

The absence of active creatine kinase system influences cardiac calcium handling

Laasmaa, Martin; Branovets, Jelena; Karro, Niina; Birkedal Nielsen, Rikke; Vendelin, Marko Biophysical journal 2019 / Poster 484 ; p. 96a <https://doi.org/10.1016/j.bpj.2018.11.558>

Altered calcium handling in cardiomyocytes from arginine-glycine amidinotransferase-knockout mice is rescued by creatine

Laasmaa, Martin; Branovets, Jelena; Barsunova, Karina; Karro, Niina; Lygate, Craig A.; Birkedal Nielsen, Rikke; Vendelin, Marko American journal of physiology-heart and circulatory physiology 2020 / p. H805-H825 <https://doi.org/10.1152/ajpheart.00300.2020>
[Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Calcium handling in creatine-deficient mouse hearts

Branovets, Jelena Acta Physiologica 2023 / art. e14043 <https://doi.org/10.1111/apha.14043>

Cardiac expression and location of hexokinase changes in a mouse model of pure creatine deficiency

Branovets, Jelena; Karro, Niina; Barsunova, Karina; Laasmaa, Martin; Lygate, Craig A.; Vendelin, Marko; Birkedal Nielsen, Rikke American journal of physiology-heart and circulatory physiology 2021 / p. H613-H629 <https://doi.org/10.1152/ajpheart.00188.2020>
[Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Cardiomyocytes from female compared to male mice have larger ryanodine receptor clusters and higher calcium spark frequency

Laasmaa, Martin; Branovets, Jelena; Stolova, Jekaterina; Shen, Xin; Rätsepso, Triinu; Balodis, Mihkel Jaan; Grahv, Cärolin; Hendrikson, Eliise; Louch, William Edward; Birkedal Nielsen, Rikke; Vendelin, Marko Journal of Physiology 2023 / p. 4033-4052
: ill <https://doi.org/10.1113/JP284515> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Compartmentalization in cardiomyocytes modulates creatine kinase and adenylate kinase activities

Birkedal, Rikke; Branovets, Jelena; Vendelin, Marko FEBS letters 2024 / p. 2623-2640 <https://doi.org/10.1002/1873-3468.14994>
[Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Compartmentalization in cardiomyocytes modulates kinase activities

Birkedal, Rikke; Branovets, Jelena; Jaska, Lucia; Shikha, Divya; Bernasconi, Romain; Vendelin, Marko FEBS Open Bio 2024 / p. 34 <https://doi.org/10.1002/2211-5463.13836>

Compromised creatine kinase energy transfer affects cardiac excitation-contraction coupling

Branovets, Jelena; Kalda, Mari; Laasmaa, Martin; Stolova, Jekaterina; Shen, Xin; Grahv, Cärolin; Hendrikson, Eliise; Louch, William Edward; Birkedal, Rikke; Vendelin, Marko Acta Physiologica 2022 / p. 594-595
<https://onlinelibrary.wiley.com/doi/epdf/10.1111/apha.13878>

Compromised creatine kinase energy transfer leads to adaptations in cardiac excitation-contraction coupling that are distinct from changes associated with heart failure : [manuscript]

Branovets, Jelena; Kalda, Mari; Laasmaa, Martin; Stolova, Jekaterina; Shen, Xin; Balodis, Mihkel Jaan; Grahv, Cärolin; Hendrikson, Eliise; Louch, William Edward; Birkedal Nielsen, Rikke; Vendelin, Marko 2022

Energetics and calcium handling in hearts from creatine-deficient mice = Energeetika ja kaltsiumi käitlemine kreatiini puudulike hiirte südames

Branovets, Jelena 2022 <https://doi.org/10.23658/taltech.56/2022> <https://digikogu.taltech.ee/et/Item/36325289-f635-4816-bddc-2246206e6dc1> https://www.ester.ee/record=b5511927*est

The influence of alternative energy transfer systems on respiration in creatine-deficient mouse cardiomyocytes

Branovets, Jelena; Jugai, Svetlana; Vendelin, Marko; Birkedal Nielsen, Rikke Biophysical journal 2016 / p. 474a-475a
<https://doi.org/10.1016/j.bpj.2015.11.2538>

Intracellular compartmentalization shapes energy transfer – differences between adenylate kinase activities in homogenate and permeabilized cardiomyocytes : [manuscript]

Branovets, Jelena; Vendelin, Marko; Birkedal Nielsen, Rikke 2022

Intronic L1 retrotransposons and nested genes cause transcriptional interference by inducing intron retention, exonization and cryptic polyadenylation

Kaer, Kristel; Branovets, Jelena; Hallikma, Anni; Nigumann, Pilvi; Speek, Mart PLoS ONE 2011 / p. e26099 [20 p.]
<http://dx.doi.org/10.1371/journal.pone.0026099>

IOCBIO Kinetics : an open-source software solution for analysis of data traces

Vendelin, Marko; Laasmaa, Martin; Kalda, Mari; Branovets, Jelena; Karro, Niina; Barsunova, Karina; Birkedal Nielsen, Rikke PLoS computational biology 2020 / art. e1008475 <https://doi.org/10.1371/journal.pcbi.1008475> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Life-long creatine deficiency leads to adaptations in calcium handling but not heart failure

Branovets, Jelena; Laasmaa, Martin; Stolova, Jekaterina; Shen, Xin; Ratsepso, Triinu; Balodis, Mihkel Jaan; Grahv, Carolin; Hendrikson, Eliise; Louch, William Edward; **Birkedal, Rikke** Biophysical Journal 2024 / p. 458A-459A
<https://doi.org/10.1016/j.bpj.2023.11.2785>

Number of open mitochondrial voltage-dependent anion channels and intracellular diffusion coefficient in heart muscle
Simson, Päivo; Jephina, Natalja; Laasmaa, Martin; Branovets, Jelena; Peterson, Pearu; Birkedal Nielsen, Rikke; Vendelin, Marko Biophysical journal 2016 / p. 475a <https://doi.org/10.1016/j.bpj.2015.11.2540>

Ontogeny of cardiomyocytes : ultrastructure optimization to meet the demand for tight communication in excitation-contraction coupling and energy transfer
Birkedal Nielsen, Rikke; Laasmaa, Martin; Branovets, Jelena; Vendelin, Marko Philosophical Transactions of the Royal Society B : Biological Sciences 2022 / art. 20210321 <https://doi.org/10.1098/rstb.2021.0321> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Rat and mouse cardiomyocytes show subtle differences in creatine kinase expression and compartmentalization
Branovets, Jelena; Soodla, Kõrõ; Vendelin, Marko; Birkedal Nielsen, Rikke PLoS ONE 2023 / art. e0294718
<https://doi.org/10.1371/journal.pone.0294718> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Unchanged mitochondrial organization and compartmentation of high-energy phosphates in creatine-deficient GAMT(-/-) mouse hearts
Branovets, Jelena; Sepp, Mervi; Kotlyarova, Svetlana; Jephina, Natalja; Sokolova, Niina; Aksentijevic, Dunja; Neubauer, Stefan; Lygate, Craig A.; **Vendelin, Marko; Birkedal Nielsen, Rikke** American journal of physiology - heart and circulatory physiology 2013 / p. H506-H520 : ill <https://doi.org/10.1152/ajpheart.00919.2012> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)