D4.9 partner [UKE]

11/09/2015 **Prof Thorsten Schinke**

SYBIL Project 602300. The SYBIL Project is funded under the European Commission Seventh Framework Programme, grant number 602300, Theme HEALTH.2013.2.1.1-1

Col1a1-Sost

See

The Anti-Osteoanabolic Function of Sclerostin Is Blunted in Mice Carrying a High Bone Mass Mutation of Lrp5.

Yorgan TA, Peters S, Jeschke A, Benisch P, Jakob F, Amling M, Schinke T.

J Bone Miner Res. 2015 Jul;30(7):1175-83. doi: 10.1002/jbmr.2461. Epub 2015 Jun 8.

PMID: 25640331

Qualitative description:

Mice carrying one transgenic allele that allows for the osteoblast specific overexpression of *Sost* display a severely osteopenic phenotype with a decreased trabecular bone mass. While the number of osteoclasts and osteoblasts remains unaffected in comparison to wildtype control animals, the bone formation rate is decreased. Closer analysis indicates that this change is due to a decreased mineral apposition rate, thus suggesting a decreased osteoblast activity.

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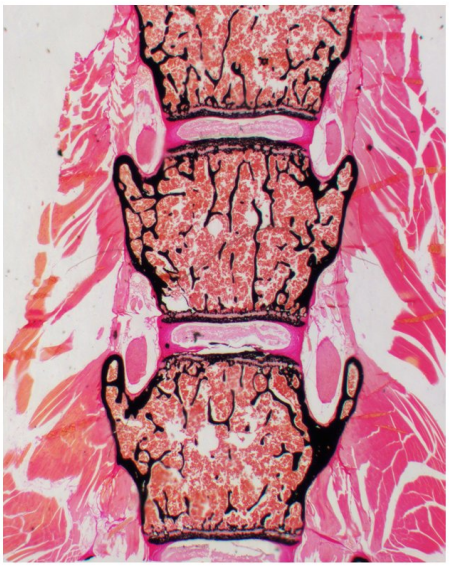
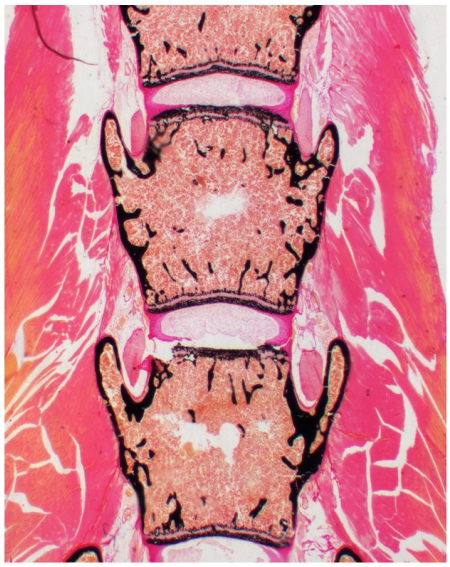
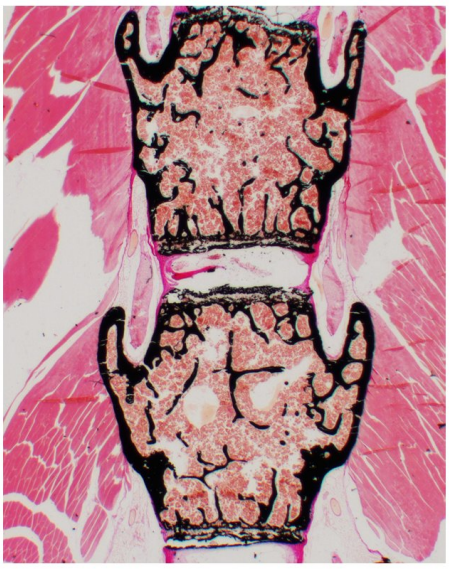
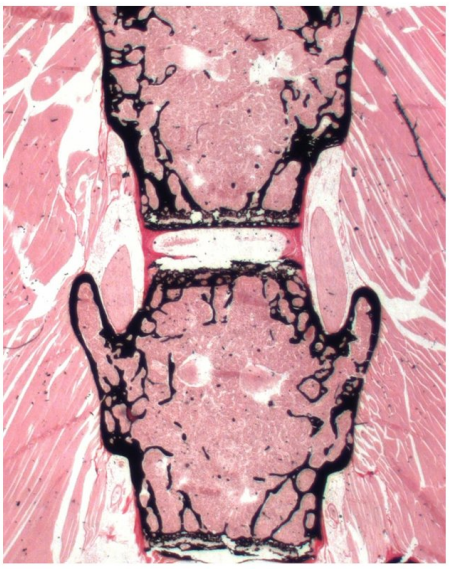
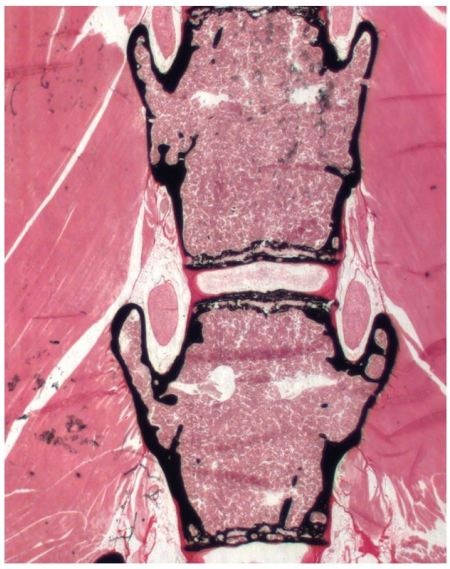
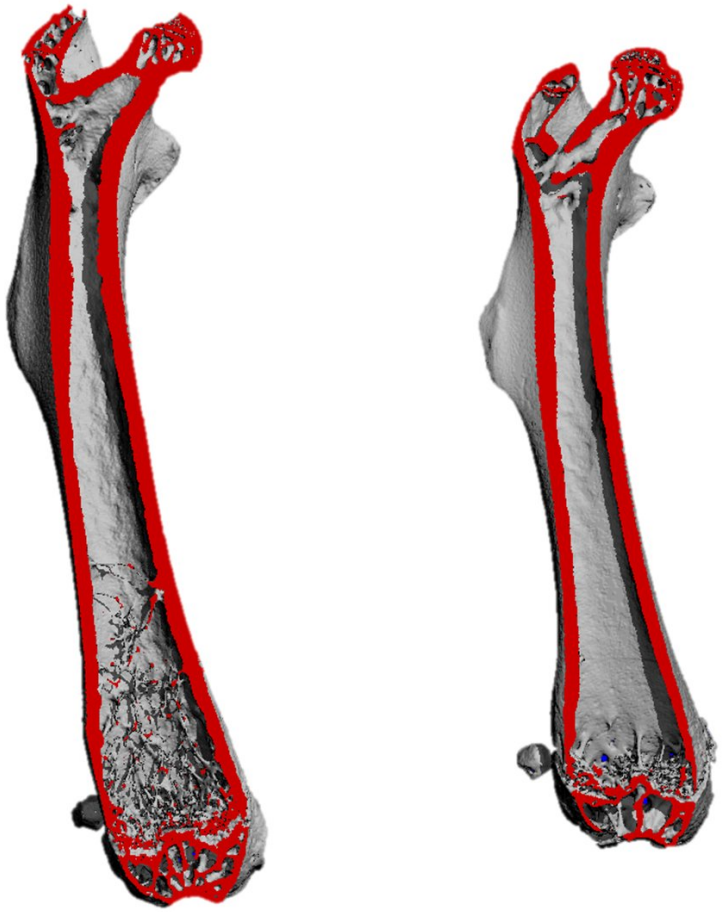
	WT	*Col1a1-Sost* +/T
6 wks		
26 wks		
52 wks		

WT

Col1a1-Sost +/T

26 wks



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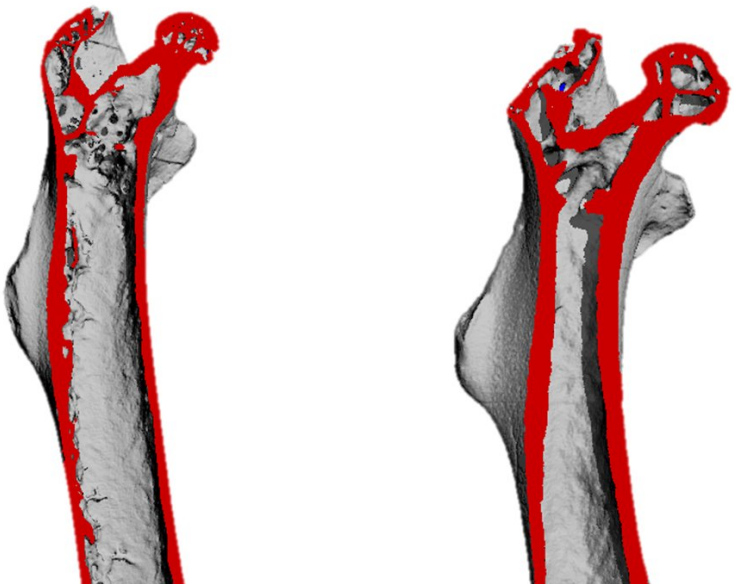

Lrp5 HBM A213V

Reason for private status: Data partially published in

The Anti-Osteoanabolic Function of Sclerostin Is Blunted in Mice Carrying a High Bone Mass Mutation of Lrp5.

Yorgan TA, Peters S, Jeschke A, Benisch P, Jakob F, Amling M, Schinke T.

J Bone Miner Res. 2015 Jul;30(7):1175-83. doi: 10.1002/jbmr.2461. Epub 2015 Jun 8.

PMID: 25640331

Qualitative description:

Mice homozygous for the HBM Allele of *Lrp5* display a dramatically increased trabecular bone mass and cortical thickness. Cellular and dynamic histomorphometry indicates that this phenotype is caused by an increased osteoblast activity.

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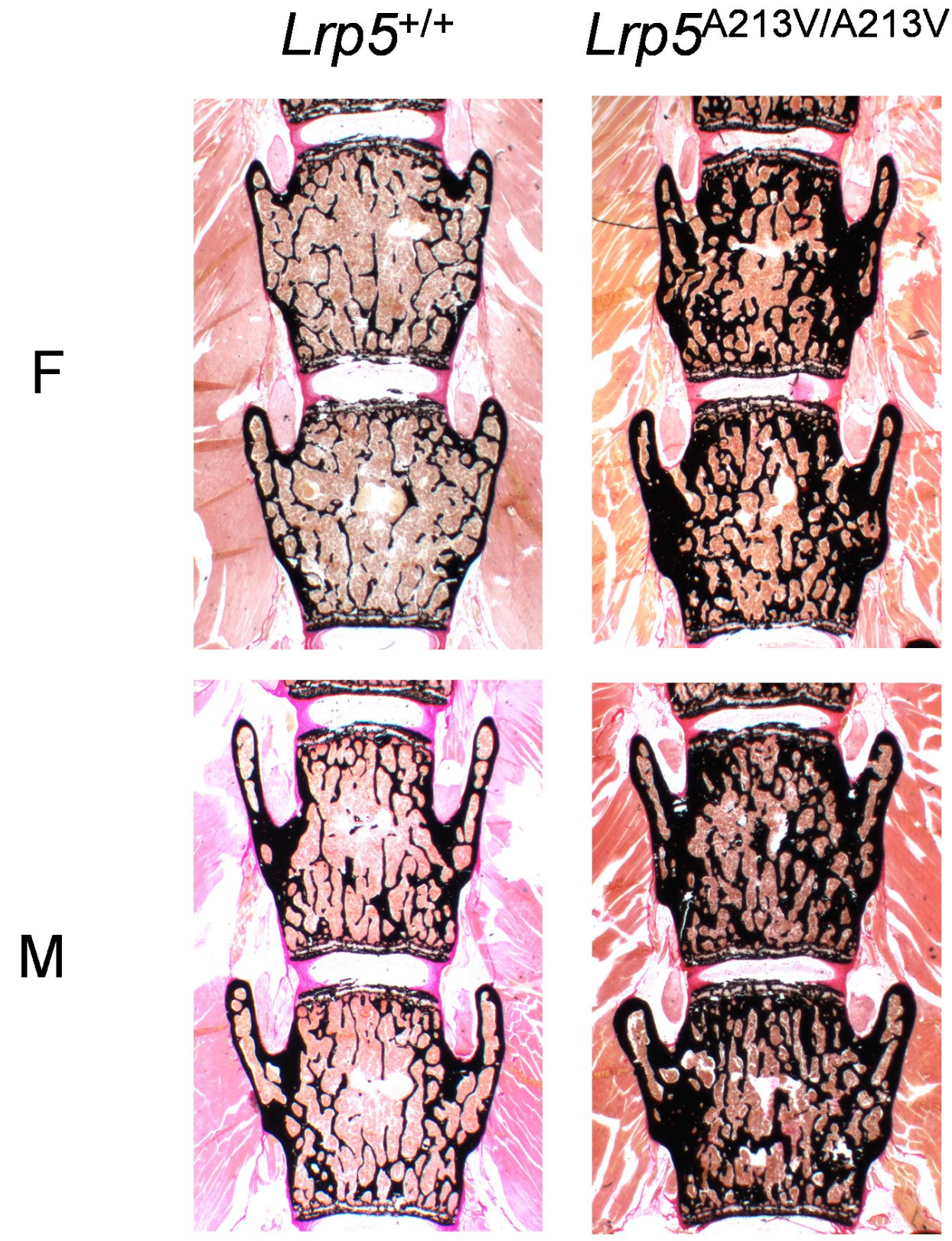
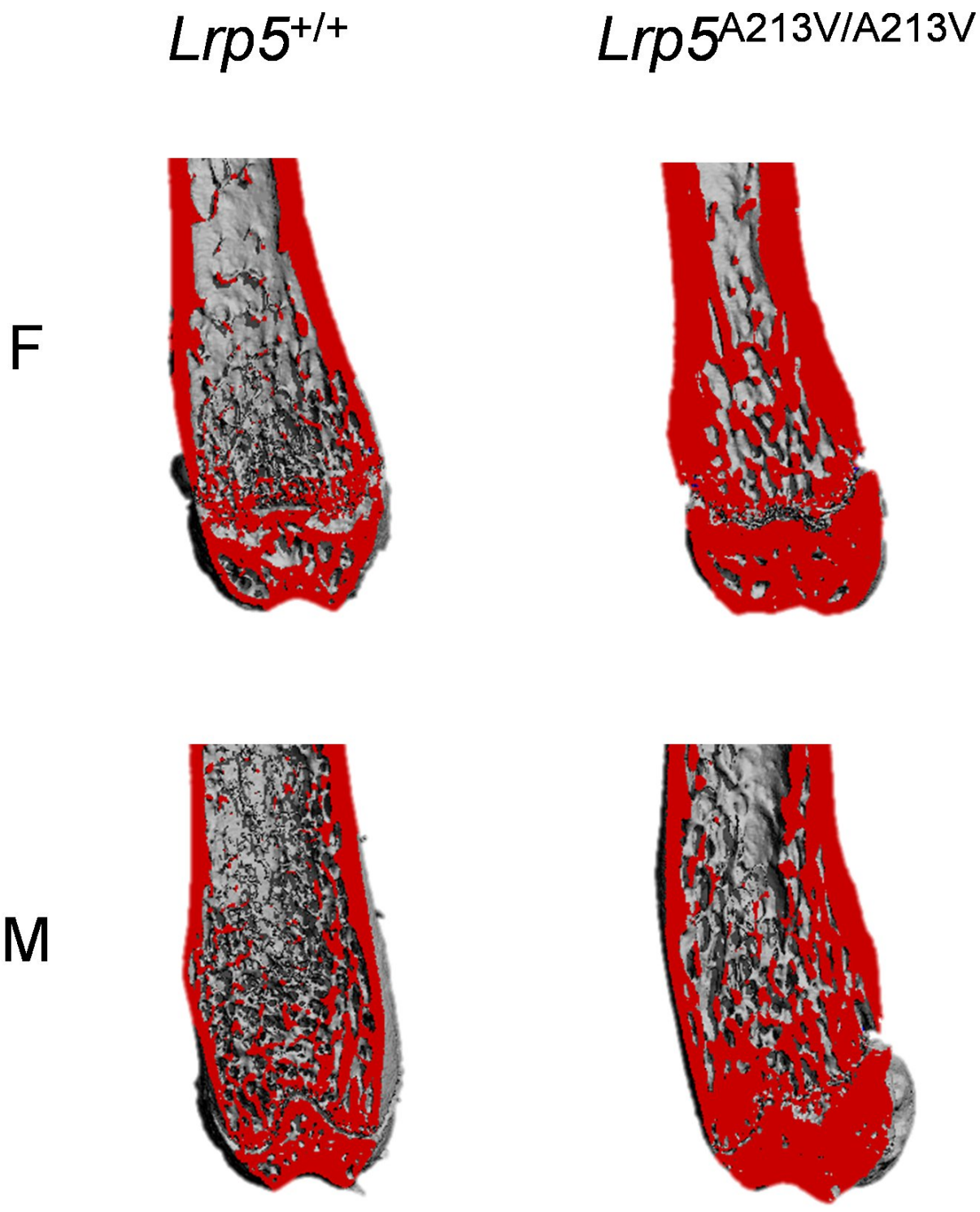


Lrp5 HBM A213V Kossa.png

SYBIL Project 602300. The SYBIL Project is funded under the European Commission Seventh Framework Programme, grant number 602300, Theme HEALTH.2013.2.1.1-1



Lrp5 HBM A213V uCT.png

SYBIL Project 602300. The SYBIL Project is funded under the European Commission Seventh Framework Programme, grant number 602300, Theme HEALTH.2013.2.1.1-1

Lrp5 HBM G170V

Reason for private status: Data partially published in

The Anti-Osteoanabolic Function of Sclerostin Is Blunted in Mice Carrying a High Bone Mass Mutation of Lrp5.

Yorgan TA, Peters S, Jeschke A, Benisch P, Jakob F, Amling M, Schinke T.

J Bone Miner Res. 2015 Jul;30(7):1175-83. doi: 10.1002/jbmr.2461. Epub 2015 Jun 8.

PMID: 25640331

Qualitative description:

Mice homozygous for the HBM Allele of *Lrp5* display a dramatically increased trabecular bone mass and cortical thickness. Cellular and dynamic histomorphometry indicates that this phenotype is caused by an increased osteoblast activity.

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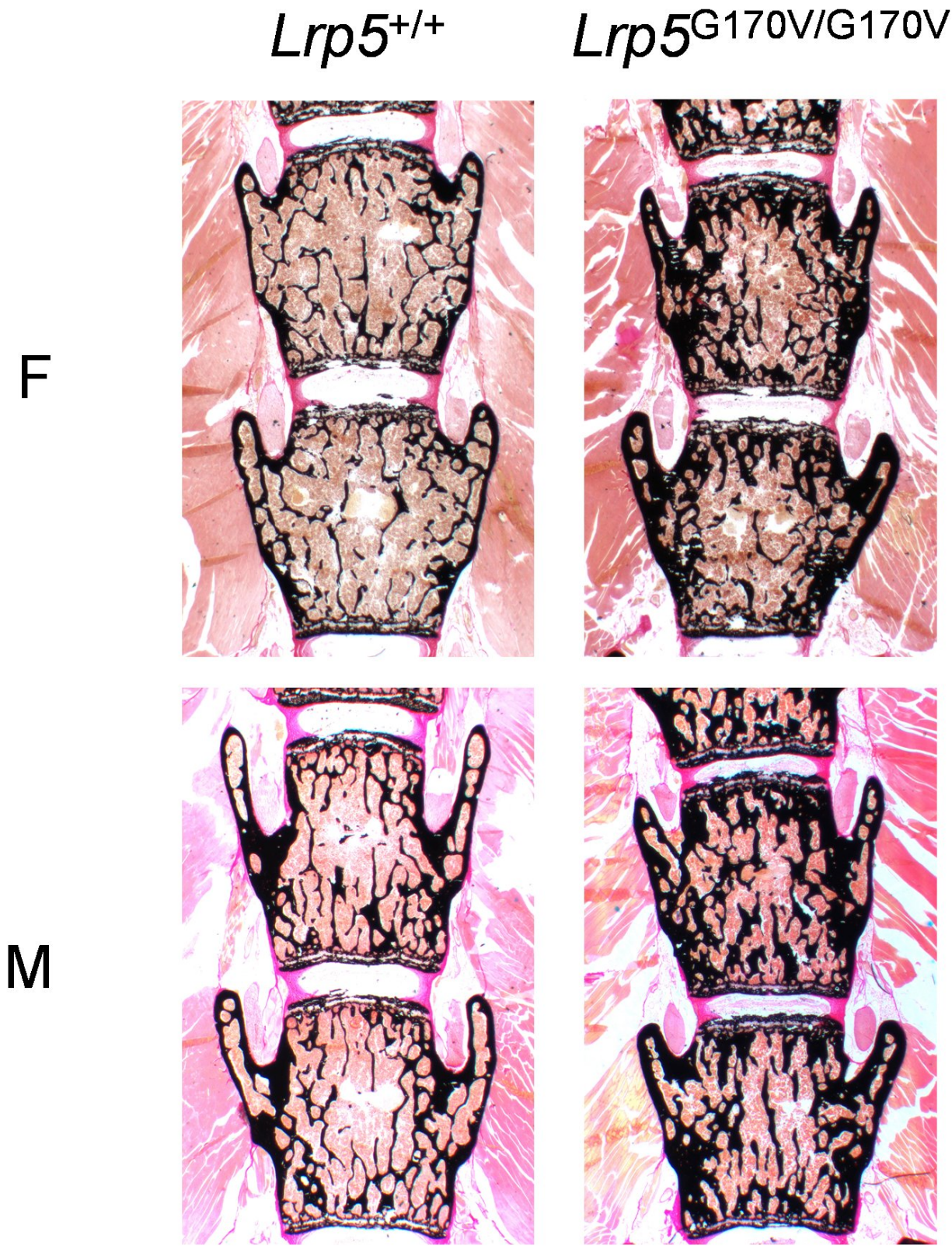
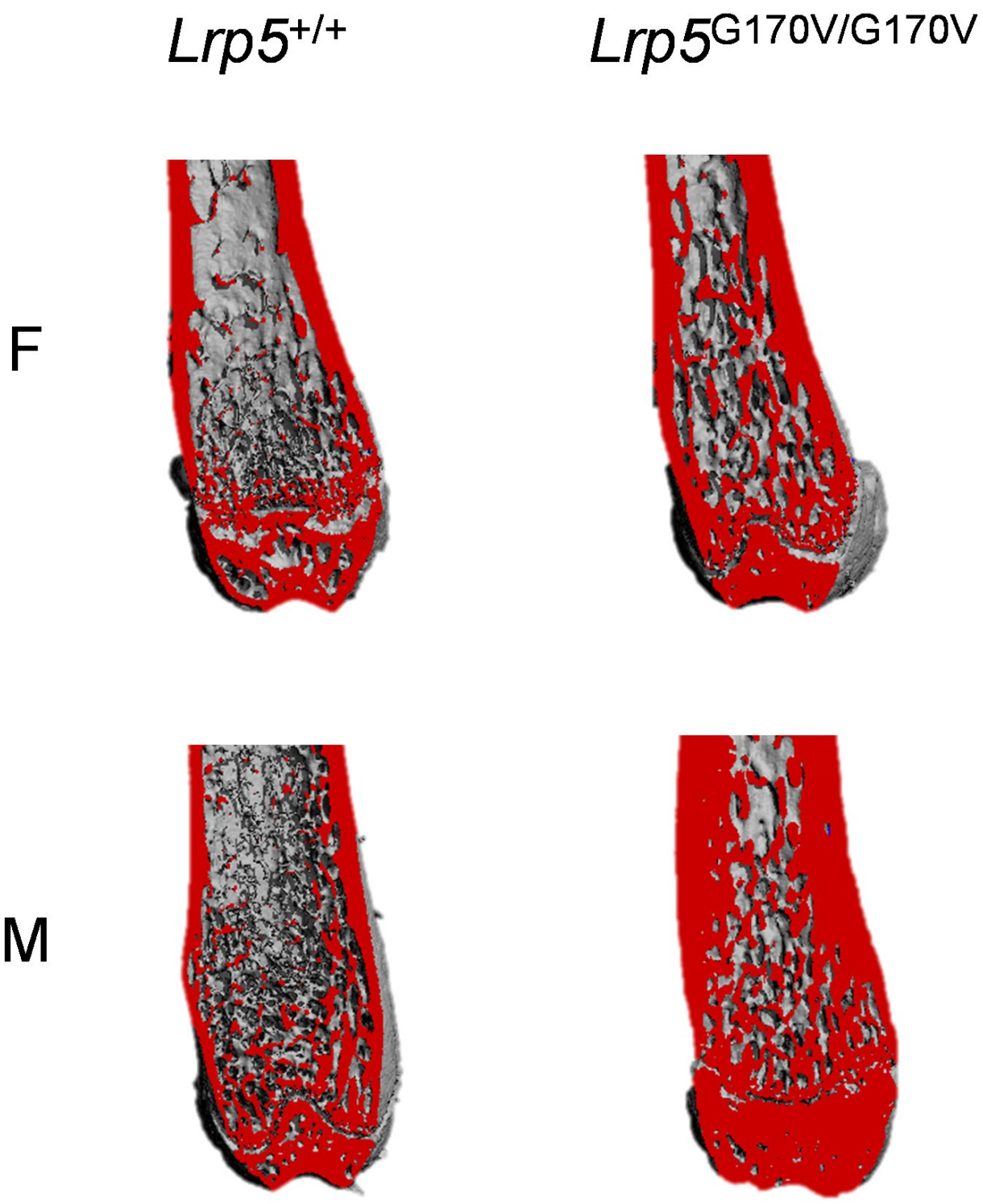


Lrp5 HBM G170V Kossa.png

SYBIL Project 602300. The SYBIL Project is funded under the European Commission Seventh Framework Programme, grant number 602300, Theme HEALTH.2013.2.1.1-1



Lrp5 HBM G170V uCT.png

SYBIL Project 602300. The SYBIL Project is funded under the European Commission Seventh Framework Programme, grant number 602300, Theme HEALTH.2013.2.1.1-1

Hyp

Reason for private status: Data partially published in

Increased Col10a1 expression is not causative for the phenotype of Phex-deficient Hyp mice.

Yorgan T, Rendenbach C, Jeschke A, Amling M, Cheah KS, Schinke T.

Biochem Biophys Res Commun. 2013 Dec 13;442(3-4):209-13. doi: 10.1016/j.bbrc.2013.11.033. Epub 2013 Nov 21.

PMID: 24269824

Qualitative description:

Mice carrying the inactivating mutation of the gene *Phex* display a decreased bone mass and a severe mineralization defect as can be observed from the increased osteoid content of the bone tissue.

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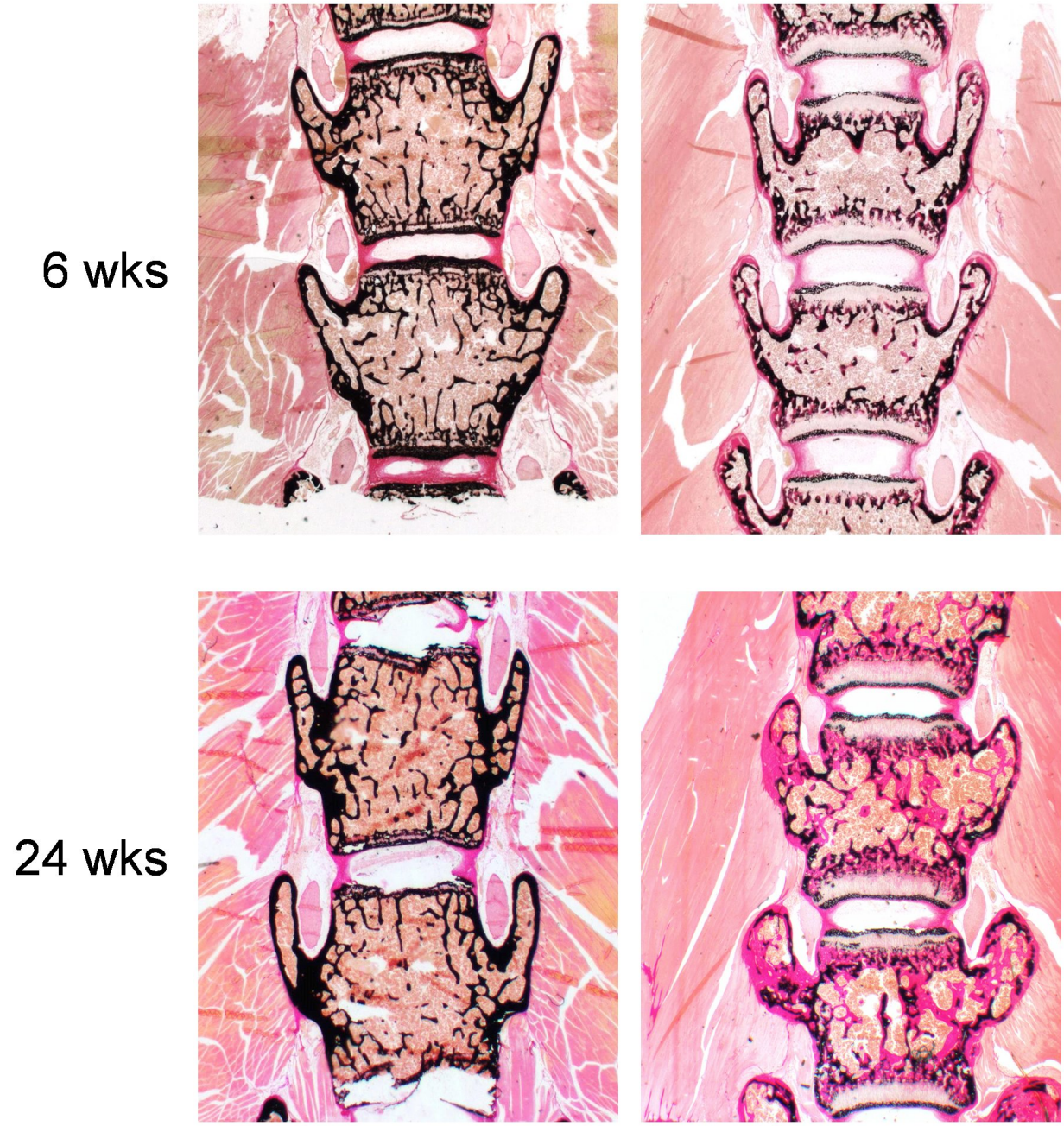


Hyp Kossa.png

SYBIL Project 602300. The SYBIL Project is funded under the European Commission Seventh Framework Programme, grant number 602300, Theme HEALTH.2013.2.1.1-1

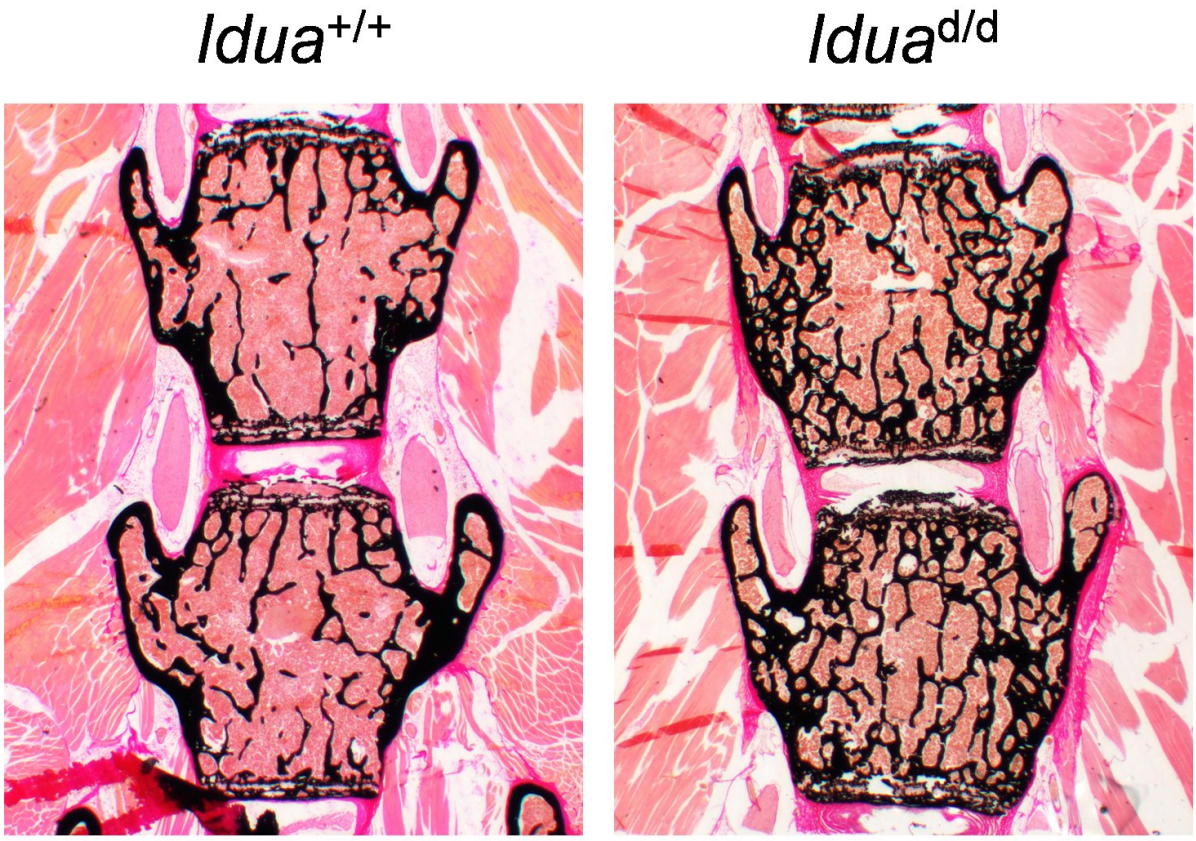
Idua KO

Reason for private status: Data partially contained in the manuscript "Impaired bone remodeling and its correction by

combination therapy in a mouse model of mucopolysaccharidosis-I" accepted for publication in the journal of Human Molecular Genetics

Qualitative description:

The skeletons of *Idua* deficient mice are characterized by a high bone mass phenotype with pathological lysosomal storage in cells of the osteoblast lineage. Histomorphometric quantification identified shortening of bone-forming units and reduced osteoclast numbers per bone surface.



Idua KO Kossa.png

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