Resource Summary Report

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MoTrPAC Data Hub

RRID:SCR_017611
Type: Tool

Proper Citation

MoTrPAC Data Hub (RRID:SCR_017611)

Resource Information

URL: https://motrpac-data.org/

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Description: National research consortium designed to discover and perform preliminary characterization of range of molecular transducers that underlie effects of physical activity in humans. Used to study molecular changes that occur during and after exercise and to advance understanding of how physical activity improves and preserves health. Six year program into mechanisms of how physical activity improves health and prevents disease led by NIH Office of Strategic Coordination, National Institute of Arthritis and Musculoskeletal and Skin Diseases, National Institute of Diabetes and Digestive and Kidney Diseases, National Institute on Aging, and National Institute of Biomedical Imaging and Bioengineering.

Abbreviations: MoTrPAC Data Hub

Synonyms: Molecular Transducers of Physical Activity Consortium Data Hub

Resource Type: consortium, data or information resource, database, organization portal, portal

Keywords: Discover, premilinary, characterization, range, molecular, transducer, physical, activity, human, changes, health, prevent, disease

Funding: NIH Common Fund

Availability: Restricted

Resource Name: MoTrPAC Data Hub

Resource ID: SCR_017611

Record Creation Time: 20220129T080336+0000

Record Last Update: 20260821T194121+0000

Ratings and Alerts

No rating or validation information has been found for MoTrPAC Data Hub.

No alerts have been found for MoTrPAC Data Hub.

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We found 20 mentions in open access literature.

Listed below are recent publications. The full list is available at dkNET .

Keshishian H, et al. (2026) Integrative Multi-omics Analysis of the Human Skeletal Muscle Response to Endurance or Resistance Exercise: Findings from the Molecular Transducers of Physical Activity Consortium (MoTrPAC). bioRxiv : the preprint server for biology.

Granger K, et al. (2026) Single-nuclei RNA-sequencing uncovers sexually divergent exercise signatures partially mimicked by TFEB overexpression in mouse skeletal muscle. bioRxiv : the preprint server for biology.

, et al. (2026) Molecular Transducers of Physical Activity Consortium (MoTrPAC): Initial Insights into the Dynamic Human Responses to Exercise. bioRxiv : the preprint server for biology.

Metzger TG, et al. (2026) Influence of Exercise on Proteolysis-Related Markers of Cardiac, Renal, and Endothelial Dysfunction. Cureus, 18(5), e108088.

Robbins JM, et al. (2026) Blood Biochemical Responses to Acute Exercise: Findings from the Molecular Transducers of Physical Activity Consortium (MoTrPAC). bioRxiv : the preprint server for biology.

, et al. (2026) Multi-Omic, Multi-Tissue Responses to Acute Exercise in Sedentary Adults: Findings from the Molecular Transducers of Physical Activity Consortium. bioRxiv : the preprint server for biology.

Carollo L, et al. (2026) Muscle movement and metabolism: exercise and skeletal muscle as mediators of health-a report from the 26th Annual Harvard Nutrition Obesity Symposium, 2025. The American journal of clinical nutrition, 123(5), 101262.

Zhang Z, et al. (2026) Exercise modulation of the alternative splicing landscape in human tissues. bioRxiv : the preprint server for biology.

Kelty TJ, et al. (2025) Endurance exercise drives temporal and sexual dimorphic multi-omic adaptations in liver metabolism-Findings from MoTrPAC. bioRxiv : the preprint server for biology.

Wang M, et al. (2025) Molecular Network Analysis and Effector Gene Prioritization of Endurance-Training-Influenced Modulation of Cardiac Aging. Genes, 16(7).

Bonilauri B, et al. (2025) The Long Non-coding RNA Landscape of Endurance Exercise Training. bioRxiv : the preprint server for biology.

Wong JPH, et al. (2025) Skeletal muscle proteomics: considerations and opportunities. npj metabolic health and disease, 3(1), 30.

Nair VD, et al. (2024) Molecular adaptations in response to exercise training are associated with tissue-specific transcriptomic and epigenomic signatures. Cell genomics, 4(6), 100421.

, et al. (2024) Temporal dynamics of the multi-omic response to endurance exercise training. Nature, 629(8010), 174.

Lee-Ødegård S, et al. (2024) Serum proteomic profiling of physical activity reveals CD300LG as a novel exerkine with a potential causal link to glucose homeostasis. eLife, 13.

Many GM, et al. (2024) Sexual dimorphism and the multi-omic response to exercise training in rat subcutaneous white adipose tissue. Nature metabolism, 6(5), 963.

Ortlund E, et al. (2024) Endurance Exercise Training Alters Lipidomic Profiles of Plasma and Eight Tissues in Rats: a MoTrPAC study. Research square.

Smith GR, et al. (2023) Multiomic identification of key transcriptional regulatory programs during endurance exercise training. bioRxiv : the preprint server for biology.

Belhaj MR, et al. (2021) Metabolomics and Lipidomics: Expanding the Molecular Landscape of Exercise Biology. Metabolites, 11(3).

Sanford JA, et al. (2020) Molecular Transducers of Physical Activity Consortium (MoTrPAC): Mapping the Dynamic Responses to Exercise. Cell, 181(7), 1464.