Stem Cell Summit draws 500 participants

Research, business, politics come together for conference

By B.D. Colen

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Massachusetts Gov. Deval Patrick Wed-nesday (Oct. 3) called on those attending the second day of a Harvard Stem Cell Institute (HSCI)-sponsored Stem Cell Summit to support his proposed $1 billion life sciences initiative “so we can get partnering with you.”

While Massachusetts has a unique concentration of researchers, academic institutions, biotech companies, and investment in the life sciences, “we can’t just rest on our laurels,” Patrick said. “I ask you to make your voices heard,” the governor continued. “Make your interests known. When the bill comes out for hearings — show up.”

This year’s summit, a two-day (Oct. 2-3) gathering of about 500 of the world’s leading stem cell researchers, patient advocates, pharmaceutical and biotech executives, and people from the venture capital world, marked a maturation point for both HSCI and the stem cell field as a whole.

“The goal is insight; the path is clear; the potential of stem cell research must be realized,” wheelchair-bound College (2000) and Kennedy School of Government (2004) grad Brooke Ellison told the meeting attendees in her keynote speech.

Ellison, who was paralyzed from the neck down as the result of an auto accident on the first day of her seventh-grade year, has written an autobiography, had her life featured in a movie directed by the late actor and stem cell advocate Christopher Reeve, run for New York state Senate, and started a nonprofit organization to advocate for stem cell research.

“I have been driven by the belief that there is no vision too big, or vision too lofty,” said Ellison, who received a standing ovation at the end of her address. “It takes only one single instant to have your life changed completely,” she said, noting that she has learned from her experience that “all of our lives are inherently fragile. Every single one of us will have our resilience questioned,” she added, but we can “have our resilience strengthened by the hope that stem cell research provides.”

Leading scientists were optimistic — and at the same time cautious — in predicting what the field might produce in the next 12 months.

Doug Melton, co-director of HSCI and co-chairman of Harvard’s new interschool Department of Stem Cell and Regenerative Biology, answered the question about what’s likely to be announced by saying, “I think it’s possible we will see the first disease-specific stem cell.” Lawrence Goldstein, director of the Stem Cell Program at the

University of California, San Diego, went a bit further, saying that “I would hope that we will actually see stem cells of some sort used responsibly in a novel kind of setting,” referring to patient therapy.

At the same time, however, Goldstein told those attending the session on “How Stem Cell Research Will Transform Medicine in the 21st Century” that he’d “like to see enhanced public understanding” of stem cells and what they’ll do. There has been too much hype about alleged stem cell therapies in other nations, Goldstein said, with absolutely no proof that they’ll work.

Melton said that he personally sees two avenues of stem cell science as the most exciting and promising — and neither involves actually using stem cells themselves as treatments. “The first way,” he said, “is rather obvious, to use stem cells … to understand” normal and abnormal development.

Diseases such as diabetes, Parkinson’s, cancer, and Amyotrophic Lateral Sclerosis, “are just plain difficult problems,” said Melton, with multiple causes, both genetic and environmental. “We’re working to create disease-specific cells so we can watch the pathology of disease develop not in a patient, but in a Petri dish. The development of disease-specific stem cells” can enormously increase insight into the natural development of diseases. “I predict that what will happen by studying that process is we’ll be able to harness those processes,” Melton said. The second major use of disease-specific stem cells, he said, would be as “targets” for drug development.

Last year’s first summit, co-sponsored by HSCI and Massachusetts General Hospital’s Center for Regenerative Medicine, was a relatively sedate, largely local affair, a gathering of about 150 people at the Academy of Arts and Sciences in Cambridge.

In stark contrast, this year the co-sponsors were HSCI, the Genetics Policy Institute — a patient advocacy group based in Washington, D.C. — and Burrill Life Sciences Media Group, a venture capital, media, boutique investment banking company. Participants this year included Ian Wilmut, “father” of Dolly the sheep, the world’s first cloned mammal; John D. Gearhart, director of the Stem Cell Program at Johns Hopkins University’s Institute for Cell Engineering; Goldstein; Susan Solomon, CEO of the New York Stem Cell Foundation; and leaders from the venture capital, biotech, and hospital arenas.

During a Wednesday morning session titled “The Hospital Perspective — An HSCI Case Study,” Massachusetts General Hospital President Peter Slavin said that federal opposition to stem cell research has drawn the Harvard-affiliated hospitals together in a common cause, just as California’s $3 billion stem cell initiative has been “a missile across our bows.”

Working together, through the collaborative that is the Harvard Stem Cell Institute, “we’ve been able to recruit people we never would have been able to attract,” said Slavin, and potential donors’ “sights have been raised” as a result of this collaboration. “It’s still a work in pro-gress,” he said, but “it is working very well” from his perspective.