

## **WP8: Sensory systems**

Sensory defects in hearing and vision account for a very large fraction of human disease syndromes. For example, 1 in every 1000 children are born with hearing impairment of which around half are genetic in origin. We have developed a series of primary and primary extended tests for both auditory/vestibular function and vision. In the case of auditory function, the primary tests for hearing and vestibular impairment (Modified SHIRPA tests including click-box, contact righting, elevated platform and reaching response; acoustic startle response; pre-pulse inhibition and swim test), were closely integrated with the primary tests developed for neurological and behavioural function (see Figure 3 and below). The acoustic brainstem response (ABR) test was adopted and standardised as a Primary Extended test for auditory function. All of the vision tests were primary extended including slit lamp for anterior segment defects and indirect ophthalmoscope or fundus camera for retinal defects. In addition, one functional test for vision, the Optokinetic Response (OKR) test was included and validated as a primary extended SOP<sup>1</sup>.

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<sup>1</sup> Jellali A, Meziane H, Ouagazzal A-M, Rousseau S, Romand R, Auwerx J, Sahel J, Chambon P, Picaud S (2005) The optomotor response: A robust first-line visual screening method for mice. *Vision Research* 45: 1439-1446.