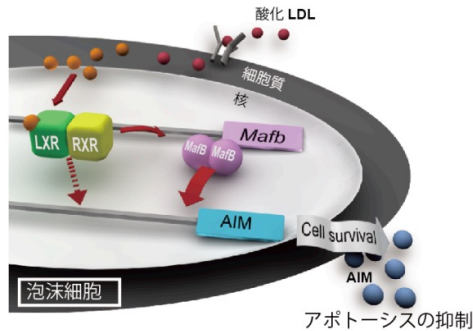


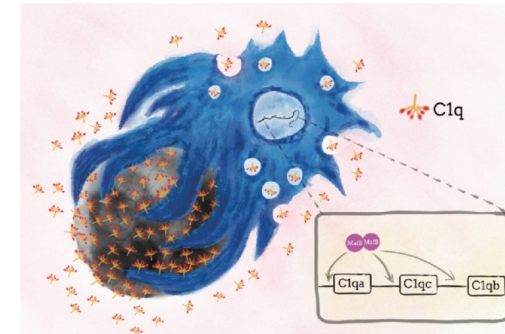
[Press Releases]

Discovery of a protein that promotes atherosclerosis progression (Jan 21, 2014)



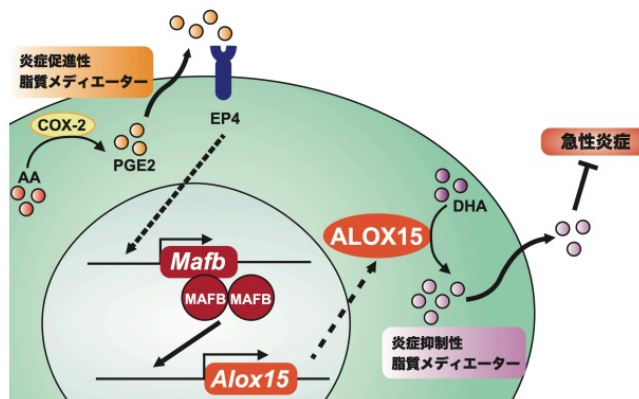
<https://www.md.tsukuba.ac.jp/basic-med/anatomy/embryology/Part/1.20.pdf>

Mechanism for removing dead cells from the body elucidated (Nov 22, 2017)



<https://www.tsukuba.ac.jp/journal/medicine-health/20171122190000.html>

Inflammatory lipid regulation by macrophages under AKI conditions elucidated (Sept 6, 2024)



<https://www.tsukuba.ac.jp/journal/medicine-health/20240906140000.html>

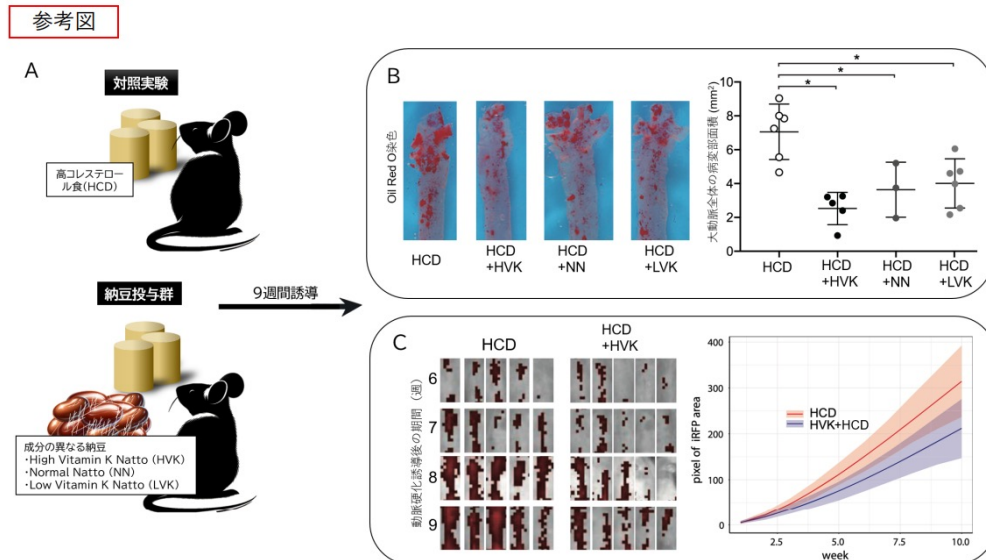
Mechanism by which macrophages induce heat production in BAT in response to cold (Mar 26, 2024)



<https://www.tsukuba.ac.jp/journal/medicine-health/20240326140000.html>

Research on Natto Intake and Its Anti-Atherosclerotic Effects

We are interested in how traditional and functional foods with long dietary histories contribute to health maintenance and disease prevention. Focusing on natto, a traditional Japanese fermented soybean food, we analyzed its effects on atherosclerosis progression using a mouse model equipped with an in vivo imaging system developed in our lab (Kulathunga et al., Sci Rep. 2018). Our results showed that natto consumption significantly suppressed the progression of atherosclerotic plaques in LDL receptor-deficient mice (Kawamata et al., Sci Rep. 2023). We aim to further investigate the active components of natto and their mechanisms in preventing atherosclerosis and other diseases.



[Publications] (Sci Rep. 2023)

Natto consumption suppresses atherosclerotic plaque progression in LDL receptor deficient mice transplanted with iRFP-expressing hematopoietic cells.

DOI:[10.1038/s41598-023-48562-y](https://doi.org/10.1038/s41598-023-48562-y)

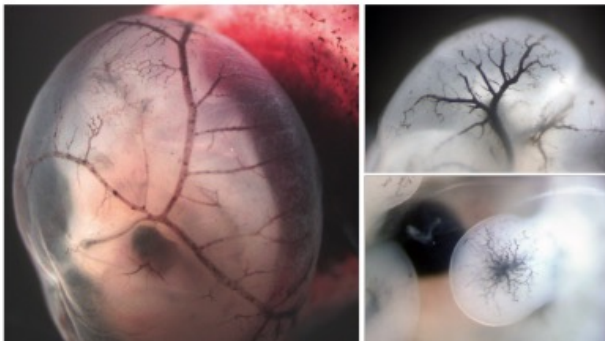
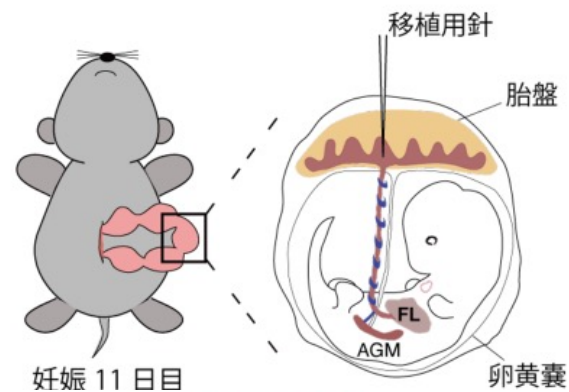
[Press Releases]

Elucidation of anti-atherosclerotic mechanisms of natto (Dec 20, 2023)

<https://www.tsukuba.ac.jp/journal/medicine-health/20231220140000.html>

Developmental Engineering and Disease Models Using the Placenta

Understanding physiological functions during the fetal period requires techniques for gene delivery and cell transplantation into developing organisms. We developed a method that enables widespread gene delivery to multiple fetal organs via intraplacental injection of adeno-associated virus (AAV) vectors (Exp Anim. 2023). By applying this method, we successfully created chimeric mice with reconstituted hematopoietic and lymphoid systems by transplanting normal or manipulated placental cells into Runx1-deficient mouse fetuses lacking hematopoietic stem cells (Sci Rep. 2021). This "placental transplantation" technique is a powerful tool with broad applications in developmental and disease research, including diabetes studies using Pdx1 knockout mice.



[Publications] (Exp Anim.2023)

Intraplacental injection of AAV9-CMV-iCre results in the widespread transduction of multiple organs in double-reporter mouse embryos.

DOI: [10.1538/expanim.23-0044](https://doi.org/10.1538/expanim.23-0044)

[Press Releases]

Successful replacement of fetal mouse blood with that from another source (Feb 25, 2021) <https://www.tsukuba.ac.jp/journal/medicine-health/20210225140000.html>

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<https://researchmap.jp/7000001534>