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Neuroscience Program

University of Illinois

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Barbey, Aron

Forthcoming

- Anderson E, **Barbey AK**. Forthcoming. Moral reasoning: A network neuroscience perspective.
- Barbey AK**, Karama S, Haier RJ. (Editors). Forthcoming. The Cambridge Handbook of Intelligence and Cognitive Neuroscience. *Cambridge University Press*.
- Barbey AK**, Posner MI. (Editors). Forthcoming. Cognitive Neuroscience of Human Intelligence. *Trends in Neuroscience and Education*.
- Daugherty AM, Sutton BP, Cohen NJ, **Barbey AK**. Forthcoming. Individual differences in the neurobiology of fluid intelligence predict responsiveness to training: Evidence from a comprehensive cognitive, mindfulness meditation, and aerobic fitness intervention.
- Harshman SW, Pitsch RL, Schaeublin NM, Smith ZK, Strayer KE, Quallie AV, Cowan D, Rose SD, O'Connor ML, Eckerle JJ, Das TK, **Barbey AK**, Strang AJ, Martin JA. Forthcoming. Metabolic stability of exercise-induced sweat.
- Key M, Zwilling C, Talukdar T, **Barbey AK**. Forthcoming. Essential amino acids, vitamins, and minerals moderate the relationship between the right frontal pole and measures of memory.
- Pindus DM, Zwilling C, Jarret J, Rohrig HS, Hillman CH, Cohen NJ, Kramer AF, **Barbey AK**. Forthcoming. Accelerometer-measured sustained MVPA is related to higher decision-making competence among young adults.
- Roman FJ, Colom R, **Barbey AK**. Forthcoming. Cognitive and neural architecture of decision making competence.
- Roman FJ, Zamroziewicz M, Zwilling C, Talukdar T, Colom R, **Barbey AK**. Forthcoming. Brain plasticity after cognitive training, physical exercise, and brain stimulation.
- Talukdar T, Zwilling CE, **Barbey AK**. Forthcoming. Multivariate phenotypes of healthy brain aging: Evidence from a comprehensive study of nutrient biomarkers, cognitive function, and brain health.
- Tanprasertsuk J, Ferland G, Johnson MA, Poon LW, Scott TM, **Barbey AK**, Barger K, Wang X, Johnson EJ. Forthcoming. Concentrations of circulating phylloquinone, but not cerebral menaquinone-4, are positively correlated with a wide range of cognitive measures in centenarians.
- Tanprasertsuk J, Johnson EJ, Johnson MA, Poon LW, Nelson PT, Davey A, Martin P, **Barbey AK**, Barger K, Wang X, Scott TM. F. In press. Clinico-neuropathological findings in the oldest old from the Georgia Centenarian Study. *Journal of Alzheimer's Disease*.
- Tanprasertsuk J, Scott TM, Johnson MA, Poon LW, Nelson PT, Davey A, Martin P, Vishwanathan R, **Barbey AK**, Barger K, Wang X, Johnson EJ. Forthcoming. Cerebral α-tocopherol concentrations are inversely associated with early progression of neurofibrillary tangles in older adults.
- Turner BO, Santander T, Paul EJ, **Barbey AK**, Miller MB. 2019. Forthcoming. Reply to 'fMRI replicability depends upon sufficient individual-level data'. *Communications Biology* [[PDF](#)]
- Yakoub KM, Davies DJ, Zhangjie S, Bentley C, Toman E, Hammond D, Forcione M, Watson CN, Bishop JRB, Cooper L, **Barbey AK**, Sawlani V, Di Pietro V, Grey M, Belli A. Forthcoming. An investigation into Repetitive Concussion in Sport (RECOOS): A study protocol of a prospective, observational cohort study.
- Zwilling C, **Barbey AK**. Forthcoming. Enhanced decision-making through multimodal training: Evidence from a comprehensive cognitive, mindfulness meditation, and aerobic fitness intervention.

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- Barbey, AK**. 2018. Network neuroscience theory of human intelligence. *Trends in Cognitive Sciences*. [[PDF](#)]
- Di Pietro V, Porto E, Ragusa M, Barbagallo C, Davies D, Forcione M, Logan A, Di Pietro C, Purrello M, Grey M, Hammond D, Barbey AK, Belli A. 2018. Salivary microRNAs: Diagnostic markers of mild traumatic brain injury in contact-sport. *Frontiers in Molecular Neuroscience*. [[PDF](#)]
- Hammer R, Paul EJ, Hillman CH, Kramer AF, Cohen NJ, **Barbey AK**. 2018. Individual differences in analogical reasoning revealed by multivariate task-based functional brain imaging. *NeuroImage*. [[PDF](#)]
- Johnson CL, Schwarb H, Horecka KM, McGarry DJ, Hillman CH, Kramer AF, Cohen NJ, **Barbey AK**. 2018. Double dissociation of structure-function relationships in memory and fluid intelligence observed with magnetic resonance elastography. *NeuroImage*. [[PDF](#)]

- Sandroff BM, Motl RW, Reed WR, **Barbey AK**, DeLuca J. 2018. Integrative CNS plasticity with exercise in MS: The PRIMERS (Processing and Integration of Multisensory Exercise-Related Stimuli) conceptual framework. *Neurorehabilitation and Neural Repair*. [\[PDF\]](#)
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- Talukdar T, Roman F, Zwilling C, Operksalski J, **Barbey AK**. 2018. Individual differences in decision making competence revealed by multivariate fMRI. *Human Brain Mapping*. [\[PDF\]](#)
- Talukdar T, Zamroziewicz M, Zwilling C, **Barbey AK**. 2018. Nutrient biomarkers shape individual differences in functional brain connectivity: Evidence from omega-3 PUFAs. *Human Brain Mapping*. [\[PDF\]](#)
- Turner BO, Paul EJ, Miller MB, **Barbey AK**. 2018. Small sample sizes reduce the replicability of task-based fMRI studies. *Communications Biology*. [\[PDF\]](#)
- Zwilling C, Talukdar T, Zamroziewicz M, **Barbey AK**. 2018. Nutrient biomarker patterns, cognitive function, and fMRI measures of network efficiency in the aging brain. *NeuroImage*. [\[PDF\]](#)

Bell, Alison

In press

- Stein, L.R. and **Bell, A.M.** The role of variation and plasticity in parental care during the adaptive radiation of threespine sticklebacks. *Evolution*
- Bell, A.M.**, Hellmann, J. An integrative framework for understanding the mechanisms and multigenerational consequences of transgenerational plasticity. *Annual Review of Ecology, Evolution and Systematics* (invited)

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- Dellinger, M*, Zhang, W, **Bell, A.M.**, Hellmann, J. Do male sticklebacks use visual and/or olfactory cues to assess a potential mate's history with predation risk? *Animal Behaviour* 145: 151-159.
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- Stein, L.R., Bukhari, S.A., **Bell, A.M.** Personal and transgenerational cues are nonadditive at the phenotypic and molecular level. *Nature Ecology and Evolution* 2: 1306-0311
- Saltz, J.B., Flint, J., Gomulkiewicz, R., Hughes, K., Keagy, J., **Bell, A.M.** Why does the magnitude of genotype by environment vary? *Ecology and Evolution* 2018:1-12 (*part of a series organized by A.M. Bell*)
- Bengston, S., Dahan, R., Donaldson, Z., Phelps, S.P., van Oers, K., Sih, A., **Bell, A.M.** Genomic tools for behavioral ecologists to understand repeatable individual differences in behavior. *Nature Ecology and Evolution* 2:944-955 (*part of a series organized by A.M. Bell*)
- Bell, A.M.**, Keagy, J., Trapp, R*. Parenting behaviour is highly heritable in male sticklebacks. *Royal Society Open Science* 5: 171029.
Recommended by F1000
- Bensky, M., **Bell, A.M.** Intraspecific variation in cue-specific learning in sticklebacks. *Animal Behaviour* 137:161-168
- Kent, M. and **Bell, A.M.** Changes in behavior and brain immediate early gene expression in male threespined sticklebacks as they become fathers. *Hormones and Behavior* 97:102-111

Benjamin, Aaron

- *Patel, T. N., Steyvers, M., & **Benjamin, A. S.** (in press). Monitoring the ebb and flow of attention: Does controlling the onset of stimuli during encoding enhance memory? *Memory & Cognition* [special festschrift issue for Richard Shiffrin]
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- Benjamin, A. S. (in press). Editorial. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 45, 193-195.

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- Steyvers, M. & **Benjamin, A. S.** (in press). The joint contribution of participation and performance to learning functions: Exploring the effects of age in large-scale data sets. *Behavior Research Methods*. (special issue on Big Data)
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- *Bennett, S. T., **Benjamin, A. S.**, *Mistry, P. K., & Steyvers, M. (2018). Making a wiser crowd: Benefits of individual metacognitive control on crowd performance. *Computational Brain & Behavior*, 1, 90-99.
- Gronlund, S. D. & **Benjamin, A. S.** (2018). The new science of eyewitness memory. In K. Federmeier (Ed.), *The Psychology of Learning and Motivation* (Vol. 69). Academic Press.
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- Brown-Schmidt, S. & **Benjamin, A. S.** (2018). How we remember conversation. *Policy Insights from the Behavioral and Brain Sciences*, 5, 187-194.
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- Park K, Cho NH, Jeon M, Lee SH, Jang JH, **Boppart SA**, Jung W, Kim J. Optical assessment of the *in vivo* tympanic membrane status using a handheld optical coherence tomography-based otoscope. *Acta Oto-Laryngologica*, 138:367-374, 2018.
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- Monroy GL, Hong W, Khampang P, Porter RG, Novak MA, Spillman DR, Barkalifa R, Chaney Ej, Kerschner JE, **Boppart SA**. Direct analysis of pathogenic structures affixed to the eardrum during chronic otitis media. *Otolaryngology-Head and Neck Surgery*, 159:117-126, 2018.
- Marjanovic M, Nguyen FT, Ahmad A, Suslick KS, **Boppart SA**. Characterization of magnetic nanoparticle-seeded microspheres for magnetomotive and multimodal imaging. *IEEE J Selected Topics Quant Electronics – Biophotonics*, 25:7101314, 2018.
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Ceman, Stephanie

DeThorne, L. and Ceman, S. 2018. Genetic testing and autism: Tutorial for communication sciences and disorders. *J. Communication Disorders*. 74:61-73

Christian, Catherine

- Ujjainwala AL, Courtney CD, Rhoads SG, Rhodes JS, **Christian CA** 2018 Genetic loss of diazepam binding inhibitor in mice impairs social interest. *Genes, Brain and Behavior* 17:e12442.
- Courtney CD, **Christian CA** 2018 Subregion-specific impacts of genetic loss of diazepam binding inhibitor on synaptic inhibition in the murine hippocampus. *Neuroscience* 388:128-138.
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Chung Hee Jung

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Fuller, Rebecca "Becky"

- St. John, M.E. and **Fuller, R.C.** (in prep) Reinforcement and cascade reinforcement in the *Lucania* system: the effects of heterospecific pairings and sex on mate preferences. Target journal: Evolution.
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