



Co-option of liver glycogen metabolism in naked mole-rat heart

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Naked mole-rats are extremophilic mammals, capable of surviving complete anoxia for up to 18 minutes. This also allows their hearts to survive ischaemia (no blood flow) without sustaining tissue damage. During my postdoc at CECAD, University Hospital Cologne, I investigated some of the molecular mechanisms behind this adaptation. We found that naked mole-rats have switched from fatty acid metabolism to sugar metabolism in their hearts and have high levels of the sugar storage molecule glycogen in their hearts. They break down glycogen by co-opting liver enzymes including the liver isoform of glycogen phosphorylase and amylase, which helps sustain glycolytic flux in ischaemia.



Friday, March 15th from 13.00 to 13.45 in the Zoophysiology Seminar Room (1131-127)