



The George C. Eickwort Student Research Award recognizes a graduate student for distinguished research and scholarly activity in the field of social insect biology. The award consists of a certificate, an honorarium, and a one-year subscription to *Insectes Sociaux*. This year the Awards Committee reviewed a very strong group of nominees with impressive research and publication records. Those who were not successful this year are encouraged to re-apply next year if still eligible. As for this year's award, the North American Section of the International Union for the Study of Social Insects is proud to announce that **Arjuna (Juni) Rajakumar at McGill University** is the recipient of the 2020 George C. Eickwort Student Research Award. Juni is expecting to finish his Ph.D. in summer 2021 under the direction of Ehab Abouheif. He previously received a Master of Science degree in Experimental Medicine and his Bachelor of Science degree in Microbiology and Immunology from McGill University as well.

Juni followed an evolutionary and developmental biology approach in his thesis to investigate the role of germline modification in the evolution of eusociality and obligate endosymbiosis. One of his major discoveries is the demonstration of how the obligate bacterial endosymbiont *Blochmannia* is integrated in the embryonic development of *Camponotus* ants. This is a problem that is unraveling since Blochmann's first discovery in the 1880. Juni now found that *Blochmannia* rewired the regulation of germline genes for vertical transmission in a comparison among 31 species of the tribe Camponotini. The high novelty of this approach led to a publication in the journal *Nature* with a co-first authorship. In additional studies in multiple formicine and myrmicine ant species, he demonstrated how reproductive defects in egg-development of workers and unmated queens arise and which genes are involved. A second part of his work focused on characterizing the detailed developmental stages across all castes in the ant *Monomorium pharaonis*. Also in this species, he found that germ cell loss is a major determinant in caste development. Besides this work, Juni is middle author in several other studies including one that has also been published in *Nature*. He has presented his research at several national/international conferences. Besides his impressive research activity, Juni is strongly engaged in diversity, equity and inclusion initiatives and graduate student training in his department and introduces elementary students to the interplay between molecular studies and ant colonies. On top of these activities, he mentored numerous undergraduates, including three research projects.

Both of his letters emphasize the novelty of Juni's research and results. Juni is described as "one of the best graduate students" in one lab and as "one of the most creative and outstanding social insect PhD students" by the other letter writer. The awards committee is proud to have Juni as one of their members and is happy to announce Juni as the next Eickwort award recipient.

IUSSI-NAS Awards Committee

Christina Kwapich, and Jürgen Liebig (co-chairs), Rachelle Adams, Kaitlin Baudier, Sarah Bengston, and Floria Mora-Kepfer Uy