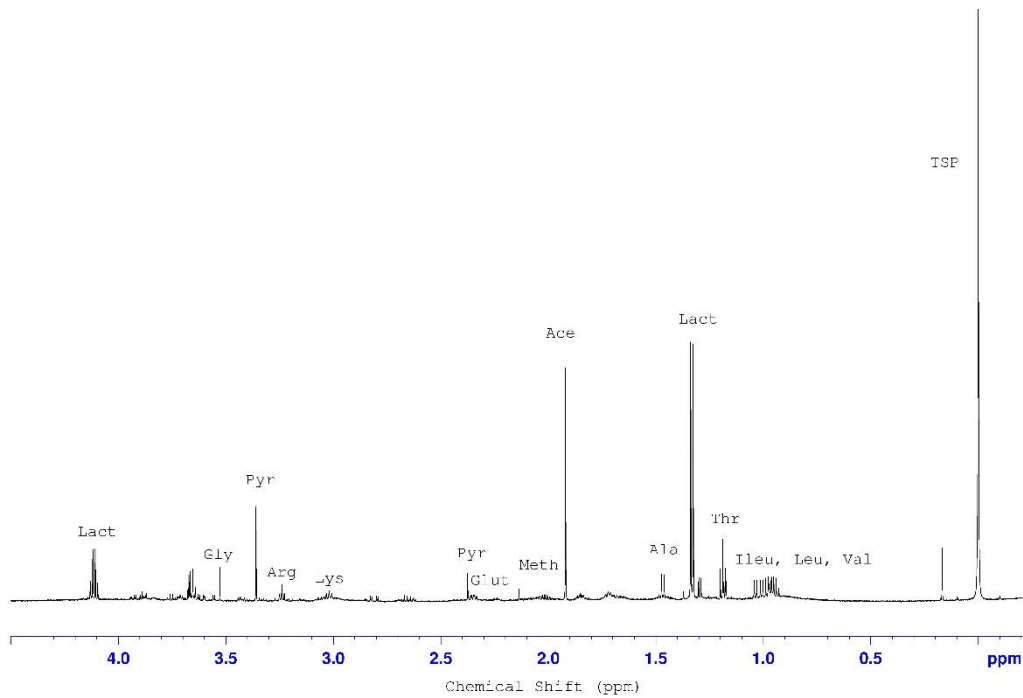
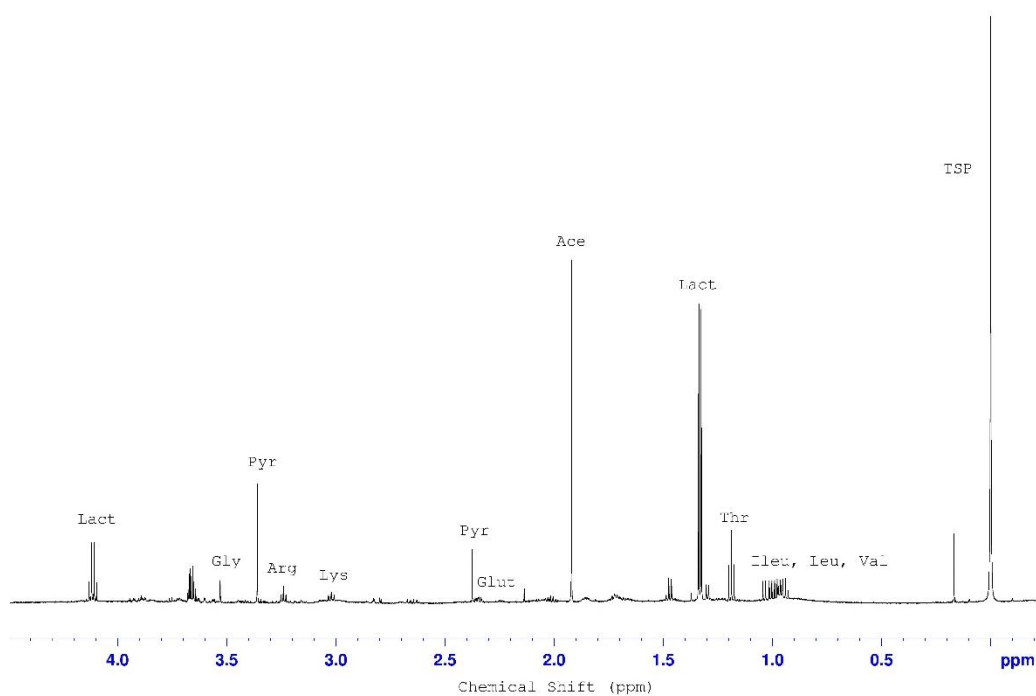


## Supporting information



<CAPT>**Figure S1** Representative NMR spectrum of plain SOF medium. Here, 18  $\mu\text{L}$  of plain SOF medium was diluted in 612  $\mu\text{L}$  of 100% deuterium oxide ( $\text{D}_2\text{O}$ ) prepared with 25 mmol/l sodium phosphate buffer ( $\text{Na}_2\text{HPO}_4$ ) and with 0.1 mmol/l TSP [sodium 3-(trimethyl-2,2,3,3)-1-propionic acid  $\text{d}_4$ ]. Analysis was performed on a 600 MHz Bruker NMR spectrometer. Ileu, isoleucine; Leu, leucine; Val, valine; Thr, threonine; Lact, sodium DL-lactate; Ala, L-alanine; Ace, acetate; Meth, methionine; Glut, L-glutamic acid; Pyr, sodium pyruvate; Lys, lysine; Arg, arginine; Gly, glycine.



<CAPT>**Figure S2** Representative NMR spectrum of SOF medium culturing a slow growing blastocyst (192 hpf). Here, 18  $\mu\text{l}$  of plain SOF medium was diluted to 612  $\mu\text{l}$  of 100% deuterium oxide ( $\text{D}_2\text{O}$ ) prepared with 25 mmol/L sodium phosphate buffer ( $\text{Na}_2\text{HPO}_4$ ) and with 0.1 mmol/L TSP [sodium 3-(trimethyl-2,2,3,3)-1-propionic acid  $\text{d}_4$ ]. Analysis was performed on a 600 MHz Bruker NMR spectrometer. Ileu, isoleucine; Leu, leucine; Val, valine; Thr, threonine; Lact, sodium DL-lactate; Ala, L-alanine; Ace, acetate; Meth, methionine; Glut, L-glutamic acid; Pyr, sodium pyruvate; Lys, lysine; Arg, arginine; Gly, glycine.

**Table S1** Embryo scoring system used for embryo selection as adapted from Puissant *et al.*, 1987; Steer *et al.*, 1992; Farin *et al.*, 1995; Gardner *et al.*, 2000)

Grade	Description
1	Even blastomeres, homogenous cytoplasm, ICM (numerous and tightly packed cells), trophoctoderm well organized with many cells
2	Homogenous cytoplasm, uneven blastomeres (less than one-third difference in size), ICM (numerous and tightly packed cells), trophoctoderm well organized with many cells
3	Homogenous cytoplasm, uneven blastomeres (less than one-third difference in size), ICM (loosely packed cells), trophoctoderm few cells in epithelium
4	Uneven blastomeres (more than one-third difference in size), cytoplasm heterogenous, ICM with several, loosely packed cells, trophoctoderm with several cells in look epithelium
5	Uneven blastomeres (more than one-third difference in size), fragmentation (less than one-third of embryonic surface, ICM with few cells, trophoctoderm with few cells
6	Uneven blastomeres (more than one-third difference in size), cytoplasm heterogenous, fragmentation (more than one-third of embryonic surface), ICM small or unidentifiable, trophoctoderm with few cells