

# Detection of biogenic magnetic nanoparticles in human's aortic aneurysms

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The presence of biogenic magnetic nanoparticles (BMNs) in aortic aneurysm is detected using magnetic force microscopy. The presence of BMNs (single BMN and their chains) in aortic aneurysm may cause magneto-dipole interactions of these BMNs with BMNs of microorganisms - pathogens of heart and with artificial magnetic nanoparticles in the drug delivery systems. The accumulation of BMNs in the human heart can be attributed not only to the process of biomineralization BMNs directly in the tissues of heart but due to the accumulation of microorganisms – pathogens of heart that are natural producers of BMNs.

## References:

[1] Gorobets S.V., Gorobets O.Yu., Chyzh Yu.M., Sivenok D.V. (2013). Magnetic dipole interaction of endogenous magnetic nanoparticles with magnetoliposomes for targeted drug delivery. *Biophysics*, 379—384.

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