

Resource Summary Report

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MCMC.qpcr

RRID:SCR_001721

Type: Tool

Proper Citation

MCMC.qpcr (RRID:SCR_001721)

Resource Information

URL: <http://cran.r-project.org/web/packages/MCMC.qpcr/>

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Description: Software package that implements generalized linear mixed model analysis of qRT-PCR data based on lognormal-Poisson model fitted using MCMC. Control genes are not required but can be incorporated as Bayesian priors or, when template abundances correlate with conditions, as trackers of global effects (common to all genes). Also implemented are the lognormal model for higher-abundance data and a classic model involving multi-gene normalization on a by-sample basis. Several plotting functions are included to extract and visualize results.

Synonyms: MCMC.qpcr: Bayesian analysis of qRT-PCR data

Resource Type: software resource

Defining Citation: [PMID:23977043](#)

Keywords: standalone software, mac os x, unix/linux, windows, r

Availability: Free, Available for download, Freely available

Resource Name: MCMC.qpcr

Resource ID: SCR_001721

Alternate IDs: OMICS_03934

License: GNU General Public License, v4

Record Creation Time: 20220129T080209+0000

Record Last Update: 20260725T190511+0000

Ratings and Alerts

No rating or validation information has been found for MCMC.qpcr.

No alerts have been found for MCMC.qpcr.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 24 mentions in open access literature.

Listed below are recent publications. The full list is available at [kravitz2](#) .

Gervais L, et al. (2025) Behavioral DiverCity: individual differences in behavior change along an urbanization gradient. Behavioral ecology : official journal of the International Society for Behavioral Ecology, 36(4), araf035.

Easwaramoorthy M, et al. (2025) Elevated temperature during rearing diminishes swimming and disturbs the metabolism of yellow perch larvae. The Journal of experimental biology, 228(20).

Kraft FH, et al. (2024) Parental developmental experience affects vocal learning in offspring. Scientific reports, 14(1), 13787.

López-Jurado J, et al. (2024) Physiology, gene expression, and epiphenotype of two *Dianthus broteri* polyploid cytotypes under temperature stress. Journal of experimental botany, 75(5), 1601.

Bertasello LET, et al. (2023) Yellow Leaf Disease Resistance and *Melanaphis sacchari* Preference in Commercial Sugarcane Cultivars. Plants (Basel, Switzerland), 12(17).

Jantawongsri K, et al. (2022) Effects of exposure to environmentally relevant concentrations of lead (Pb) on expression of stress and immune-related genes, and microRNAs in shorthorn sculpins (*Myoxocephalus scorpius*). Ecotoxicology (London, England), 31(7), 1068.

Bledsoe JW, et al. (2022) Functional feeds marginally alter immune expression and microbiota of Atlantic salmon (*Salmo salar*) gut, gill, and skin mucosa though evidence of tissue-specific signatures and host-microbe coadaptation remain. Animal microbiome, 4(1), 20.

Leal-Calvo T, et al. (2021) A new paradigm for leprosy diagnosis based on host gene expression. PLoS pathogens, 17(10), e1009972.

Vahkal B, et al. (2020) Immune System Effects of Insulin-Like Peptide 5 in a Mouse Model. Frontiers in endocrinology, 11, 610672.

Cullingham CI, et al. (2020) Linking genotype to phenotype to identify genetic variation relating to host susceptibility in the mountain pine beetle system. Evolutionary

applications, 13(1), 48.

Nowicki JP, et al. (2020) Gene expression correlates of social evolution in coral reef butterflyfishes. *Proceedings. Biological sciences*, 287(1929), 20200239.

Lin AS, et al. (2020) Temporal Control of the *Helicobacter pylori* Cag Type IV Secretion System in a Mongolian Gerbil Model of Gastric Carcinogenesis. *mBio*, 11(3).

Poquita-Du RC, et al. (2020) Gene Expression and Photophysiological Changes in *Pocillopora acuta* Coral Holobiont Following Heat Stress and Recovery. *Microorganisms*, 8(8).

Tripp-Valdez MA, et al. (2019) De novo transcriptome assembly and gene expression profile of thermally challenged green abalone (*Haliotis fulgens*: Gastropoda) under acute hypoxia and hypercapnia. *Marine genomics*, 45, 48.

Abram QH, et al. (2019) Effect of suboptimal temperature on the regulation of endogenous antigen presentation in a rainbow trout hypodermal fibroblast cell line. *Developmental and comparative immunology*, 100, 103423.

Castañó-Ortiz JM, et al. (2019) PFOS mediates immunomodulation in an avian cell line that can be mitigated via a virus infection. *BMC veterinary research*, 15(1), 214.

Velando A, et al. (2019) Redox-regulation and life-history trade-offs: scavenging mitochondrial ROS improves growth in a wild bird. *Scientific reports*, 9(1), 2203.

Biswas T, et al. (2018) Cross-Resistance: A Consequence of Bi-partite Host-Parasite Coevolution. *Insects*, 9(1).

Pokharel K, et al. (2018) Integrated ovarian mRNA and miRNA transcriptome profiling characterizes the genetic basis of prolificacy traits in sheep (*Ovis aries*). *BMC genomics*, 19(1), 104.

Welle T, et al. (2017) Metabolic response of porcine colon explants to in vitro infection by *Brachyspira hyodysenteriae*: a leap into disease pathophysiology. *Metabolomics : Official journal of the Metabolomic Society*, 13(7), 83.