Internship Advertisement
Undergraduate Summer Research Internship, Animal Cognition Research Group
Department of Psychology, University of Alberta, Edmonton, Alberta, Canada

Principal Investigator (PI): Dr. Lauren Guillette
Closing date to apply: Wednesday, September 17, 2025
Dates of internship: 12 weeks starting between May 1st and July 31st, 2025
Apply at: https://globalink.mitacs.ca/#/student/application/projects
Projects IDs: Project ID 48322 - Testing for confirmation bias in decisions made by nest-building birds and Project ID 50418 - Influence of bias in cognitive processing

For specific project details visit link above and search for the above project or PI name (Guillette)

General information:
The Animal Cognition Research Group (ACRG, https://sites.psych.ualberta.ca/animal-cognition-ualberta/) in the Department of Psychology at the University of Alberta is hiring (upto) two undergraduate researchers for a 12-week internship in the Summer of 2026.

This internship will include investigating the nest-building behaviour of zebra finches (*Taeniopygia guttata*) and how social learning influences such behaviour in a laboratory environment using video data and nest morphology to analyze the birds' behaviour. The current research in our lab focuses on variation in cognition abilities (e.g., sex differences in learning based on nest-building history), social learning in foraging and nest building, and the trade-off between asocial and social information use.

The ACRG is funded by an NSERC Discovery Grant and a Canada Research Chair in Cognitive Ecology. Our laboratory space includes free-flight colony rooms for zebra finches, extensive laboratory space for behavioural testing, and a full histology and microscopy suite. The ACRG currently has three graduate students, one post-doctoral research associate, and several undergraduate student researchers.

To apply, visit the link provided above.

- If you have questions about the application process, contact the Mitacs team at helpdesk@mitacs.ca

Below are the eligibility requirements (as per the Mitacs application portal):
Applicants must:

- Be at least 18 years of age at the time of application
- Be enrolled in a full-time undergraduate or combined undergraduate/master's program at an eligible institution in: Brazil, Chile, China, Colombia, France, Germany, Hong Kong, Jordan, Mexico, Pakistan, Singapore, South Korea, Taiwan, Thailand, Tunisia, Ukraine, United Kingdom and the United States.

- Have one to three semesters remaining in their program as of fall 2025 (see requirement by country)
- Meet the grade requirements for their country of study (see GPA requirements for each international partner)
- Apply to a minimum of three and a maximum of ten projects and ensure selections are from at least three different Canadian provinces
- Be fluent in the oral and written language of the project (English and/or French)
- Be available to complete an internship lasting 12 consecutive weeks between May 1 and October 31. You must be able to start your internship anytime between May 1st and July 31st. Anything before or after those dates is not allowed.
- Not have been awarded a Globalink Research Internship project in the past

Project ID 48322

Testing for confirmation bias in decisions made by nest-building birds

Information biases distort cognitive processes like making decisions. People with confirmation bias will actively seek and assign greater value to information that confirms an already existing preference. For example, a voter with strong confirmation bias may only watch social media that supports their preferred candidate before voting in an election – despite other media sources being readily available. Non-human animals also show information biases that impact the outcome of important decisions. Birds will use social information when choosing among different colours of nest-building materials, copying the colour choices of familiar conspecifics. Although, individuals with a strong initial preference are less likely to use social information from other birds and instead will build their nest using their own preferred colour. This project investigates whether zebra finches show confirmation bias when making nest-building decisions. First, we will measure the initial colour preference of test birds. Then each test bird will be allowed to freely move around a cage fitted with observation windows. At each window the test bird can observe a familiar zebra finch building a nest using one colour of material, with a different colour demonstrated at every window. Afterwards, the test birds will build their own nest with access to all the different colours options. We predict that if there is confirmation bias, test birds with a strong initial colour preference will observe windows showing builders using their own preferred colour more than windows showing builders using their own non-preferred colours. We would also predict that the colour preference strength of test birds with strong initial preferences will remain stable or increase when building their own nest.

Project ID 50418

Influence of bias in cognitive processing

Processing information is cognitively and metabolically demanding. For example, in humans, visual system activity alone can account for up to 3.5% of resting energy expenditure. To conserve energy, animal brains are thought to reduce redundancies in sensory input, essentially leading to processing information more efficiently. One proposed strategy for reducing cognitive

effort is through biases - pre-existing inclinations for or against someone or something- which act as cognitive shortcuts. These shortcuts may speed up decision-making and reduce processing costs, however, empirical evidence for the role of biases in improving cognitive processing efficiency remains limited. This project investigates whether pre-existing colour biases facilitate more efficient information processing during nest building using zebra finches (*Taeniopygia guttata*) as a study system. In captivity, these birds show consistent individual preferences nest material colours, and these preferences are stable in the absence of new information. Moreover, birds with strong preferences are less likely to use social information and instead will build their nest using their own preferred colour. All together, these finding suggest that colour preferences in nesting material reflect a form of bias, making zebra finches ideal to study pre-existing biases through nest-building behaviour.