event where the trades provided short, 60-second pitches on their products. In lieu of hosting a large social event in a hotel conference room, each vendor hosted a small activity at their respective booths to further engage par-

ticipants in conversation. Wednesday and Thursday were full of excellent programs and learning sessions, providing great opportunities for technical staff and husbandry technicians to present their work. As a facility manager, I was quite pleased with the emphasis on the operational aspects of our field, including husbandry practices and technical services, and the opportunities for technical staff to present.

As you can imagine, it is difficult to try and summarize two weeks' worth of extraordinary experiences, facility visits, and interactions with peers from "across the pond." In short, there are many ways of performing similar work. When we create space to share our unique perspectives, we not only learn new ways to advance and refine our own work, but we also advance the field of laboratory animal science by building a collective understanding – and shared appreciation – for the challenges and successes of our colleagues.

I am impressed by the significant focus on the 3Rs seen across the UK, as well as the myriad efforts to advance openness and transparency. In that same vein, the UK has a sophisticated training and apprentice process that produces extremely skilled caretakers and study support teams. It was truly eye opening to hear researchers talk about the level of trust they have in their animal care teams, especially when suggestions for improvement to processes and procedures were made. I know that there is more that we – in the US and at the University of Michigan – can do to enhance education in schools and colleges about careers in laboratory animal science. I look forward to applying this knowledge to initiatives within my own institution and am pleased to share all that I have learned with other members of the US laboratory animal community. Please email me if you have questions about my journey as an AAALAC Fellow.

Finally, I would be remiss if I didn't take a moment to acknowledge the many individuals at AAALAC who helped with planning the logistics for this complex trip, the gracious hosts at the institutions I visited, my colleagues at the University of Michigan for supporting my time away and for nominating me for this prestigious award, and my family for allowing me 16 days away from home.

If you remember nothing else, share your experiences with others and seize every opportunity to learn. Be proud of what you know, encouraged by what you do not yet know, and perhaps more than anything else, when the time comes to expand your horizons, be brave.

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