History of the development of WHHL, and WHHLMI rabbits

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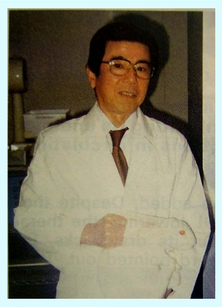
History of WHHL rabbits

1973 Dr. Watanabe discovered a mutant rabbit showing hyperlipidemia.

He confirmed inheritance of the hyperlipidemia and named it HLR.

A male mutant rabbit



Dr. Yoshio Watanabe

1980 **He established as a strain and named it WHHL.**

(*Atherosclerosis* 1980;36: 261-268)

He began providing WHHL rabbits to researchers all of the world.

WHHL rabbits contributed to studies about lipoprotein metabolism and atherosclerosis.

1985 **Development of coronary atherosclerosis-prone WHHL rabbits**

(*Atherosclerosis* 1985;56: 71-79)

WHHL rabbits contributed to studies about lipoprotein metabolism and atherosclerosis.

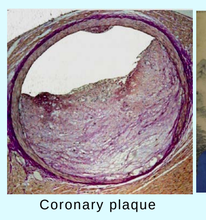
WHHL rabbits contributed to the development of statins.

Studies using WHHL rabbits proved that statins suppress atherosclerosis.

(1990) Professor Yoshio Watanabe retired and Dr. Masashi Shiomi succeeded to the WHHL rabbit colony.

1992 **Development of the WHHL rabbit with severe coronary lesions (WHHLCA)**

(*Atherosclerosis* 1982;96: 431-528)



Coronary plaque

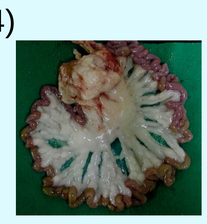
Dr. Masashi Shiomi

Development of a method for quantitative analysis of atherosclerotic lesion components

(*Arterioscler Thromb* 1994;14: 931-937)

Elucidation of statin's stabilizing effect on atherosclerotic lesions

(*Arterioscler Thromb* Vasc Biol 1995;15: 1938-1944)



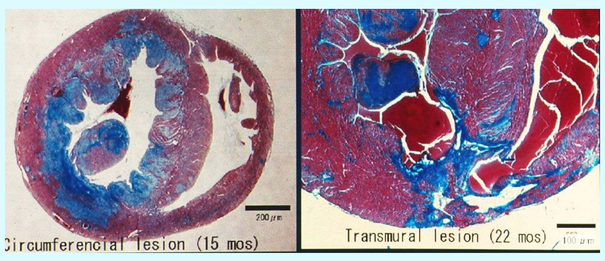
Metabolic syndrome-like findings in WHHLCA rabbits

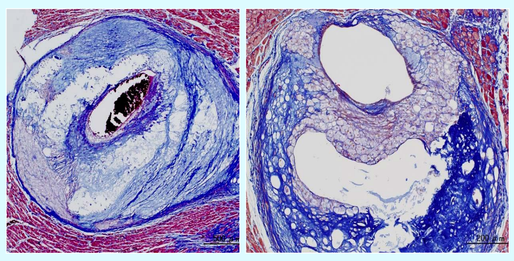
(*Atherosclerosis* 1999;142: 345-353)

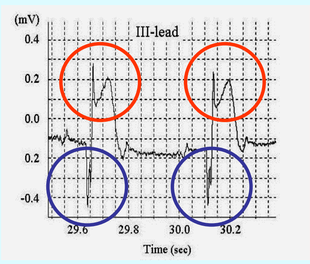
(WHHL rabbits contributed to development of various lipid lowering agents.)

1999 Development of the WHHLMI rabbit that spontaneously develops myocardial infarction.

(*Arterioscler Thromb Vasc Biol* 2003;23: 1239-1244)





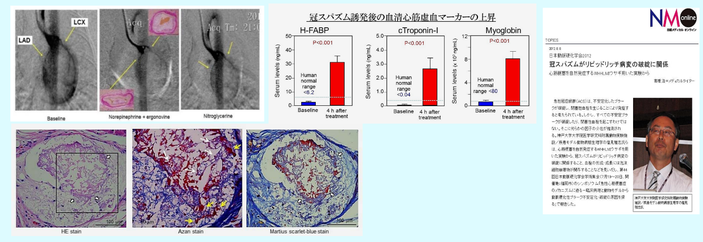


WHHLMI rabbits contributed to the development of imaging technologies for atherosclerotic lesions (MR, CT, PET, IVUS).

(WHHL rabbits contribute to development of various lipid lowering agents.)

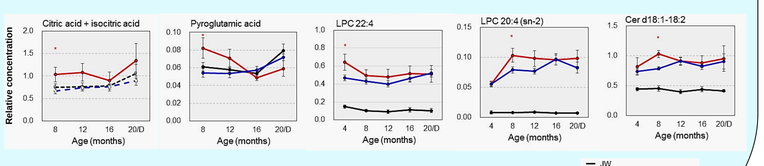
2012 ACS induced in WHHLMI rabbits with coronary spasm

(*Arterioscler Thromb* Vasc Biol 2013;33:2518-2523)



2018 Identification of serum markers specific for coronary lesions

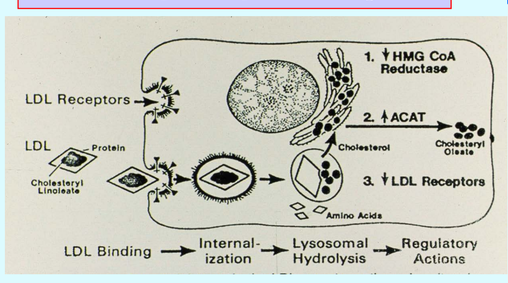
(*Atherosclerosis* 2019, 284:18-23)



Closure of the WHHLMI rabbit colony at Kobe University

Related news

Hypothesis of LDL receptor pathway



Discovery of statin

Serum cholesterol levels are related to heart disease.

Elucidation of LDL metabolism

Studies about the LDL receptor using WHHL won the Nobel Prize in 1985.

Statins were released.

Hypothesis of plaque stabilizing effects of statins

Research fields using the WHHLMI rabbit

Studies on pathophysiology and the mechanism	Atherosclerosis, Myocardial infarction, Acute coronary syndromes, Hypercholesterolemia, Low HDL, Metabolic syndrome, Xanthoma, Aortic valve stenosis
Studies on therapeutic methods, diagnostic methods, etc.	Imaging diagnostic methods for atherosclerosis, Serum markers for coronary atherosclerosis, Therapeutic drugs for the above diseases, Gene therapy, Regenerative medicine