Adachi 2012 - Rats' heads were shaved for better adherence and the electrodes were trimmed to 1.5 cm2 for better fit. After placement, electrodes were fixed onto the head with adhesive tape (MicroporeTM) and covered with a protective mesh to prevent removal (Fig. 5A).
The anodal electrode was positioned between the ears, from the neck of the rat (parietal cortex) (Fig. 5B) (Takano et al., 2011 with modifications), so as to mimic anodal placement in human pain studies (Mendonca et al., 2011; Dasilva et al., 2012). The cathodal electrode was positioned at the midpoint of the lateral angle of the eyes (supraorbital area). The electrodes were placed on the skin in a similar manner to that used in human studies of tDCS for pain (Nitsche et al., 2008; Antal and Paulus, 2011; Rosen et al., 2009; Fregni et al., 2006c). An important point to consider was that this model required neither anesthesia nor surgery, unlike models used in the previous tDCS studies in rats (Dockery et al., 2011; Wachter et al., 2011; Liebetanz et al., 2006). In fact, this represents a strength in this study, as volatile anesthesia (such as isoflurane) has been shown to decrease excitatory and increase inhibitory transmission (Gomez and Guatimosim, 2003; Ouyang and Hemmings, 2005), altering BDNF expression and thus neuroplasticity (Lu et al., 2006; Head et al., 2009).
Figure- tDCS electrode placement. The cathodal stimulus electrodewas positioned at themidpoint of the lateral angle of the eyes, and the anodal electrode is positioned over the neck and shoulder areas. Panel B: tDCS stimulation procedure. The stimulator was placed onto the thorax with a corset and the electrodes were fixed onto the rat's head.

Liebetanz 2006, Cambiaghi 2010,2011 -
The active electrode consisted of an epicranial implanted tubular plastic jack (inner area = 4.5 mm2; RS Components S.p.A., Vimodrone, Milan, Italy) filled with saline solution (0.9% NaCl) just prior to stimulation. This method was chosen in order to avoid polarization of the active electrode by tDCS, as the same site was also used to obtain MEPs. The counter electrode was a saline-soaked sponge applied over the ventral thorax (5.2 cm2) by using a home-made rubber corset, according to published methods (Liebetanz et al., 2006b).
For the epicranial electrode implant, the animals were anaesthetized with 5% sevofluorane (Sevorane, Abbott S.p.a., Campoverde, Italy) and temperature during surgery was maintained at 37C using a heating lamp. The scalp and underlying tissues were removed and the epicranial electrode was implanted using glass ionomer dental cement (Ketac Cem, ESPE Dental AG, Seefeld, Germany). The centre of the active electrode was positioned over M1, 2 mm right to the bregma, in accordance with a previous functional mapping study in mice (Pronichev & Lenkov, 1998).
Figure- Placement and assembly of the electrodes used for both transcranial ramp stimulation and transcranial DC stimula-tion. A unilateral epicranial electrode (a) is positioned at 2 mm left and 2 mm anterior to the bregma (b). The epicranial electrode, which is fixed with dental cement, and the large chest electrode (c) are alternatively connected to the ramp stimulator or the DC stimulator.