

***Cxcr4* and *Sdf-1* are critically involved in the formation of facial and non-somitic neck muscles**

Imadeldin Yahya^{1,3}, Marion Böing¹, Qin Pu¹, Malte Puchert², Veysel Oedemis⁴, Jürgen Engele², Beate Brand-Saberi¹✉, Gabriela Morosan-Puopolo¹✉

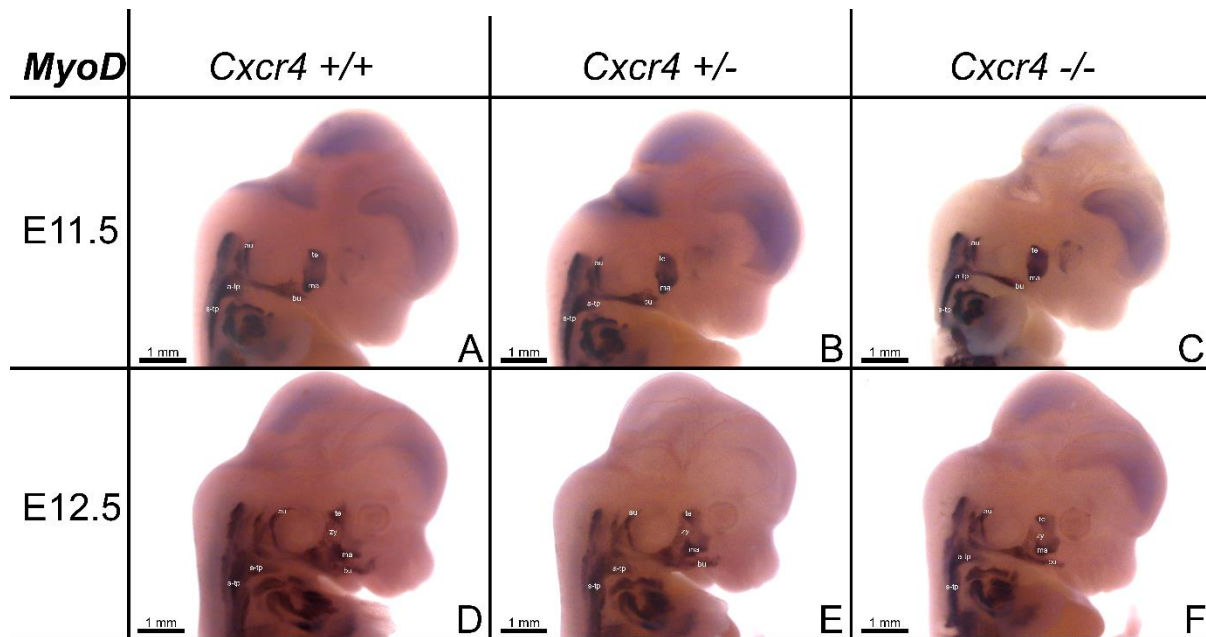


Figure S1: Mice deficient in CXCR4 exhibit impaired facial expression muscles and non-somite neck muscle formation. (A-F) Facial muscle development in E11.5 and E12.5 wildtype, heterozygous and *Cxcr4*-mutant mouse embryos was analyzed using in situ hybridization for *MyoD*. Mastication muscle primordia (temporalis and masseter) (te and ma in A-F) which originate from the first branchial arch were visible in E11.5 and E12.5 mouse embryos analyzed, with no difference between wildtype (n=12), heterozygous (n=8) and homozygous (n=6). In contrast, the facial expression muscles (m. buccinators, bu in A-F) is much smaller in the heterozygous (2 out of 8) and knockout (6 out of 6) mouse embryos when compared to wildtype (12 out of 12). M. auricularis (au in A-F) showed only a mild effect. Non-somitic neck muscles (a-trapezius, a-tr and s-trapezius, s-tr) were significantly reduced in homozygous (6 out of 6) mouse embryos.