

## ABSTRACT

**SYSTEM AND METHOD FOR DETERMINATION OF A BRAINSTEM RESPONSE  
STATE DEVELOPMENT**

A system, method and computer program are disclosed that are adapted to detect a lateral brainstem response state development of a subject over a period of time as a function of a population of neurons evoked response patterns to sound stimuli. In these a sound stimuli generating unit is operative stimulus comprises a first and at least a second consecutive train of sound pulses. A detection unit is operative to detect a brainstem response signal related to the neurons response patterns, wherein a first response signal is caused by the first train of sound pulses and a second response signal is caused by the second train of sound pulses. A storage unit may be included that is operative to store information based on the brainstem response signals. Further, a control unit is operative to determine the lateral brainstem response state development based on a comparison between the first and second response signals.

15

Figure accompanying abstract: Figure 4a

20