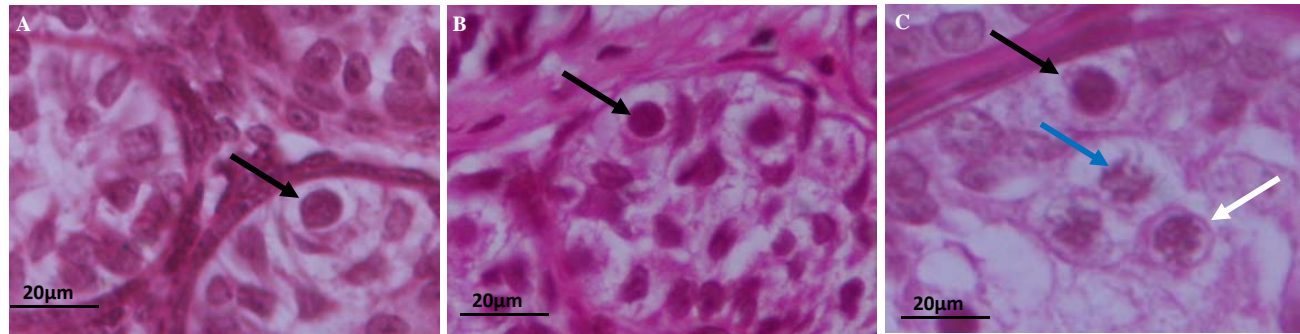
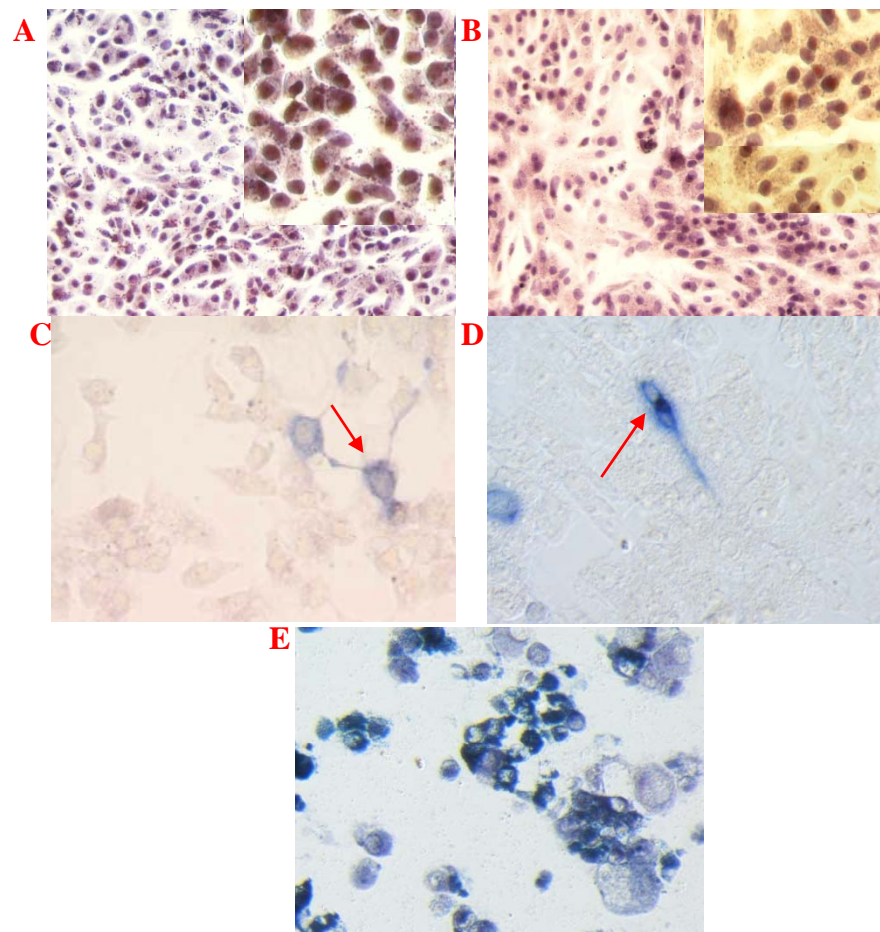


Supplementary Fig. 1. Discharges of testosterone secretion induced in 3 representative juvenile monkeys during the 4 week intermittent iv GnRH infusion (GnRH pulses administered at time 0). First two values (0 Week) indicate plasma levels of testosterone before and 40 minutes after the first GnRH pulse. Arrows indicate the time of each GnRH infusion.



Supplementary Fig. 2. Cross section of an infant (A), juvenile (B) and pubertal (C, GnRH treated juvenile) rhesus monkey testes. In infant and juvenile seminiferous cords, only type A spermatogonia (black arrows) and Sertoli cells were present, although the cord diameter of the juvenile was greater than that observed in the infant. In pubertal monkeys, a lumen was present and the tubules contained differentiating germ cell, including type B spermatogonia (blue arrow) and spermatocytes(white arrow).



Supplementary Fig. 3. Oil Red 'O' and hematoxylin staining of Sertoli cells (20X) cultured from infant (A) and pubertal (B) monkeys; insets are shown at 40X. Arrows indicate alkaline phosphatase positive peritubular cells in infant (C) and pubertal (D) cell cultures (40X). No 3 β -HSD positive cells were detected in Sertoli cell cultures. 3 β -HSD positive crude Leydig cells (40X) from a pubertal monkey are shown in panel E confirming the staining procedure.

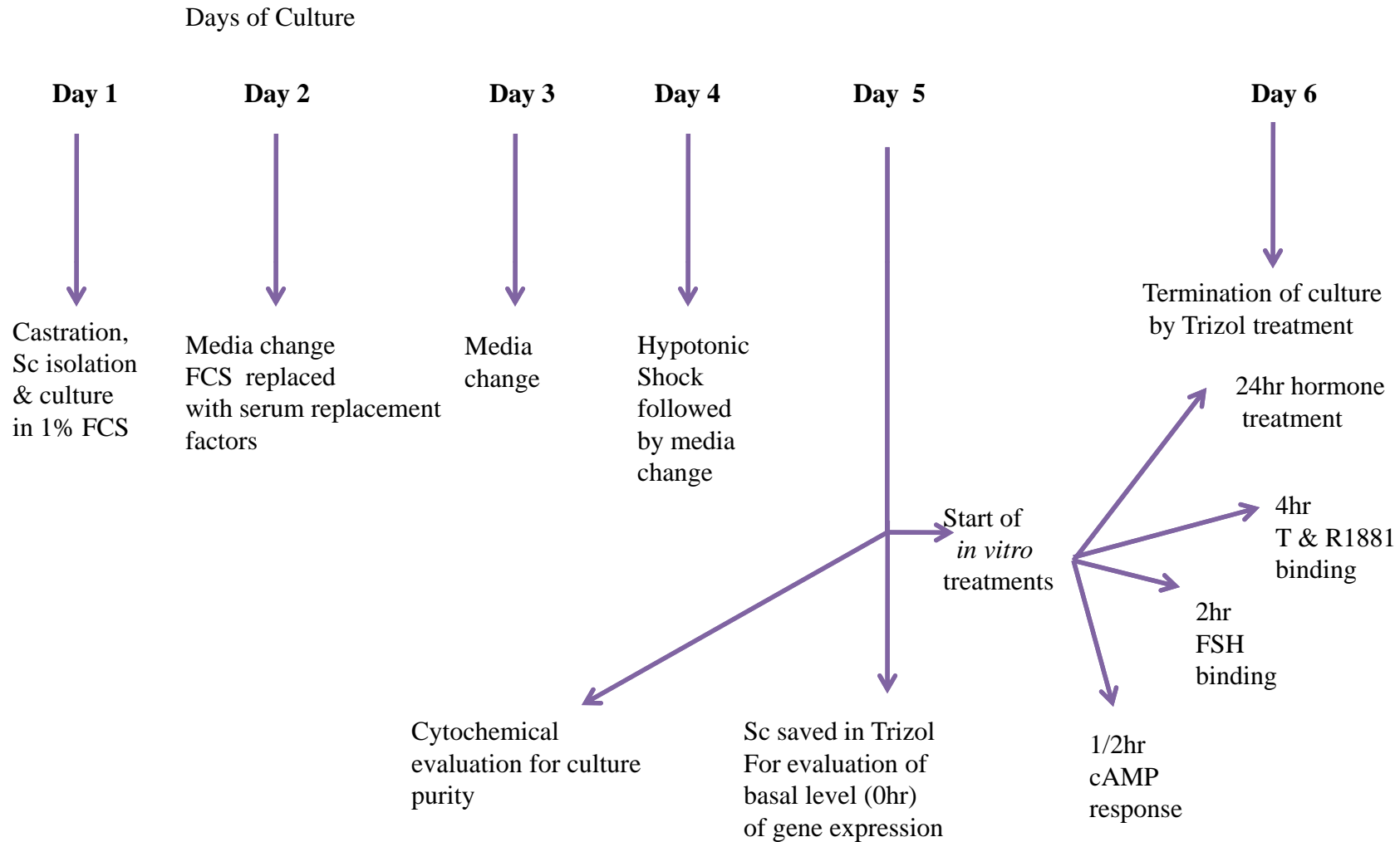
Supplementary Table I

| Infant Monkey | Serum Testosterone (ng/ml) |
|----------------------|-----------------------------------|
| 1 | 2.48 |
| 2 | 4.5 |
| 3 | 1.6 |
| 4 | 3.94 |
| 5 | 5.6 |
| 6 | 4.14 |

Mean testosterone concentration in the infant monkeys before castration was 3.71 ± 1.52 ng/ml.

Supplementary Table II

Experimental Flow Chart for Culture of Monkey Sc



Supplementary Table III

| Name of the Genes | Sequence | Base pair | Efficiency | References |
|--|--|-----------|------------|------------|
| AR NM_001032911.1 | Forward 5'-ACATCAAGGAACTCGATCGTATCA-3' Reverse 5'-AGCTGGTAGAAGCGTCTTGAGC-3' | 76 | 0.71 | Designed |
| FSHR NM_181446.2 | Forward 5'-TGCCAACCCCTTCCTCTATG-3' Reverse 5'-CATTCCTTGGATGGGAGTTG-3' | 149 | 0.94 | do |
| Inhibin- β_B NM_002193.2 | Forward 5'-TACAAATGCCTGTCAGTCGGAG-3' Reverse 5'-TTGTGCTTTTATGTGTGCTCGG-3' | 104 | 0.93 | do |
| Claudin11 NM_001185056.1 | Forward 5'-AATGGGCAGCAATCAGAAAC-3' Reverse 5'-TGTCAAAATGTCCAAACAGC-3' | 199 | 0.92 | do |
| SCF NM_000899.4 | Forward 5'-AACCACACCGTTTTCCAG-3' Reverse 5'-AAATGGTGGCAAGTGGAC-3' | 128 | 1.02 | do |
| GDNF NM_001190469.1 | Forward 5'-CCAACCCAGAGAATTCCTCAA-3' Reverse 5'-ATGTTGTCTCAGCTGCATCG-3' | 174 | 1.25 | do |
| RPL32 (housekeeping) NM_001193573.1 | Forward 5'-CAACATTGGTTATGGAAGCAACA-3' Reverse 5'-TGACGTTGTGGACCAGGAACT-3' | 80 | 1.06 | (1) |