

The endocranial morphology and inner ear of the abelisaurid theropod *Aucasaurus garridoi*

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A partial cranial endocast and right inner ear of the Cretaceous abelisaurid dinosaur *Aucasaurus garridoi* were digitally reconstructed from CT scans. The forebrain, midbrain, and hindbrain resemble the morphology described for the abelisaurids *Majungasaurus* and *Indosaurus*. However, *Aucasaurus* exhibits a floccular process that is relatively larger than that of *Majungasaurus*. In *Aucasaurus* the flocculus is enclosed in an 8-shaped floccular recess, similar in shape and size to that observed in *Abelisaurus*, suggesting that the two Patagonian taxa were capable of a slightly wider range of movements of the head. Here we describe the second inner ear known for the Abelisauridae. The labyrinth of the inner ear is similar in shape and size to the semicircular canals of *Majungasaurus*, although the lateral semicircular canal is shorter in *Aucasaurus*.

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