many as half of these embryos would be used for reproductive or other purposes, leaving us with 100,000 embryos that our data suggest might be available for research.

More to the political point, prior to our report, the only existing attempt to estimate the availability of embryos for research in the United States, which was made based on the reports of infertility clinics—rather than infertility patients—had placed the number at less than 3% (*1*). Our data, which represent an attempt to introduce the perspective of infertility patients into this debate, provide a solid basis for concluding that this estimate is way too low and that, once their reproductive projects are completed, many infertility patients prefer donating their cryopreserved embryos to research over making them available for adoption or allowing them to be thawed and discarded.

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Modified Newtonian Dynamics Close to Home

IN HIS PERSPECTIVE "SEEING THROUGH DARK Matter" (3 August, p. 607), Stacy McGaugh describes the success of a modified Newtonian dynamics (MOND) in explaining the flat rotation curves of galaxies without invoking dark matter. In addition to noting that MOND is in accord with available data and observations, it is possible to directly test Newtonian dynamics in the laboratory, even at low accelerations. This has recently been done in a test of Newton's second law ($F = ma$), and perfect agreement with Newton was found down to accelerations of 10^{-13} m/s^2, three orders of magnitude below the scale at which MOND should set in (*1*). Similarly, Newton's gravitational law has been tested to very small accelerations (i.e., with very small masses at small distances), and no deviations from the law were needed to describe the solar system (*2*). Thus, while no observational data disagree with MOND, recent laboratory tests indicate that Newtonian dynamics also explain galaxy rotation curves and apply to accelerations in the galaxy tails.

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Response

CHRISTOF AEGERTER RIGHTLY POINTS OUT that no deviations from purely Newtonian behavior have been detected in the laboratory (*1*) to accelerations lower than the critical acceleration scale of MOND, where the mass discrepancy becomes evident in galactic systems. While a laboratory test of MOND would be highly desirable, Grundlach *et al*. (*1*) themselves point out that their result does not provide such a test. The reason is that their laboratory sits on the surface of the earth, where the acceleration we feel is 11 orders of magnitude above the MOND scale. It is the total acceleration that matters in MOND, so terrestrial experiments always exhibit Newtonian behavior even if their internal accelerations are arbitrarily small.

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A proper laboratory test of MOND requires that the apparatus itself be located in a region of very low acceleration, an extraordinarily difficult situation to arrange (*2*) on Earth. How far from Earth we need to be to detect MOND effects depends on the sharpness of the transition between the Newtonian and MOND regimes. In the optimistic case of a gradual transition, the Pioneer anomaly (the deviation of two Pioneer spacecraft in the outer solar system from their predicted trajectories) (*3*) might be a MOND effect (*4*, *5*). Other solar system constraints (*6*–*8*) appear to favor a sharper transition, and the natural location for a clean experiment would be deep in intergalactic space. While that is obviously impossible, real laboratory tests are feasible. For example, in the relativistic extension of MOND hypothesized by Bekenstein [the tensor-vector-scalar gravity theory (*9*)], strong MOND effects are anticipated in regions where the gravitational potential nears zero. Such cancellation can be found at a point between the Sun and Earth (*10*), so a critical test is achievable with an appropriate satellite experiment.

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Letters to the Editor

Letters (~300 words) discuss material published in *Science* in the previous 3 months or issues of general interest. They can be submitted through the Web (www.submit2science.org) or by regular mail (1200 New York Ave., NW, Washington, DC 20005, USA). Letters are not acknowledged upon receipt, nor are authors generally consulted before publication. Whether published in full or in part, letters are subject to editing for clarity and space.

CORRECTIONS AND CLARIFICATIONS

Table of Contents: (28 September, p. 1825). The author names were omitted from the Report titled "Genomic minimalism in the early diverging intestinal parasite *Giardia lamblia*." The authors of this Report are Hilary G. Morrison *et al.*

Reports: "The Slit receptor EVA-1 coactivates a SAX-3/Robo–mediated guidance signal in *C. elegans*" by K. Fujisawa *et al*. (28 September, p. 1934). SLT-1 was mistakenly defined as "Shiga-like toxin 1" in the first sentence of the abstract and in the third sentence of the first paragraph of the text. The corrected sentence in the abstract should read "The SAX-3/roundabout (Robo) receptor has SLT-1/Slit–dependent and –independent functions in guiding cell and axon migrations." The corrected sentence in the first paragraph should read "One such mechanism involves the SLT-1/Slit guidance cue, a large secreted protein with several predicted N- and O-glycosylation sites (*2*), and its receptor SAX-3, a homolog of the transmembrane (TM) roundabout (Robo) receptor (*3*–*6*)."

ScienceScope: "China's spending boom" (21 September, p. 1663). The data on China's research budget refer to 2006, not 2007.

Random Samples: "Monkeys have tin ears" (3 August, p. 577). The photograph mistakenly showed a chimpanzee instead of a monkey.

Reports: "Quantitative imaging of nitrogen fixation by individual bacteria within animal cells" by C. P. Lechene, Y. Luyten, G. McMahon, and D. L. Distel (14 September, p. 1563). Claude Lechene should be the only corresponding author listed. The asterisk beside Daniel Distel's name on p. 1563 and his e-mail address on p. 1564 should be deleted.

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