REPROCELL's RNA REPROGRAMMING TECHNOLOGY

REPROCELL's reprogramming method carries the highest reprogramming efficiency and produces iPSCs of superior viability, pluripotency and quality compared to other non-integrative reprogramming method

RNA Transgenes

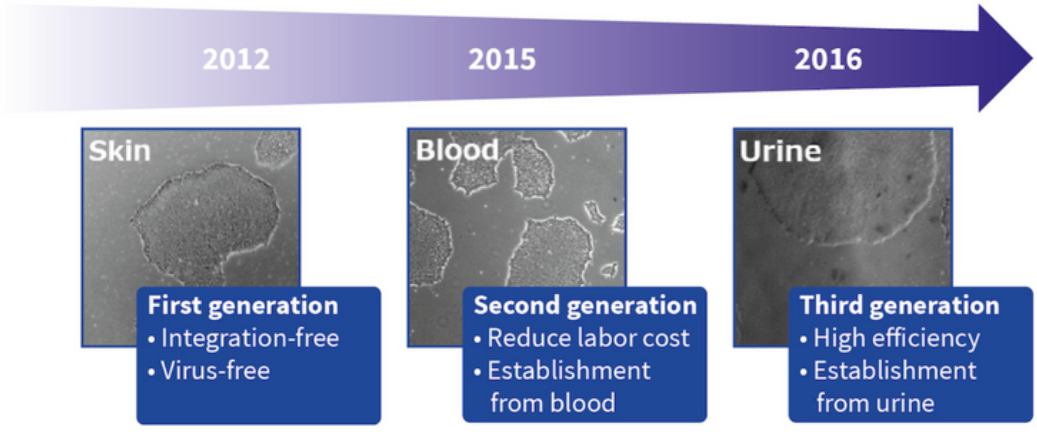
REPROCELL's reprogramming technology uses RNA transgenes, rather than DNA or viral vectors, which is rapidly degraded by cells. The resultant iPSCs therefore possess low transgene persistence, increased chromosomal stability and reduced clonal variation.[1] As RNA reprogramming leads to decreased copy number variation (CNV), it also reduces the risk of oncogenesis and abnormal karyology.[2]

50 Times More Efficient

REPROCELL Stem RNA reprogramming technology is up to 50 times more efficient than any other non-integrative methodology on the market* In Addition, Stem RNA technology has been used across a diverse range of iPSC projects in the research community, from enhancing in vivo research models[3] to optimising human iPSC reprogramming.[4]

* Compared with Episomal reprogramming methodology Epi5 (0.03 - 0.04%), StemRNA™ 3rd generation is at least 50 times more efficient (2.00 - 4.00%).

The Evolution Of Stem RNA Reprogramming Technology



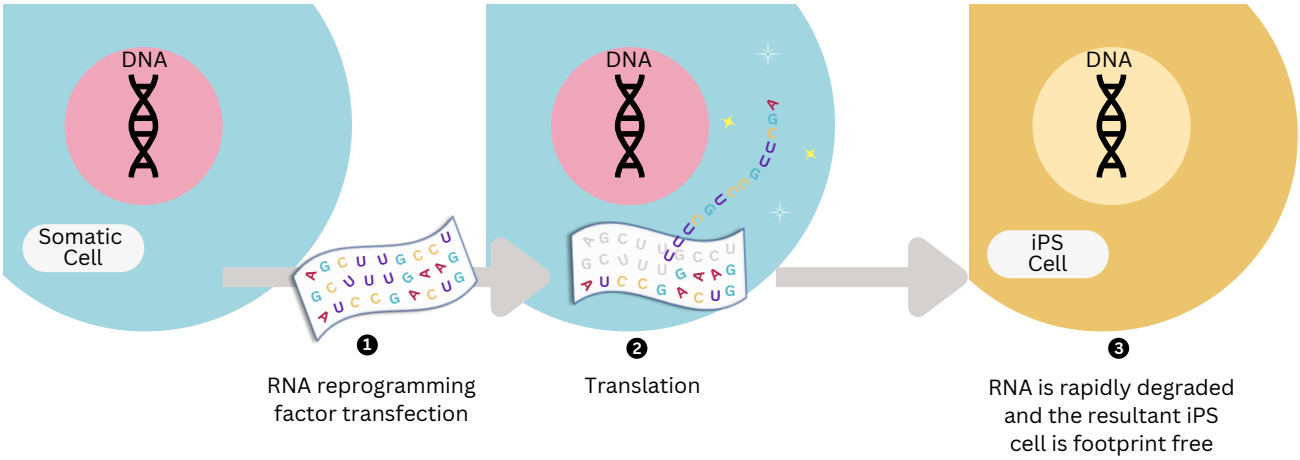
The Benefits of RNA Reprogramming

RNA Reprogramming is the ideal vector for introducing reprogramming factors into cells, because RNA is:

- **Footprint-Free** — mRNA vectors are rapidly degraded 48 hours following transfection, eliminating the need to screen your iPSCs for vector retention
- **Integration-free** — No DNA is used during reprogramming, eliminating the risk of genomic integration of reprogramming factors or vector sequences[2]
- **Efficient** — RNA reprogramming is highly efficient, requiring fewer starting target cells than other methods - increasing the likelihood of success with difficult to reprogram cells[4]
- **Rapid** — RNA reprogramming provides rapid access to iPSC colonies and useable iPSCs for projects where timing is critical

RNA reprogramming is the optimal method for iPSC establishment[2][3] and our latest generation technology can be used to transform samples from skin, blood and urine.

RNA Reprogramming Method



DNA is translated into protein after being taken up by the cell, transforming the cell into an iPS cell. DNA in the nucleus is not damaged because RNA cannot enter the nucleus. RNA that is no longer needed is quickly degraded, and the introduced RNA does not remain in the resulting iPS cells, keeping them in good condition.