Andrew Barron
Professor
School of Natural Sciences
Frontier AI Research Centre
Pollinator Futures Research Centre
Minds and Intelligences Research Centre
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Biography

Professor Barron is the Director of the Macquarie Minds and Intelligences Initiative. He is a neuroethologist, which is a discipline of neuroscience studying the neural mechanisms of natural animal behaviour. Most of his research focuses on insects, especially honey bees. Using advanced techniques to visualise, manipulate, map and record from the insect brain Barron's team has made important contributions to the understanding of fundamental behavioural systems such as cognition, navigation, social behaviour and learning and memory.
He also conducts research to improve honey bee health and welfare. He is studying how bees and bee colonies are impacted by pesticide and disease stressors, and how to best intervene to help bee colonies under stress.

Employment

Professor
Professor
School of Natural Sciences
Macquarie University
1 Jan 2022 → present

Frontier AI Research Centre
Macquarie University
1 Jan 2025 → 31 Dec 2029

Pollinator Futures Research Centre
Macquarie University
1 Jan 2025 → 31 Dec 2029

Minds and Intelligences Research Centre
Macquarie University
1 Jan 2026 → 31 Dec 2027

Australian Research Council Future Fellow
Australian Research Council
Canberra, Australia
1 Jan 2015 → 1 Jan 2022

President, Australasian Society for the Study of Animal Behaviour
AUSTRALASIAN SOCIETY OF THE STUDY OF ANIMAL BEHAVIOUR
Australia
1 Jan 2012 → 1 Jan 2014

Vice-President, Australasian Society for the Study of Animal Behaviour
AUSTRALASIAN SOCIETY OF THE STUDY OF ANIMAL BEHAVIOUR
Australia
1 Jan 2010 → 1 Jan 2012

Treasurer, Australasian Society for the Study of Animal Behaviour
AUSTRALASIAN SOCIETY OF THE STUDY OF ANIMAL BEHAVIOUR
Australia

1 Jan 2008 → 1 Jan 2010

Postdoctoral Fellow, Research School of Biological Sciences
Australian National University
Canberra, Australia
1 Jan 2004 → 1 Jan 2007

Fullbright Postdoctoral Fellow
University of Illinois at Urbana-Champaign
Champaign, United States
1 Jan 2001 → 1 Jan 2004

Royal Society Postdoctoral Fellow
University of Sydney
Westmead, Australia
1 Jan 1999 → 1 Jan 2001

Research output

Agency, goal directedness, and the levels of biological organization
Bourrat, P. & Barron, A. B., Aug 2026, In: BioScience. 76, 8, p. 744-752 9 p., biag030.

Beekeeper attitudes towards the management of *Varroa destructor* in Australia
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Head direction and the evolutionary origins of spatial representation
Sayre, M. E., Narendra, A., Heinze, S. & Barron, A. B., Jun 2026, In: Trends in Neurosciences. 49, 6, p. 423-432 10 p.

Beekeeping in the digital age: prospects and pitfalls of hive sensors in commercial beekeeping
Sattler, C., Barron, A. B. & Colin, T., 2026, In: Journal of Apicultural Research. 65, 1, p. 52-62 11 p.

How bumblebees manage conflicting information seen on arrival and departure from flowers
Guiraud, M. G., MaBouDi, H., Woodgate, J., Bates, O. K., Rodriguez, O. R., Gallo, V. & Barron, A. B., Dec 2025, In: Animal Cognition. 28, 1, p. 1-12 12 p., 11.

Temperature as an early warning signal of honeybee colony failure
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Phenomenal interface theory: a model for basal consciousness
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***Bombella intestini*: a probiotic honeybee(*Apis mellifera*)gut bacterium**
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Visual discrimination learning in the Australian stingless bee *Tetragonula carbonaria* (Hymenoptera: Apidae)
Mourmourakis, F. & Barron, A. B., Feb 2025, In: Austral Entomology. 64, 1, p. 1-10 10 p., e12725.

Comparing cognition across major transitions using the hierarchy of formal automata
Klein, C. & Barron, A. B., Jul 2024, In: Wiley Interdisciplinary Reviews: Cognitive Science. 15, 4, 7 p., e1680.

Quantifying the impact of crop coverings on honey bee orientation and foraging in sweet cherry orchards using RFID
Warren, R. J., Colin, T., Quarrell, S. R., Barron, A. B. & Allen, G. R., Jun 2024, In: Journal of Applied Entomology. 148, 5, p. 566-581 16 p.

The relationship between cognition and brain size or neuron number
Barron, A. B. & Mourmourakis, F., Jun 2024, In: Brain, Behavior and Evolution. 99, 2, p. 109-121 13 p.

Impact of isolated and unattractive crops on honeybee foraging: a case study using radio frequency identification and hybrid carrot seed crops
Warren, R. J., Colin, T., Quarrell, S. R., Barron, A. B. & Allen, G. R., May 2024, In: Agricultural and Forest Entomology. 26 , 2, p. 218-231 14 p.

Understanding the limits to animal cognition
Howard, S. R. & Barron, A. B., 8 Apr 2024, In: Current Biology. 34, 7, p. R294-R300 7 p.

Environmental exposure to metallic pollution impairs honey bee brain development and cognition
Monchanin, C., Drujont, E., Le Roux, G., Lösel, P. D., Barron, A. B., Devaud, J. M., Elger, A. & Lihoreau, M., 5 Mar 2024, In: Journal of Hazardous Materials. 465, p. 1-11 11 p., 133218.

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Barron, A., Fahrbach, S. E., Mercer, A. R., Mesce, K. A., Schulz, D. J., Smith, B. H. & Søvik, E., 4 Aug 2023, In: Science (New York, N.Y.). 381, 6657, p. 1 1 p., adg3916.

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Feeding and amines stimulate the growth of the salivary gland following short-term starvation in the black field cricket, *Teleogryllus commodus*
Othman, N. W., Barron, A. B. & Cooper, P. D., Jun 2023, In: Insects. 14, 6, p. 1-16 16 p., 495.

The diverging epigenomic landscapes of honeybee queens and workers revealed by multiomic sequencing
Zhang, Y., He, X. J., Barron, A. B., Li, Z., Jin, M. J., Wang, Z. L., Huang, Q., Zhang, L. Z., Wu, X. B., Yan, W. Y. & Zeng, Z. J., Apr 2023, In: Insect Biochemistry and Molecular Biology. 155, p. 1-12 12 p., 103929.

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Heavy metal pollutants: the hidden pervasive threat to honey bees and other pollinators
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Bumblebees retrieve only the ordinal ranking of foraging options when comparing memories obtained in distinct settings
Solvi, C., Zhou, Y., Feng, Y., Lu, Y., Roper, M., Sun, L., Reid, R. J., Chittka, L., Barron, A. B. & Peng, F., 27 Sept 2022, In: eLife. 11, p. 1-12 12 p., e78525.

The best of both worlds: dual systems of reasoning in animals and AI
Kelly, M. & Barron, A. B., Aug 2022, In: Cognition. 225, p. 1-9 9 p., 105118.

Honey bees cannot sense harmful concentrations of metal pollutants in food
Monchanin, C., Gabriela de Brito Sanchez, M., Lecouvreur, L., Boidard, O., Méry, G., Silvestre, J., Le Roux, G., Baqué, D., Elger, A., Barron, A. B., Lihoreau, M. & Devaud, J. M., Jun 2022, In: Chemosphere. 297, p. 1-9 9 p., 134089.

The involvement of a floral scent in plant-honeybee interaction
Liu, Y. B., Zeng, Z. J., Barron, A. B., Ma, Y., He, Y. Z., Liu, J. F., Li, Z., Yan, W. Y. & He, X. J., Jun 2022, In: Science of Nature. 109, 3, p. 1-10 10 p., 30.

Extent and complexity of RNA processing in honey bee queen and worker caste development
He, X. J., Barron, A. B., Yang, L., Chen, H., He, Y. Z., Zhang, L. Z., Huang, Q., Wang, Z. L., Wu, X. B., Yan, W. Y. & Zeng, Z. J., 20 May 2022, In: iScience. 25, 5, p. 1-19 19 p., 104301.

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Ozdemir, A., Scerri, M., Barron, A., Philippides, A., Mangan, M., Vasilaki, E. & Manneschi, L., Apr 2022, In: IEEE Robotics and Automation Letters. 7, 2, p. 4520-4527 8 p.

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Paten, A. M., Colin, T., Coppin, C. W., Court, L. N., Barron, A. B., Oakeshott, J. G. & Morgan, M. J., 25 Mar 2022, In: Science of the Total Environment. 814, p. 1-11 11 p., 152614.

Traces of a neonicotinoid pesticide stimulate different honey bee colony activities, but do not increase colony size or longevity
Meikle, W. G., Colin, T., Adamczyk, J. J., Weiss, M. & Barron, A. B., Feb 2022, In: Ecotoxicology and Environmental Safety. 231, p. 1-8 8 p., 113202.

Did prosociality drive the evolution of homosexuality? Response to Luoto (2021)
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Current permissible levels of metal pollutants harm terrestrial invertebrates
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Metal pollutants have additive negative effects on honey bee cognition
Monchanin, C., Drujont, E., Devaud, J.-M., Lihoreau, M. & Barron, A. B., Jun 2021, In: Journal of Experimental Biology. 224, 12, p. 1-7 7 p., jeb241869.

Chronic exposure to trace lead impairs honey bee learning
Monchanin, C., Blanc-Brude, A., Drujont, E., Negahi, M. M., Pasquaretta, C., Silvestre, J., Baqué, D., Elger, A., Barron, A. B., Devaud, J. M. & Lihoreau, M., 1 Apr 2021, In: Ecotoxicology and Environmental Safety. 212, p. 1-9 9 p., 112008.

Effects of late miticide treatments on foraging and colony productivity of European honey bees (*Apis mellifera*)
Colin, T., Forster, C. C., Westacott, J., Wu, X., Meikle, W. G. & Barron, A. B., Apr 2021, In: Apidologie. 52, 2, p. 474-492 19 p.

Non-numerical strategies used by bees to solve numerical cognition tasks
MaBouDi, H., Barron, A. B., Li, S., Honkanen, M., Loukola, O. J., Peng, F., Li, W., Marshall, J. A. R., Cope, A., Vasilaki, E. & Solvi, C., 24 Feb 2021, In: Proceedings of the Royal Society B: Biological Sciences. 288, 1945, p. 1-10 10 p., 20202711.

Effects of commercial queen rearing methods on queen fecundity and genome methylation
Yi, Y., Liu, Y.-B., Barron, A. B. & Zeng, Z.-J., Feb 2021, In: Apidologie. 52, 1, p. 282-291 10 p.

Pesticide dosing must be guided by ecological principles
Colin, T., Monchanin, C., Lihoreau, M. & Barron, A. B., Dec 2020, In: Nature Ecology and Evolution. 4, 12, p. 1575-1577 3 p.

Transcriptomic, morphological, and developmental comparison of adult honey bee queens (*Apis mellifera*) reared from eggs or worker larvae of differing ages
Yi, Y., Liu, Y. B., Barron, A. B. & Zeng, Z. J., Dec 2020, In: Journal of Economic Entomology. 113, 6, p. 2581-2587 7 p.

Transgenerational accumulation of methylome changes discovered in commercially reared honey bee (*Apis mellifera*) queens
Yi, Y., He, X. J., Barron, A. B., Liu, Y. B., Wang, Z. L., Yan, W. Y. & Zeng, Z. J., Dec 2020, In: Insect Biochemistry and Molecular Biology. 127, p. 1-11 11 p., 103476.

Response to Luoto's (2020) "Did Prosociality Drive the Evolution of Homosexuality?"
Barron, A. B., Oct 2020, In: Archives of Sexual Behavior. 49, 7, p. 2245-2246 2 p.

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MaBouDi, H., Marshall, J. A. R. & Barron, A. B., 9 Sept 2020, In: Proceedings. Biological sciences. 287, 1934, p. 1-9 9 p., 20201525.

Vertical lobes of the mushroom body are essential for view-based navigation in Australian *Myrmecia* ants
Kamhi, J. F., Barron, A. B. & Narendra, A., 7 Sept 2020, In: Current Biology. 30, 17, p. 3432-3437 9 p.

The miticide thymol in combination with trace levels of the neonicotinoid imidacloprid reduces visual learning performance in honey bees (*Apis mellifera*)
Colin, T., Plath, J. A., Klein, S., Vine, P., Devaud, J. M., Lihoreau, M., Meikle, W. G. & Barron, A. B., Aug 2020, In: Apidologie. 51, 4, p. 499-509 11 p.

How experimental neuroscientists can fix the hard problem of consciousness
Klein, C. & Barron, A. B., 24 Jun 2020, In: Neuroscience of Consciousness. 2020, 1, p. 1-10 10 p., niaa009.

A hybrid compact neural architecture for visual place recognition
Chancan, M., Hernandez-Nunez, L., Narendra, A., Barron, A. B. & Milford, M., Apr 2020, In: IEEE Robotics and Automation Letters. 5, 2, p. 993-1000 8 p.

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Barron, A. B. & Hare, B., 16 Jan 2020, In: Frontiers in Psychology. 10, p. 1-7 7 p., 2955.

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Klein, C. & Barron, A. B., 2020, In: Journal of Consciousness Studies. 27, 5-6, p. 82-90 9 p.

The capping pheromones and putative biosynthetic pathways in worker and drone larvae of honey bees *Apis mellifera*
Qin, Q.-H., He, X.-J., Barron, A. B., Guo, L., Jiang, W.-J. & Zeng, Z.-J., Dec 2019, In: Apidologie. 50, 6, p. 793-803 11 p.

Long-term dynamics of honey bee colonies following exposure to chemical stress
Colin, T., Meikle, W. G., Paten, A. M. & Barron, A. B., 10 Aug 2019, In: Science of the Total Environment. 677, p. 660-670 11 p.

Traces of a neonicotinoid induce precocious foraging and reduce foraging performance in honey bees
Colin, T., Meikle, W. G., Wu, X. & Barron, A. B., 16 Jul 2019, In: Environmental Science and Technology. 53, 14, p. 8252-8261 10 p.

A maternal effect on queen production in honeybees
Wei, H., He, X. J., Liao, C. H., Wu, X. B., Jiang, W. J., Zhang, B., Zhou, L. B., Zhang, L. Z., Barron, A. B. & Zeng, Z. J., 8 Jul 2019, In: Current Biology. 29, 13, p. 2208-2213 9 p.

A comparison of honeybee (*Apis mellifera*) queen, worker and drone larvae by RNA-Seq
He, X. J., Jiang, W. J., Zhou, M., Barron, A. B. & Zeng, Z. J., Jun 2019, In: Insect Science. 26, 3, p. 499-509 11 p.

Honey bees increase their foraging performance and frequency of pollen trips through experience
Klein, S., Pasquaretta, C., He, X. J., Perry, C., Søvik, E., Devaud, J. M., Barron, A. B. & Lihoreau, M., 1 May 2019, In: Scientific Reports. 9, 1, p. 1-10 10 p., 6778.

Effects of thymol on European honey bee hygienic behaviour
Colin, T., Lim, M. Y., Quarrel, S. R., Allen, G. R. & Barron, A. B., 25 Apr 2019, In: Apidologie. 50, 2, p. 141-152 12 p.

Biogenic amine modulation of honey bee sociability and nestmate affiliation
Hewlett, S. E., Delahunt Smoleniec, J. D., Wareham, D. M., Pyne, T. M. & Barron, A. B., 25 Oct 2018, In: PLoS ONE. 13, 10, p. 1-18 18 p., e0205686.

The development of honey bee colonies assessed using a new semi-automated brood counting method: Combcount
Colin, T., Bruce, J., Meikle, W. G. & Barron, A. B., 16 Oct 2018, In: PLoS ONE. 13, 10, p. 1-14 14 p., e0205816.

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Cope, A. J., Vasilaki, E., Minors, D., Sabo, C., Marshall, J. A. R. & Barron, A. B., 17 Sept 2018, In: PLoS Computational Biology. 14, 9, p. 1-21 21 p., e1006435.

Short-term exposure to lambda-cyhalothrin negatively affects the survival and memory-related characteristics of worker bees Apis mellifera
Liao, C. H., He, X. J., Wang, Z. L., Barron, A. B., Zhang, B., Zeng, Z. J. & Wu, X. B., Jul 2018, In: Archives of Environmental Contamination and Toxicology. 75, 1, p. 59–65 7 p.

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Meikle, W. G., Holst, N., Colin, T., Weiss, M., Carroll, M. J., McFrederick, Q. S. & Barron, A. B., 23 May 2018, In: PLoS ONE. 13, 5, p. 1-21 21 p., e0197589.

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Cocaine directly impairs memory extinction and alters brain DNA methylation dynamics in honey bees
Søvik, E., Berthier, P., Klare, W. P., Helliwell, P., Buckle, E. L. S., Plath, J. A., Barron, A. B. & Maleszka, R., 13 Feb 2018, In: Frontiers in Physiology. 9, FEB, p. 1-11 11 p., 79.

Honey bee (*Apis mellifera*) sociability and nestmate affiliation are dependent on the social environment experienced post-eclosion
Hewlett, S. E., Wareham, D. M. & Barron, A. B., 13 Feb 2018, In: Journal of Experimental Biology. 221, 3, p. 1-8 8 p., 173054.

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Bordier, C., Klein, S., Le Conte, Y., Barron, A. B. & Alaux, C., 1 Feb 2018, In: Journal of Experimental Biology. 221, 4, p. 1-5 5 p., jeb171470.

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Nouvian, M., Mandal, S., Jamme, C., Claudianos, C., D'Ettorre, P., Reinhard, J., Barron, A. B. & Giurfa, M., 31 Jan 2018, In: Proceedings of the Royal Society B: Biological Sciences. 285, 1871, p. 1-9 9 p., 20172653.

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Barron, A. B. & Plath, J. A., 1 Dec 2017, In: Journal of Experimental Biology. 220, 23, p. 4339-4346 8 p.

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Cabirol, A., Brooks, R., Groh, C., Barron, A. B. & Devaud, J. M., Oct 2017, In: Learning and Memory. 24, 10, p. 557-562 6 p.

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Scheiner, R., Entler, B. V., Barron, A. B., Scholl, C. & Thamm, M., 8 Aug 2017, In: Frontiers in Systems Neuroscience. 11, p. 1-8 8 p., 55.

The frontiers of insect cognition
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Søvik, E., Lamora, A., Seehra, G., Barron, A. B., Duncan, J. G. & Ben-Shahar, Y., Jun 2017, In: Genes, Brain and Behavior. 16, 5, p. 506-514 9 p.

Different roles for honey bee mushroom bodies and central complex in visual learning of colored lights in an aversive conditioning assay
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Scheiner, R., Reim, T., Søvik, E., Entler, B. V., Barron, A. B. & Thamm, M., 15 Apr 2017, In: Journal of Experimental Biology. 220, 8, p. 1443-1450 8 p.

Epigenetics and the evolution of instincts: instincts may evolve from learning and share the same cellular and molecular mechanisms
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Why bees are so vulnerable to environmental stressors
Klein, S., Cabirol, A., Devaud, J.-M., Barron, A. B. & Lihoreau, M., Apr 2017, In: Trends in Ecology and Evolution. 32, 4, p. 268-278 11 p.

Making a queen: an epigenetic analysis of the robustness of the honeybee (*Apis mellifera*) queen developmental pathway
He, X. J., Zhou, L. B., Pan, Q. Z., Barron, A. B., Yan, W. Y. & Zeng, Z. J., Mar 2017, In: Molecular Ecology. 26, 6, p. 1598-1607 10 p.

A Computational model of the integration of landmarks and motion in the insect central complex
Cope, A. J., Sabo, C., Vasilaki, E., Barron, A. & Marshall, J. A. R., 27 Feb 2017, In: PLoS ONE. 12, 2, p. 1-19 19 p., e0172325.

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Søvik, E., Plath, J. A., Devaud, J. M. & Barron, A. B., 26 Nov 2016, In: Journal of Visualized Experiments. 117, p. 1-11 11 p., e54695.

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Brown, M. J. F., Dicks, L. V., Paxton, R. J., Baldock, K. C. R., Barron, A. B., Chauzat, M. P., Freitas, B. M., Goulson, D., Jepsen, S., Kremen, C., Li, J., Neumann, P., Pattemore, D. E., Potts, S. G., Schweiger, O., Seymour, C. L. & Stout, J. C., 9 Aug 2016, In: PeerJ. 4, p. 1-20 20 p., e2249.

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A systems approach to animal communication
Hebets, E. A., Barron, A. B., Balakrishnan, C. N., Hauber, M. E., Mason, P. H. & Hoke, K. L., 16 Mar 2016, In: Proceedings of the Royal Society B: Biological Sciences. 283, 1826, p. 1-10 10 p., 20152889.

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Insects have the capacity for subjective experience
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Awards

Projects

ActiveAI - active learning and selective attention for robust, transparent and efficient AI
Barron, A. (Primary Chief Investigator) & Philippides, A. (Chief Investigator)
1/11/19 → 31/10/22

Analysing the neural mechanisms of animal cognition and behaviour
Narendra, A. (Primary Chief Investigator), Barron, A. (Chief Investigator), Cheng, K. (Chief Investigator), Hart, N. (Chief Investigator) & Cornish, J. (Chief Investigator)
1/01/16 → 31/12/16

An analysis of the distribution of degrees of intelligence across animal groups
Barron, A. (Chief Investigator)
4/06/18 → 3/06/20

A new understanding of complex systems through study of self-assembled swarm architecture in ants
Reid, C. (Primary Chief Investigator) & Barron, A. (Sponsor)
30/06/17 → …

Automated Fluorescence Stereo Microscope
Narendra, A. (Primary Chief Investigator), Taylor, P. (Chief Investigator), Lindsay, S. (Chief Investigator), Barron, A. (Chief Investigator), Herberstein, M. (Chief Investigator), Hart, N. (Chief Investigator), Williamson, J. (Chief Investigator), Griffith, S. (Chief Investigator), Whiting, M. (Chief Investigator), Brock, G. (Chief Investigator) & Jacob, D. (Chief Investigator)
1/01/17 → 31/12/17

Best practices for evaluation of bee health technology
Barron, A. (Primary Chief Investigator) & Colin, T. (Chief Investigator)
1/05/23 → 31/10/26

Biomolecular Discovery and Design Research Centre
Packer, N. (Primary Chief Investigator), Paulsen, I. (Chief Investigator), Nevalainen, H. (Chief Investigator), Haynes, P. (Chief Investigator), Molloy, M. (Chief Investigator), Atwell, B. (Chief Investigator), Barron, A. (Chief Investigator), Beggs, P. (Chief Investigator), Bergquist, P. L. (Chief Investigator), Brown, L. (Chief Investigator), Cornish, J. (Chief Investigator), Chung, R. (Chief Investigator), De Deene, Y. (Chief Investigator), Garcia-Bennett, A. (Chief Investigator), Gillings, M. (Chief Investigator), Goodchild, A. (Chief Investigator), Guillemin, G. (Chief Investigator), Hallinan, J. (Chief Investigator), Hose, G. (Chief Investigator), Jaschke, P. (Chief Investigator), Mabbutt, B. (Chief Investigator), Raftos, D. (Chief Investigator), Ranganathan, S. (Chief Investigator), Sofronov, G. (Chief Investigator), Sunna, A. (Chief Investigator), Tetu, S. (Chief Investigator), Andersen, M. (Chief Investigator), Willows, R. (Chief Investigator), Ahn, C. (Associate Investigator), Breen, E. (Associate Investigator), Campbell, M. (Associate Investigator), Care, A. (Associate Investigator), Cordina, N. (Associate Investigator), Curach, N. (Associate Investigator), Everest Dass, A. (Associate Investigator), Elbourne, L. (Associate Investigator), Goold, H. (Associate Investigator), Hassan, K. (Associate Investigator), Kautto, L. (Associate Investigator), Krisp, C. (Associate Investigator), Kroukamp, H. (Associate Investigator), Lee, A. (Associate Investigator), Lin, C.-H. (Associate Investigator), Mackie, A. (Associate Investigator), McKay, M. (Associate Investigator), McQuade, L. (Associate Investigator), Mirzaei, M. (Associate Investigator), Mohamedali, A. (Associate Investigator), Ostrowski, M.

(Associate Investigator), Parker, L. (Associate Investigator), Pascovici, D. (Associate Investigator), Penesyan, A. (Associate Investigator), Shah, B. (Associate Investigator), Sun, A. (Associate Investigator), Thompson, E. (Associate Investigator) & Williams, T. (Associate Investigator)
1/01/17 → …

Biosecurity Futures Research Centre
Taylor, P. (Primary Chief Investigator), Gillings, M. (Chief Investigator), Raftos, D. (Chief Investigator), Leishman, M. (Chief Investigator), Sunna, A. (Chief Investigator), Bishop, M. (Chief Investigator), Barron, A. (Chief Investigator), Beattie, A. (Chief Investigator), Beaumont, L. (Chief Investigator), Connally, R. (Chief Investigator), Grech, A. (Chief Investigator), Griffith, S. (Chief Investigator), Guillemin, G. (Chief Investigator), Hughes, L. (Chief Investigator), Inglis, D. (Chief Investigator), Jamie, I. (Chief Investigator), Jamie, J. (Chief Investigator), Lu, Y. (Chief Investigator), Morelli De andrade, R. (Chief Investigator), Nevalainen, H. (Chief Investigator), Park, S. J. (Chief Investigator), Perez, J. (Chief Investigator), Power, M. (Chief Investigator), Ranjan, R. (Chief Investigator) & Vickery, K. (Chief Investigator)
1/07/15 → …

Cognition all the way up?
Bourrat, P. (Primary Chief Investigator), Barron, A. (Co-Investigator), Griffiths, P. (Co-Investigator) & Love, A. C. (Partner Investigator)
1/12/24 → 31/08/27

Combined gas chromatography/ electroantennogram detector for insect olfaction research
Taylor, P. (Primary Chief Investigator), Jamie, I. (Chief Investigator), Herberstein, M. (Chief Investigator), Kemp, D. (Chief Investigator), Barron, A. (Chief Investigator), Jamie, J. (Chief Investigator), Akter, H. (Student), Adnan, S. (Student), Moadeli, T. (Student), Masud, K. (Student), Bakshi, D. (Student) & MQRES, M. (Student)
1/01/15 → 31/12/15

Comprehending and modelling the workings of the animal brain
Barron, A. (Primary Chief Investigator), MQRES (International), M. (Student) & MQRES, M. (Student)
1/06/15 → 31/12/20

MQRIS Small: Enhancing electrochemical recording techniques in the animal research facility
Cornish, J. (Primary Chief Investigator), Baracz, S. (Chief Investigator), McMullan, S. (Chief Investigator), Goodchild, A. (Chief Investigator), Barron, A. (Chief Investigator) & Hildreth, C. (Chief Investigator)
1/01/18 → 31/12/18

Exploring neurogenomic adaptations to repeated cocaine exposure in honey bees
Barron, A. (Primary Chief Investigator)
22/10/08 → 21/10/09

DP24 (ANU Led): Finding equivalence between natural and artificial intelligences
Klein, C. (Chief Investigator) & Barron, A. (Primary Chief Investigator)
1/03/24 → 28/02/27

Gene expression analysis system
Barron, A. (Primary Chief Investigator), Cheng, K. (Chief Investigator), Taylor, P. (Chief Investigator), Nelson, X. (Chief Investigator) & Pryke, S. (Chief Investigator)
1/01/08 → 31/12/08

High quality ultramicrotome for precision specimen preparation for optical and electron microscopy
Deng, W. (Primary Chief Investigator), Chung, R. (Chief Investigator), Nevalainen, H. (Chief Investigator), Phillips, J. K. (Chief Investigator), McMorran, B. (Chief Investigator) & Barron, A. (Chief Investigator)
1/01/14 → 31/12/14

High Throughput Molecular Sample Processing Facility
Zakoshanski, I. (Primary Chief Investigator), Paulsen, I. (Chief Investigator), Whiting, M. (Chief Investigator), Power, M. (Chief Investigator), Lanfear, R. (Chief Investigator), Barron, A. (Chief Investigator), Westoby, M. (Chief Investigator), Warren, D. (Chief Investigator), Van Sluyter, S. (Chief Investigator), Clarke, T. (Chief Investigator), Wunderlin, T. (Chief Investigator), Ostrowski, M. (Chief Investigator), Mazard, S. (Chief Investigator) & Tetu, S. (Chief Investigator)

4/02/15 → 31/12/15

Honeybee probiotic combating glyphosate exposure
Narendra, A. (Primary Chief Investigator), Forster, C. (Chief Investigator), Ponton, F. (Chief Investigator), Barron, A. (Chief Investigator) & Colin, T. (Chief Investigator)
28/02/23 → 15/06/24

Integrative analysis of honey bee colony function and performance (58-5342-3-004F: Developing the use of sensors to model bee colony dynamics and to monitor bee health, productivity and performance)
Barron, A. (Primary Chief Investigator) & Meikle, W. (Chief Investigator)
1/07/13 → …

Invertebrate olfaction facilities
Taylor, P. (Primary Chief Investigator), Herberstein, M. (Chief Investigator), Barron, A. (Chief Investigator), Weldon, C. (Chief Investigator), Nelson, X. (Chief Investigator) & Prenter, J. (Chief Investigator)
1/01/09 → 31/12/09

Knowing what you don't know: analyzing the biology of metacognition and uncertainty in a simple model system
Solvi, C. (Primary Chief Investigator) & Barron, A. (Supervisor)
1/06/11 → 1/06/14

Macquarie University Species Spectrum Research Center
Herberstein, M. (Primary Chief Investigator), Gillings, M. (Chief Investigator), Jacob, D. (Chief Investigator), Saintilan, N. (Chief Investigator), Barron, A. (Chief Investigator), Westoby, M. (Chief Investigator), Sofronov, G. (Chief Investigator) & Tetu, S. (Chief Investigator)
1/01/17 → …

Microbalance for integrative behavioral research
Taylor, P. (Primary Chief Investigator), Barron, A. (Chief Investigator) & Weldon, C. (Chief Investigator)
1/01/10 → 31/12/10

Minds and Intelligences: A Diverse Intelligences Hub
Barron, A. (Primary Chief Investigator), Downey, G. (Chief Investigator), Menary, R. (Chief Investigator), Moser, R. (Chief Investigator), Kaplan, D. M. (Chief Investigator) & Mostafavi, H. (Research Coordinator)
1/09/25 → 31/08/27

Molecular memory: how DNA methylation contributes to spatial memory
Maleszka, R. (Primary Chief Investigator), Cornish, J. (Chief Investigator) & Barron, A. (Chief Investigator)
1/01/10 → 31/12/12

Navigating brains: the neurobiology of spatial cognition
Cheng, K. (Primary Chief Investigator), Zeil, J. (Chief Investigator), Narendra, A. (Chief Investigator), Barron, A. (Chief Investigator), Wehner, R. (Partner Investigator) & MQRES, M. (Student)
30/06/15 → 29/06/19

Navigating brains: the neurocomputational foundations of insect spatial cognition
Cheng, K. (Primary Chief Investigator), Barron, A. (Chief Investigator) & Wehner, R. (Partner Investigator)
1/01/14 → 31/12/14

Neural adaptations for social harmony in bees
Barron, A. (Primary Chief Investigator)
1/01/08 → 31/12/08

Operant behavioural chambers for rat research
Cornish, J. (Primary Chief Investigator), Clemens, K. (Chief Investigator), Staples, L. (Chief Investigator), Goodchild, A. (Chief Investigator), Haynes, P. (Chief Investigator), Barron, A. (Chief Investigator), Baillie, A. (Chief Investigator) & Pilowsky, P. (Chief Investigator)

1/01/11 → 31/12/11

Origin of Consciousness and it's Computational Applications in Machines (MQ Discretionary Scheme)
Barron, A. (Primary Chief Investigator), Klein, C. (Primary Chief Investigator), Balleine, B. W. (Chief Investigator), Bell, G. (Chief Investigator), Millford, M. (Chief Investigator) & Van Swinderen, B. (Chief Investigator)
12/02/18 → 31/12/18

Protecting Australia's honey bee pollinators
Barron, A. (Primary Chief Investigator)
1/11/21 → 31/10/23

Protecting vulnerable Australian honey bees
Barron, A. (Primary Chief Investigator)
25/07/17 → …

Real-time qPCR system for gene detection, gene expression analysis and single nucleotide polymorphisms genotyping in Biology research
Hart, N. (Primary Chief Investigator), Ponton, F. (Chief Investigator), Narendra, A. (Chief Investigator), Barron, A. (Chief Investigator), Shine, R. (Chief Investigator) & Clulow, S. (Chief Investigator)
1/01/20 → 29/05/20

The bionic bee brain
Barron, A. (Primary Chief Investigator)
19/06/15 → 24/08/15

The genomic response to colony disease stress in honey bees
Barron, A. (Primary Chief Investigator) & Gillings, M. (Chief Investigator)
1/07/12 → 30/06/14

MTEC: The major transitions in the evolution of cognition
Barron, A. (Primary Chief Investigator)
1/11/20 → 31/10/23

The molecular and cellular basis the memory in the honey bee
Barron, A. (Primary Chief Investigator)
1/08/09 → 30/07/11

Towards a Bionic Brain
Barron, A. (Primary Chief Investigator)
30/04/14 → 25/12/14

Understanding colony collapse: a social analysis of honey bee colony failure
Barron, A. (Primary Chief Investigator)
1/07/11 → 31/12/14

Understanding the functions of neural circuit changes in visual navigation
Kamhi, F. (Primary Chief Investigator), Narendra, A. (Chief Investigator) & Barron, A. (Chief Investigator)
1/01/17 → 31/12/18

Vulnerability to cocaine use: discovering common mechanisms conserved across animal phyla
Barron, A. (Primary Chief Investigator), Cornish, J. (Chief Investigator) & Maleszka, R. (Chief Investigator)
1/01/09 → 31/12/12