

Final grant report form: Student Grants

Project title:	Welfare study using the AWAG to Measure Quality of Life of Breeding macaques
Researcher:	Abigail Liston, University of Surrey
Supervisor:	Sarah Wolfensohn
Year awarded:	2019

Provide a lay summary outlining the project, focusing on the project's achievements and potential impact to animal welfare.

The aim of this study was to use a novel animal welfare assessment software, called the Animal Welfare Assessment Grid (AWAG), to track the welfare of eight individual Rhesus macaques that are housed in a breeding facility for primates intended for research. After a pilot study had taken place earlier in the year to validate the use of the software, this research project focused on the effects of introducing novel enrichments to the welfare of the macaques. Observations took place at five time points throughout the day; each individual had two control days, two days with a water bath introduced, and two days where food kongs containing a substrate and raisins were introduced.

A vast amount of observational data was collected during the six-week period which has aided the development of our understanding of the normal behavioral repertoire of the macaques at this facility. During the project two major software interface updates were made to the AWAG software which has made the tool more user-friendly.

It has become clear that more use and evaluation of the AWAG software is necessary to allow this tool to grow and be used effectively as a welfare tool for monitoring animal welfare over extended periods of time. It is necessary to test the uses of this software in various situations, for example when animals are under stress, when consistent enrichment is introduced and when there are limited external variables affecting the behaviors (for example, feeding time, number of staff present). There was no clear correlation between the enrichment and the AWAG score, this may be due to the inconstant external variables that were out of my control. It is also likely that multiple different enrichments should be used to fully understand the relationship between enrichment and welfare.

In the future, the AWAG has the potential to be used among all animal sectors, to be fully configurable and to offer a universal welfare assessment tool which can allow for quantitative, measurable and cumulative welfare assessments for all animal owners. After other organisations have completed their research projects in other animal sectors, we will accumulate the work and submit a publication to represent the success of the AWAG so far.

The AWAG did show a clear representation of welfare, it tracked welfare over a period and could clearly highlight a correlation between negative events and poor welfare scores. The macaques did show a keen interest to explore and show play behaviors towards novel enrichments, a positive step forward in our understanding of what enrichment works for these animals. The staff at CFM were keen to involve these new enrichments in their routine husbandry practices.

Provide a short description of your personal experience in undertaking this project

During this project I have had the opportunity to push myself out my comfort zone. I have been in meetings with senior researchers and have had an active role in improving software with developers at Public Health England. During data collection I built a great rapport with the staff at the Centre For Macaques which allowed me to develop positive working relationships with the team and I felt I could contribute to the team and morale. The skills I developed in order to plan, execute and collate the data I needed for this project was beyond the scope of my university curriculum. I now feel I have gained vital skills that will help shape my future career. I have gained confidence through presenting my work at European and national conferences, something I never thought I would have the opportunity to do. Throughout the project I had great support from a variety of academics which has allowed the research to run as smoothly as it did. I feel proud of my research and what this project represents- support for the younger generations to make a

difference with research.

Use the space below for any other relevant information you wish to report on.

I was invited to present my research to a primate sanctuary who were interested in my research, the meeting was successful in securing a new member of the AWAG trial.

I presented at the national Primate Society of Great Britain (PSGB) conference in April, I presented a poster at the European Federation of Primatology- PSGB conference in September and I have been invited to present a poster at the NC3Rs conference in November.

I plan to publish my work in a collaborative paper with other researchers that have used the AWAG in different animal sectors.