

Whether new regulations would apply to work by University of Rochester's Steve Goldman, who presented at the meeting, was also left hanging. Goldman implants glial progenitor cells from patients with neuropsychiatric disorders into mouse embryos. This work allows him to uncover potential new pathways for intervention as well as create models for studying the molecular bases of the pathologies seen in these patients.

Ultimately, the list of unknowns about human chimeras made it clear that fundamental knowledge is still needed before this field can move forward to provide therapeutic solutions, particularly in the area of organ replacement. Leading a discussion at the meeting, Janet Rossant, from the Hospital for Sick Children in Toronto, asked a series of pointed questions: Are there fundamental blocks with interspecies chimeras, given that only chimeras between closely related species have succeeded so far? What is the ideal cell type for engraftment, a pluripotent or fully differentiated cell or something in between? And of course, even if whole organs were generated in an interspecific chimera, what are the real prospects of using them in the clinic, given the complex nature of an organ like a kidney or a heart, which have continued interaction with the host even after the organ is formed?

In a letter published in *Science* on the day the panel met, researchers from Stanford and the University of Minnesota pointed out that NIH's

role—"to identify, review, and fund research in biomedicine to advance the health of people"—argues for continuing funding in this field. They also pointed out the existence of several bodies that already oversee research involving chimeras: the Institution Review Boards (IRBs) for research involving human cells and tissues, the Stem Cell Review Organizations (SCROs) for studies with stem cells, and the Institutional Animal Use Committees (IACUCs). Researchers must also, the letter noted, comply with federal, state and local laws.

Perhaps most surprising was that NIH staffers at the meeting said that they had no

foreknowledge of the October moratorium, says Goldman. Members of staff told him that they are concerned that the funding moratorium might presage more regulations. They did make it clear that the panel was meant as a fact-finding mission, not a forum to make policy. Summing up the feeling of researchers is Salk's Belmonte. "It is important to have guidelines so that researchers have a clear path in this promising and fast-moving area, but a blanket ban on funding this work will slow much-needed progress in basic research," he says.

Laura DeFrancesco Senior Editor

Corrections

In the December 2015 issue, in the article "Predictive biomarkers for checkpoints, first tests approved," in Table 1, the highest threshold for PD-L1 positivity with the Ventana SP142 diagnostic for immune cells was given as 50%; the threshold is 10%. In addition, in Box 1, the name of the company Arcteris was misspelled as Arcteris. The errors have been corrected in the HTML and PDF versions of the article.

In the November 2015 issue, in the article "Drug makers target ubiquitin proteasome pathway anew," pevonedistat (TAK-924) was mis-identified as TAK-243, and the synergies referred to were seen in preclinical experiments, not in phase 1. The first two sentences in the penultimate paragraph "Less selective, perhaps, is targeting the E1 ubiquitin-activating enzyme. But Takeda is exploring these targets in combination with other therapies, having seen what senior scientist Allison Berger describes as "striking synergy" between an E1 ubiquitin-activating enzyme inhibitor TAK-243, in phase 1, and azacytidine in patients with acute myelogenous leukemia" have been replaced with "Targeting pathways linked to ubiquitin-like proteins remains at an early stage, too. Takeda is exploring the potential of pevonedistat (TAK-924), a first-in-class inhibitor of Nedd8 activating enzyme, in several cancers. A combination trial with azacytidine is underway in acute myelogenous leukemia, following what senior scientist Allison Berger called "striking synergy" seen in preclinical experiments." The errors have been corrected in the HTML and PDF versions of the article.

Around the world in a month



SWEDEN

Vinnova, Sweden's innovation agency, will expand biopharma research and manufacturing with \$37 million in funding over the next eight years. One key objective is to strengthen the links between industry and academia, said minister for higher education and research Helene Knutsson.



SOUTH KOREA

South Korea modifies its safety regulations for stem cell drugs, requiring producers of stem cell treatments to file a comprehensive plan addressing the potential risks and dangers of the drugs when seeking regulatory approval as well as to initiate follow-up surveys with patients taking the drugs. The new rules go into effect in 2017.



ZAMBIA

The government launches its National Biosafety Authority to regulate GM organisms and their products within Zambia. Policy formulation, notification and issuing permits for key biosafety matters will include input from the ministries of higher education, health, lands, natural resources and environmental protection as well as the ministry of local government and housing.



INDIA

India unveils its National Biotechnology Development Strategy 2015–2020, which aims to grow the sector into a \$100 billion industry by 2025. The plan emphasizes a strong infrastructure for R&D in vaccines, genomics, infectious and chronic diseases and crop science, among others, and scientific and technological training for the country's workforce.



VIETNAM

Beginning this month, food products containing at least one GM ingredient making up over 5% of total ingredients must include the phrase 'genetically modified' on their labels. Fresh and live GM plants and animals, unpackaged GM foods, and those produced for export only are not subject to the requirement.

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