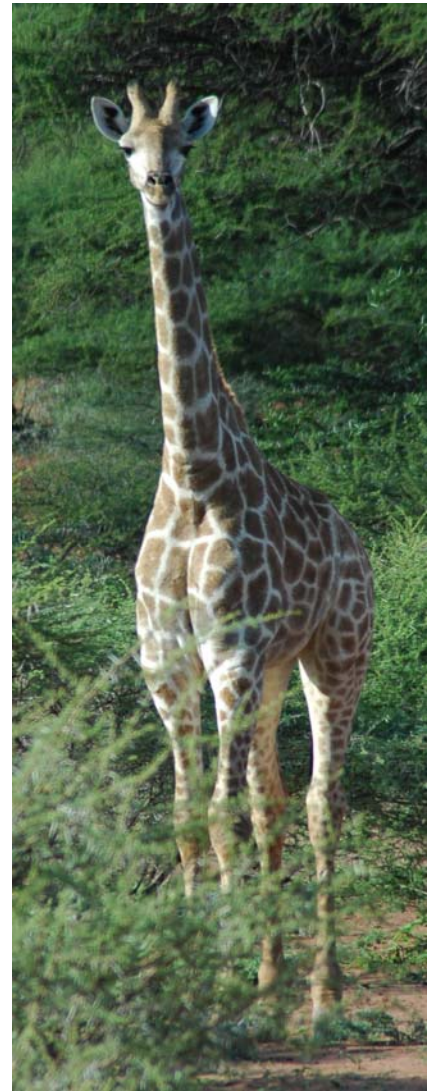




## The Big Four: Cardiovascular Adaptations to Gravity in Giraffes (and Ostriches)

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The cardiovascular system of giraffes have provoked physiologists for centuries, and the scarcity of actual measurements have allowed the discussion of their cardiovascular physiology to remain within the realm of wish-full thinking and fantasy. In the past five years, The Danish Giraffe Cardiovascular Research Program (DaGiR) has directed two expeditions to South Africa where we have measured blood pressures and blood flows in anaesthetized and awake giraffes. These studies reveal of a number of relatively simple modifications that allow for the giraffes to tolerate blood pressures that would kill virtually any other vertebrate on earth.



Brøndum E.T., J.M. Hasenkam, N.H. Secher, M.F. Bertelsen, C. Grøndahl, K.K., Petersen, R. Buhl, C. Aalkjær, U. Baandrup, H. Nygaard, M. Smerup, F. Stegmann, E. Sloth, P., K.H. Østergaard, Nissen, M. Runge, K. Pitsillides and T. Wang (2009). Jugular venous pooling during lowering of the head affects blood pressure of the anesthetized giraffe. *American Journal of Physiology* 297, R1058-1065.

Monday Jan 24<sup>th</sup> at 11.15 at Zoophysiology