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**Directional sensitivity and hearing pathways in the beluga whale,
Delphinapterus leucas**

Aude Pacini^a, Paul Nachtigall^a, T. Aran Mooney^a, Manuel Castellote^b, Kristen Taylor^a and José-Antonio Esteban^c

^aUniversity of Hawaii, Hawaii Institute of Marine Biology, P.O. Box 1106, Kailua, HI 96734, USA

^bL'Oceanografic, C/. Junta de Murs i Valls, s/n, 46013 Valencia, Spain

^cResearch Department, Parques Reunidos Valencia S. A. L'Oceanogràfic, Ciudad de las Artes y las Ciencias, 46013 Valencia, Spain

Although much variation exists in jaw morphology among species, odontocetes are believed to receive sound primarily through the pan bone region of the lower jaw. In order to further examine this jaw hearing hypothesis, we tested the head receiving sensitivity and directional hearing of a beluga whale, *Delphinapterus leucas*. Hearing measurements were conducted with a 9-yr-old female beluga using the auditory evoked potential technique. A preliminary audiogram indicated that the subject had very sensitive hearing (45-55dB from 32-80 kHz) and heard up to 128 kHz. The pathway investigation used a piezo-electric transducer to present the click stimuli, whereas the hearing directivity was measured in the far field, also using broadband clicks. Like the bottlenose dolphin, the subject had a region of high sensitivity around the pan bone region (78 dB), however, unlike the bottlenose dolphin, we found that the region of maximum sensitivity was at the tip of the lower jaw (75dB). The subject also proved to have highly directional hearing. This study supports the shaded receiver hypothesis and also shows that hearing pathway variations appear to exist among odontocete species and are at least partially dependent on head morphology.