**[HSCI iPS Cell Core Facility](http://www.hsci.harvard.edu/ipscore/)**

**URL:** <http://ipscore.hsci.harvard.edu/>

**Faculty Directors:** Chad Cowan and Kevin Eggan

**Core Management:** Derivation and Distribution Services: Laurence Daheron

Genome Editing Services: Li Li

**Description:**

*Square Footage:* 1,877 square feet

*Facility Location:* Bauer Building, Room B01

The Harvard Stem Cell Institute (HSCI) iPS Cell Core Facility was created to accelerate research in the stem cell field by facilitating the derivation, distribution and editing of iPS cell lines. Disease-specific iPS lines provide us with a unique opportunity to study the mechanisms of disease and ultimately to develop new treatments. The iPS Core serves as a repository for iPS cells produced by HSCI scientists and functions as a laboratory to produce and engineer disease-specific lines. The Center has 1877 square feet of space, with one main molecular biology and biochemistry room and three tissue culture rooms: one for primary cell culture, one for iPS derivation, and one for genome editing, expansion and banking.

**Services:**

* Distribution Services
* Derivation Services, including:
  + Fibroblast isolation from skin biopsy
  + Reprogramming fibroblasts using retroviral methods
  + Reprogramming fibroblasts using the Sendai virus method
  + Reprogramming blood (T cells or erythroblasts) using the Sendai virus method
  + Reprogramming fibroblasts using the modified mRNA/microRNA combination
  + Reprogramming somatic cells using the episomal vector method
  + ICC, EB formation, gene expression
  + Karyotyping
  + DNA fingerprinting
  + Teratoma formation
* Genome Editing Service, including:
  + Construction/Testing TALEN vectors
  + TALEN-mediated gene knockout
  + TALEN-mediated gene mutation introduction and/or repair
  + Construction/Testing CRISPR vectors
  + CRISPR-mediated gene knockout
  + CRISPR-mediated gene mutation introduction and/or repair
  + CRISPR-mediated reporter line generation
* Workshops (PSC culture, reprogramming and gene editing)