## Reverse engineered lung cells created

Consider the marvel of the embryo. It begins as a glob of identical cells that change shape and function as they multiply to become the cells of our lungs, muscles, nerves and all the other specialized tissues of the body.

Now, in a feat of reverse tissue engineering, Stanford researchers have begun to unravel the complex genetic coding that allows embryonic cells to proliferate and transform into all of the specialized cells that perform a myriad of different biological tasks.

A team of interdisciplinary researchers took lung cells from the embryos of mice, choosing samples at different points in the development cycle. Using the new technique of single-cell genomic analysis, they recorded what genes were active in each cell at each point. Though they studied lung cells, their technique is applicable to any type of cell.

"This lays out a playbook for how to do reverse tissue engineering," said Stephen Quake, the Lee Otterson Professor in the School of Engineering and a Howard Hughes Medical Institute investigator.

Read the full, original story: Stanford Researchers Develop a Single-cell Genomics Technique to Reverse Engineer the Developing Lung