



ZSÓFIA BOGNÁR

Eötvös Loránd University, Department of Ethology
Budapest, Hungary
bognarzsofia@gmail.com

SCIENTIFIC INTEREST

Already as a high school student, I became interested in ethology, then as a first-year student, in 2013 I joined the Department of Ethology at Eötvös Loránd University. I carry out my research under the supervision of Dr Enikő Kubinyi. My main area of research is the relationship between head shape and behaviour in dogs. I study why the popularity of brachycephalism (short-headedness) may increase among companion dogs despite the fact that shortening of the skull is associated with serious health problems and leads to an animal welfare crisis. These problems place a significant financial burden on owners and can lead to the premature death of the animal, so the emotional burden is also significant. In my research, my goal is to understand this seemingly paradoxical situation. Several characteristics are likely to contribute to their growing popularity. In our research, we have observed that brachycephalic dogs pay more attention to faces and are more likely to form eye contact with humans, which may be due to the anatomical properties of their eyes: In their retina, the density of retinal ganglion cells is higher at the centre of the visual field, while it decreases toward the periphery. As a result, they may be more focused on their communication partner, because they may be less disturbed by other visual stimuli coming from the periphery. Eye contact is an important non-verbal communication signal that we use to express who the communication is for and to make sure the partner is paying attention to the communication. A dog prone to eye contact can be easier to teach and control. In addition, eye contact through an oxytocin feedback mechanism may be important in strengthening the bond between dog and human. Thus, we hypothesize that the increased propensity of brachycephalic dogs to make eye contact may contribute to their increased popularity.

PROFESSIONAL EXPERIENCE

Momentum research group membership

2021. October –

MTA-ELTE Lendület "Momentum" Companion Animal Research Group, Eötvös Loránd University, Department of Ethology, Budapest, Hungary

Lead researcher: Enikő Kubinyi, PhD, DSc

ERC research group membership

2016. May – 2021. September

ERC Starting Grant Cognitive Ageing In Dogs, Senior Family Dog Project, Eötvös Loránd University, Department of Ethology, Budapest, Hungary

Lead researcher: Enikő Kubinyi, PhD, DSc

STUDIES

2020 - Eötvös Loránd University, Biological Doctoral School, **Ethology Program**

2018-2020 Eötvös Loránd University – **Biologist (MSc)** (*Ecology, Evolutionary- and Conservation Biology*)

2012-2018 Eötvös Loránd University – **Biology (BSc)**

LANGUAGE SKILLS

English (B2)

German (B2)

PROFESSIONAL AWARDS AND RECOGNITIONS

2021 - **Young Researcher of the Year in Behavioural Sciences** by the Hungarian Ethological Society

2021 - **Pro Scientia Gold Medal**

2021 - **1st place**, Hungarian New National Excellence Program III. Popular Science Competition, Popular Science Video

2021 - **1st place**, Hungarian National Students' Scientific Conference of Biology; Ethology and behavioural ecology section

2020 - **1st place**, Hungarian New National Excellence Program II. Popular Science Competition, Popular Science Video

2019 - **1st place**, Eötvös Loránd University Students' Conference; Supraindividual section

2019 - **Special award**, Eötvös Loránd University Students' Conference; Supraindividual section

2019 - **Outstanding student of the Faculty of Sciences**, Eötvös Loránd University

2017 - **2nd place**, Hungarian National Students' Scientific Conference of Biology; Ethology and behavioural ecology section

2016 - **Special award**, Eötvös Loránd University Students' Conference; Ethology and behavioural ecology section

SCHOLARSHIPS

2022-2023 – **Stephen W. Kuffler Research Scholarship for PhD Students**

2021-2022 – **Hungarian New National Excellence Program scholarship for PhD Students**

2020-2021 – **Hungarian New National Excellence Program scholarship for PhD Students**

2019-2020 – **Hungarian New National Excellence Program scholarship for MSc Students**

2019-2020 – **Hungarian National Higher Education Scholarship**

2017-2019 – **Eötvös Loránd University Regular Science Scholarship**

PUBLICATIONS

ORIGINAL PAPERS

Bognár, Z., Szabó, D., Deés, A., & Kubinyi, E. (2021). **Shorter headed dogs, visually cooperative breeds, younger and playful dogs form eye contact faster with an unfamiliar human**. *Scientific Reports*, 11(1), 9293. <https://doi.org/10.1038/s41598-021-88702-w>

Bognár, Z., Piotti, P., Szabó, D., Le Nézet, L., & Kubinyi, E. (2020). **A novel behavioural approach to assess responsiveness to auditory and visual stimuli before cognitive testing in family dogs**. *Applied Animal Behaviour Science*, 105016. <https://doi.org/10.1016/j.applanim.2020.105016>

Piotti, P., Szabó, D., Bognár, Z., Egerer, A., Hulsbosch, P., Carson, R. S., & Kubinyi, E. (2018). **Effect of age on discrimination learning, reversal learning, and cognitive bias in family dogs**. *Learning & Behavior*. <https://doi.org/10.3758/s13420-018-0357-7>

Bognár, Z., Iotchev, I. B., & Kubinyi, E. (2018). **Sex, skull length, breed, and age predict how dogs look at faces of humans and conspecifics**. *Animal Cognition*, 21(4), 447–456. <https://doi.org/10.1007/s10071-018-1180-4>

Piotti, P., Szabó, D., Wallis, L. J., Bognár, Z., Stiegmann, B. S., Egerer, A., Marty, P., & Kubinyi, E. (2017). **The effect of age on visuo-spatial short-term memory in family dogs**. *Pet Behaviour Science*, 4, 17. <https://doi.org/10.21071/pbs.v0i4.10130>

CONFERENCE PRESENTATIONS

Dog-Human Eye Contact: The Connection With Head Shape, Breed Function And Age - Bognár Zsófia, Szabó Dóra, Deés Alexandra, Kubinyi Enikő - 7th Canine Science Forum, 2021. July 6-9., Lisbon, Portugal (online)

Exploring The Factors Affecting The Complex Cognitive Performance Of Family Dogs Using Correlation Network Analysis - Faragó Tamás, Ivaylo B. Iotchev, Turcsán Borbála, Bognár Zsófia, Szabó Dóra, Kubinyi Enikő - 7th Canine Science Forum, 2021. July 6-9., Lisbon, Portugal (online)

A fejforma hatása a kutyák vizuális kommunikációs képességeire - Bognár Zsófia - Hungarian New National Excellence Program closing conference, 2020. December 14., Budapest, Hungary (online)

Shorter headed and younger dogs have a higher propensity to form eye contact with humans - Bognár Zsófia, Szabó Dóra, Deés Alexandra, Kubinyi Enikő - The 57th Annual Conference of the Animal Behavior Society, 2020. July 28-31., Knoxville, USA (online)

A fiatalabb és rövidebb fejű kutyák hamarabb veszik fel a szemkontaktust - Bognár Zsófia, Szabó Dóra, Deés Alexandra, Kubinyi Enikő - XXI. Conference of the Hungarian Ethological Society, 2019. November 29. - December 1., Mátrafüred, Hungary

Look into my eyes, I will reward you – Head shape, sex and age affects dogs' visual communication - Bognár Zsófia, Szabó Dóra, Patrizia Piotti, Lisa Wallis, Deés Alexandra, Stiegmann Bianka, Turcsán Borbála, Kubinyi Enikő - 6th European Student Conference on Behaviour & Cognition, 2019. September 4-7., Padua, Italy

Age effects on cognitive performance of family dogs - Patrizia Piotti, Szabó Dóra, Lisa Wallis, Bognár Zsófia, Egerer Anna, Stiegmann Bianka, Marosi Sarolta, Kubinyi Enikő - 6th Canine Science Forum, 2018. July 3-6., Budapest, Hungary

Senior Family Dog Project: studying cognitive ageing in dogs using an interdisciplinary approach - Kubinyi Enikő, Szabó Dóra, Lisa Wallis, Ivaylo B. Iotchev, Sándor Sára, Czeibert Kálmán, Egerer Anna, Bognár Zsófia, Tátrai Kitti, Turcsán Borbála, Patrizia Piotti - 6th Canine Science Forum, 2018. July 3-6., Budapest, Hungary

A novel test for visuospatial short-term memory in dogs - Patrizia Piotti, Szabó Dóra, Lisa Wallis, Bognár Zsófia, Stiegmann Bianka, Egerer Anna, Pauline Marty, Kubinyi Enikő - XIX. Conference of the Hungarian Ethological Society, 2017. December 1-3., Dobogókő, Hungary

Predictors of Gaze-Directed Attention in Dogs - Bognár Zsófia, Ivaylo B. Iotchev, Kubinyi Enikő - 11th International Veterinary Behaviour Meeting, 2017. September 14-16., Samorin, Slovakia

Neophilia in successfully ageing dogs - preliminary results – Szabó Dóra, Bognár Zsófia, Stiegmann Bianka, Böröczki Renáta, Lisa Wallis, Miklósi Ádám, Kubinyi Enikő - 11th International Veterinary Behaviour Meeting, 2017. September 14-16., Samorin, Slovakia

Neofilia egészenesen öregedő kutyákban - előzetes eredmények - Szabó Dóra, Bognár Zsófia, Stiegmann Bianka, Hemző Vivien, Marosi Sarolta, Lisa Wallis, Miklósi Ádám, Kubinyi Enikő - 25. MAKOG - A kognitív tudományok alapjai és alkalmazhatósága, 2017. August 31.-September 2., Budapest, Hungary

CONFERENCE POSTERS

Longitudinal Measurement of Intelligence and Cognitive Decline in the Dog - Bognár Zsófia, Turcsán Borbála, Ivaylo B.Iotchev, Faragó Tamás, Szabó Dóra, Kubinyi Enikő - The 58th Annual Conference of the Animal Behavior Society, 2021. August 3-6., USA (online)

Age-Related Personality And Behavioural Changes In Dogs, A Longitudinal Study's Preliminary Results - Bognár Zsófia, Faragó Tamás, Turcsán Borbála, Kubinyi Enikő - 7th Canine Science Forum, 2021. July 6-9., Lisbon, Portugal (online)

Ageing related personality changes in dogs; preliminary results from a longitudinal study - Bognár Zsófia, Faragó Tamás, Turcsán Borbála, Kubinyi Enikő - XXII. Conference of the Hungarian Ethological Society, 2020. December 4-5., Gödöllő, Hungary (online)

Age, breed and sex influences dogs' performance in eye contact training – preliminary results - Bognár Zsófia, Szabó Dóra, Patrizia Piotti, Lisa Wallis., Egerer Anna, Stiegmann Bianka, Deés Alexandra, Turcsán Borbála, Kubinyi Enikő - XX. Conference of the Hungarian Ethological Society, 2018. November 23-25., Cluj-Napoca, Romania

A behaviour test to detect age-related decline of stimulus-responsiveness in dogs - Bognár Zsófia, Patrizia Piotti, Szabó Dóra, Louis Le Nézet, Kubinyi Enikő - 5th European Student Conference on Behaviour & Cognition, 2018. September 5-7., Vienna, Austria

Performance in a problem solving task in old and young family dogs - Marosi Sarolta, Patrizia Piotti, Szabó Dóra, Lisa Wallis, Bognár Zsófia, Stiegmann Bianka, Egerer Anna, Pauline Marty, Hemző Vivien, Kubinyi Enikő - 6th Canine Science Forum, 2018. July 3-6., Budapest, Hungary

Assessment of age-related decline of stimulus-responsiveness in dogs - Bognár Zsófia, Patrizia Piotti, Szabó Dóra, Louis Le Nézet, Kubinyi Enikő - 6th Canine Science Forum, 2018. July 3-6., Budapest, Hungary

Neophilia in successfully ageing dogs - Szabó Dóra, Bognár Zsófia, Stiegmann Bianka, Marosi Sarolta, Egerer Anna, Patrizia Piotti, Lisa Wallis, Miklósi Ádám, Kubinyi Enikő - XIX. Conference of the Hungarian Ethological Society, 2017. December 1-3., Dobogókő, Hungary

A kutyák arcok felé irányuló figyelmének vizsgálata - Bognár Zsófia, Ivaylo B. Iotchev, Kubinyi Enikő - XIX. Conference of the Hungarian Ethological Society, 2017. December 1-3., Dobogókő, Hungary

Assessment of age-related decline of stimulus-responsiveness in dogs - Patrizia Piotti, Bognár Zsófia, Louis Le Nézet, Kubinyi Enikő - 30. Annual Symposium of the European Society of Veterinary Neurology and the European College of Veterinary Neurology, 2017. September 21-24., Helsinki, Finland