

Supplementary Material

Treatment of buffalo (*Bubalus bubalis*) donor cells with trichostatin A and 5-aza-2'-deoxycytidine alters their growth characteristics, gene expression and epigenetic status and improves the *in vitro* developmental competence, quality and epigenetic status of cloned embryos

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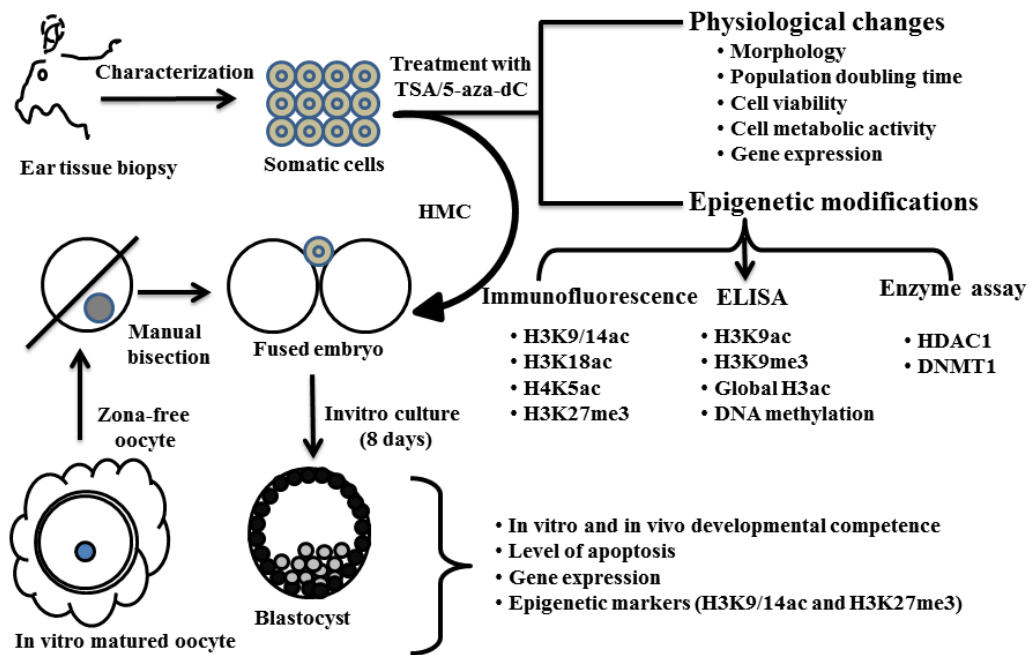


Fig. S1. Detailed experimental plan of the study.

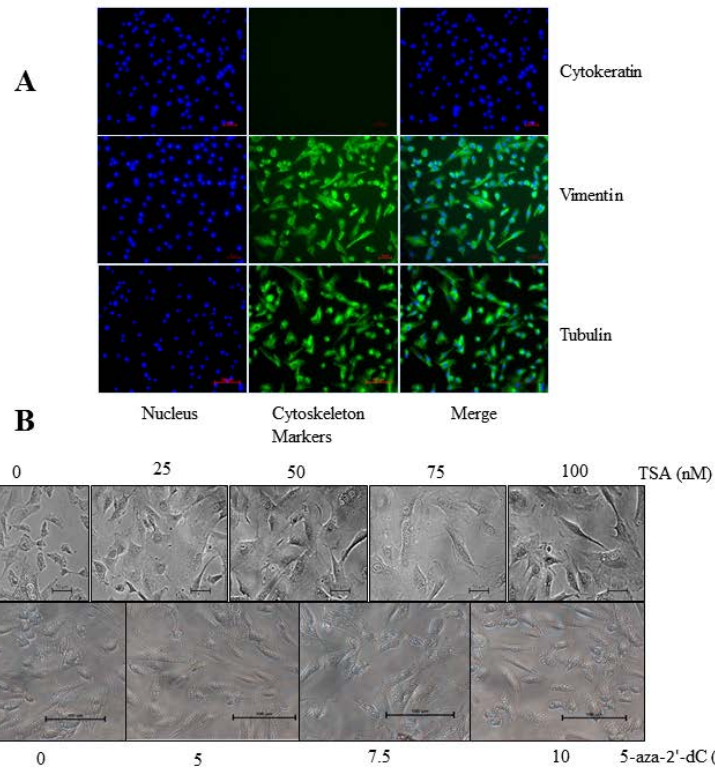


Fig. S2. (A) Donor cells showing expression of vimentin and tubulin but not that of cytokeratin following immunofluorescence staining. (B) Morphological appearance of cells following 24 h of culture in the presence of TSA or 5azadC.

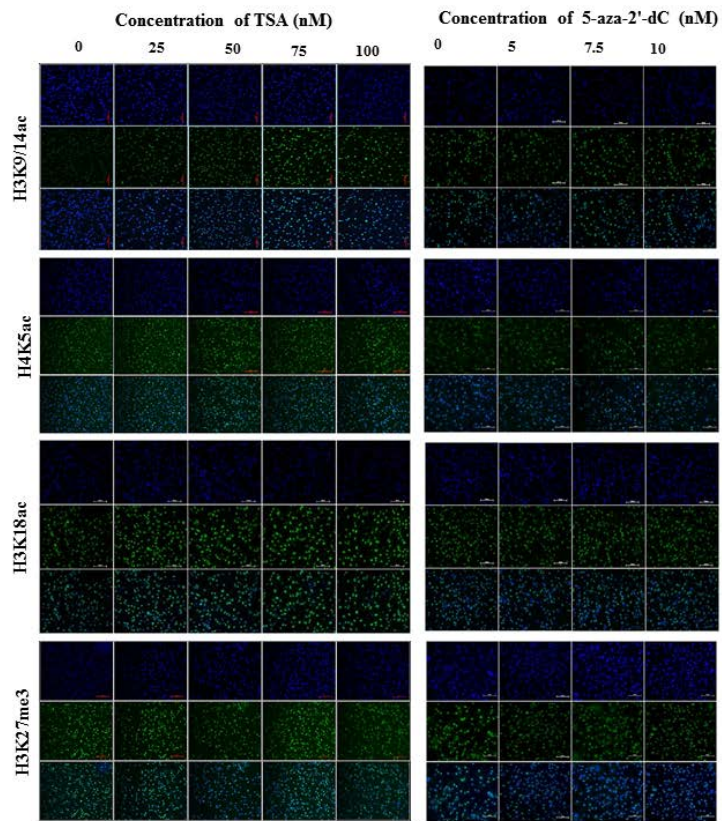


Fig. S3. Effect of 24 h treatment of the donor cells with TSA or 5azadC on the mean pixel intensity of H3K9/14ac, H4K5ac, H3K18ac and H3K27me3 following immunofluorescence staining.

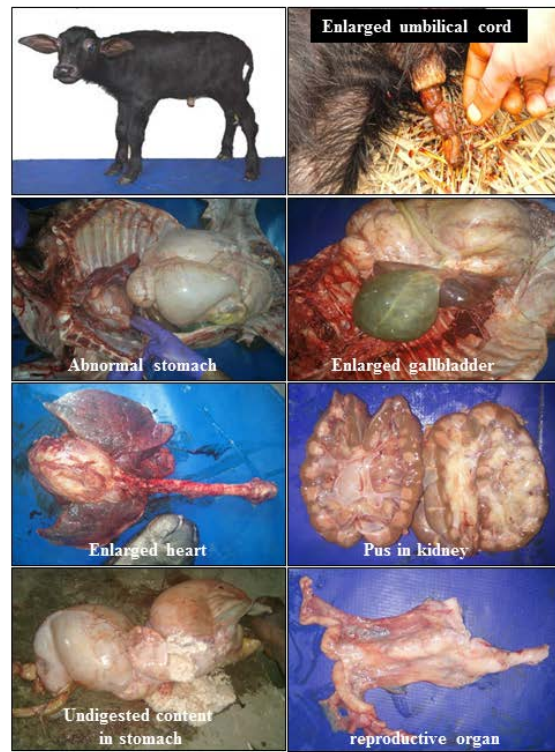


Fig. S4. The cloned calf born and organ abnormalities observed at necropsy.

Table S1. Real-time PCR primers for each target gene

Gene	Sequence	Product size	Acc. No
<i>HDAC1</i>	F-ATCGGTTAGGTTGCTTCAATCTG R- GTTGTATGGAAGCTCATTAGGGA	168	BT030718.1
<i>DNMT1</i>	F-CTCAGAAGGGAGATGTGGAG R-TAGTAGTCACAGTAGCTGAGGA	138	NM_182651.2
<i>DNMT3a</i>	F-GTGCTGTCTCTATTCGATGG R-CCATTCCTGGATATGCTTCTG	188	NM_001206502.1
<i>P53</i>	F-GGAAGAATCACAGGCAGAACTC R- ACTTCATTCGGACATTCATCCA	176	AB571118.1
<i>CASPASE3</i>	F- TGGTATTGAGACAGACAGTGG R-AGCATCTCACAAAGAAGCCTG	158	NM_001077840.1
<i>β-ACTIN</i>	F-ACCACACCTTCTACAACGAG R-GAACATGATCTGGGTCATCTTC	112	NM_001206502.1

Table S2. Parentage identity of born clone calf on the basis of 15 microsatellite markers

Sr. No	Donor buffalo	Recipient buffalo	Cloned calf
1	125/135	125/125	125/135
2	180/180	178/178	180/180
3	129/164	128/149	129/164
4	182/193	188/193	182/193
5	262/268	262/264	262/268
6	96/115	96/115	96/115
7	104/111	109/113	104/111
8	76/96	76/96	76/96
9	115/115	115/115	115/115
10	80/96	80/96	80/96
11	71/76	70/76	71/76
12	207/212	205/207	207/212
13	276/299	299/299	276/299
14	220/228	220/250	220/228
15	135/137	135/135	135/137