

## Access and utility in materials choice

In order to probe the real reasons investigators choose to use essential materials, we surveyed 118 researchers who presented pluripotent stem cell posters at the ISSCR meeting. We scored and categorized the surveys based on major themes that characterize the field. *Utility of materials* scored comments about whether the lines were used because they were convenient, because they were facile in the lab, or were the best choice to derive a differentiated type of cell. In this category we included whether lines were used because they are well characterized, important for comparative studies, or useful for potential therapies. *Access to specific materials* scored comments on whether the researcher was instructed to use a certain line, whether it was already in use, came from a collaborator and if cost, intellectual property, or funding eligibility played a role in obtaining the line. We also asked researchers whether private, federal, national/federal, or state agencies underwrote their projects, and how policy had impacted their choice of careers, collaborators, workplace, and materials.

Researchers using hESC alone, iPSC alone, or both cell types in combination talked about access to research materials and the scientific utility of different materials about the same amount. (Table S1 Supplemental) However, qualitative coding of their actual comments revealed significant differences in how investigators on each type of paper discussed the challenges of getting the research materials they needed and the usefulness of those materials for specific scientific and technical purposes.

**Table 1 Supplemental: Survey Responses, ISSCR 2010 Poster Presenters by Cell Types Used**

	Access to specific materials	Utility of Cell Lines	Policy & Scientific Choices	Funding for Projects	Total
<b>hESC only Posters</b>	41	38	23	15	68
	60.3%	55.9%	33.8%	22.1%	
<b>hiPSC only Posters</b>	9	11	2	1	23
	39.1%	47.8%	8.7%	4.3%	
<b>hESC &amp; hiPSC</b>	16	14	9	9	27
	59.3%	51.9%	33.3%	33.3%	
<b>Total</b>					N=118

Note: Rows sum to more than total because individual responses can reflect multiple themes

### Access

Investigators using only hESCs manifested the most complicated thinking about access to research materials. Perhaps because embryonic lines are the core of their research programs they 1) evinced much more concern about access to federal funding and worries about the eventual disposition of particular lines under the Obama policy, 2) expressed greater reliance on state funding as an alternative to federal funding, and 3) described a much more diverse set of routes to access specific lines.

Scientists described how regulatory uncertainty and funding dilemmas could impede their research. A California researcher who relied on a specific hESC line said, “Bottom line is the ability to work with them. CIRM [California Institute for Regenerative Medicine] gives me confidence because I know I'm funded. I'm glad I'm in California.” The vagaries of federal regulation caused one New Jersey researcher to derive a new line for NIH approval when state funding was dropped for a project using H9. After a nine-month delay, H9