

Chondrogenic differentiation of defined equine mesenchymal stem cells derived from umbilical cord blood for use in cartilage repair therapy.

Mélanie Desancé¹, Romain Contentin¹, Lélia Bertoni², Tangni Gomez-Leduc¹, Thomas Branly¹, Sandrine Jacquet², Jean-Marc Betsch³, Agnès Batho^{1,4}, Florence Legendre¹, Fabrice Audigié², Philippe Galéra^{1*†} & Magali Demoor^{1*}.

* Contributed equally

† Corresponding author: philippe.galera@unicaen.fr, magali.demoor@unicaen.fr

1. NORMANDIE UNIV, UNICAEN, BIOTARGEN, 14000 CAEN, FRANCE.

2. Center of Imaging and Research on Locomotor Affections in Equines, Ecole Vétérinaire d'Alfort, Université Paris-Est, 14430 Goustranville, France.

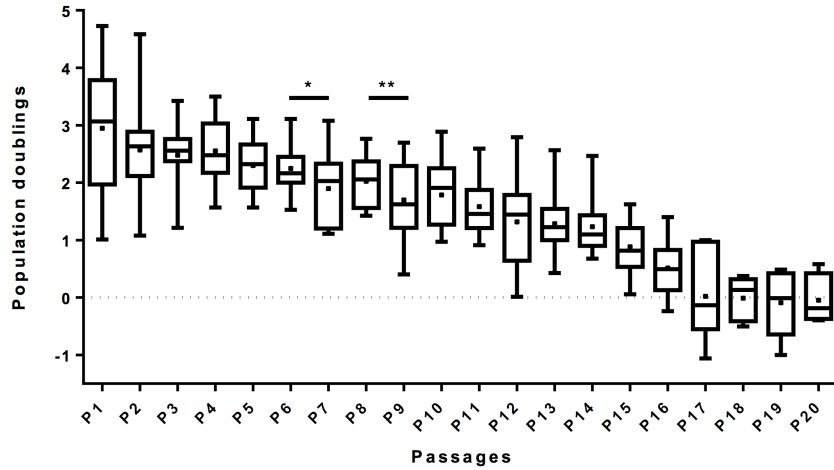
3. Clinique Vétérinaire Equine de Méheudin, Méheudin, 61150 Ecouché, France.

4. EFS Caen, 14000 Caen, France.

	P2	P3	P4	P5
Number of different samples	20	16	7	4
Total of cells (millions)	239.6	234.88	93.64	43.7

Table S1. Cryopreservation of mesenchymal stem cells. Equine umbilical cord blood-derived mesenchymal stem cells banking at different passages.

A



B

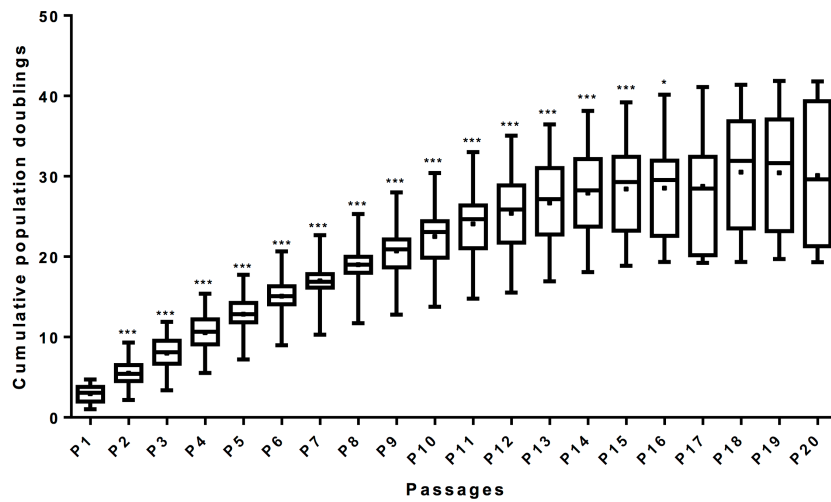


Figure S1. Analysis of proliferation capacity of equine umbilical cord blood-derived mesenchymal stem cells (eUCB-MSCs). (A) Mean value of population doublings and (B) mean value of cumulative population doublings. Population doublings were determined at each passage of the adherent eUCB-MSCs cultured in the absence of FGF-2. Graph represents mean \pm standard deviation (n=12 between P1 and P14, n=10 for P15, n=9 for P16, n=7 for P17, n=5 for P18 and P19, n=4 for P20). Statistically significant differences among eUCB-MSCs for two successive passages were determined using paired t test (*p<0.05, **p<0.01, ***p<0.001).