

and the organ of Corti is demonstrated to possess wider band width, and it becomes substantially greater than the intracellular receptor potential at mid- to high frequencies. However, as this voltage gradient appears across the motor-bearing basolateral membrane of passive (nonexcited) hair cells, it will be less than the receptor potential produced by a solitary hair cell, and its magnitude is inversely related to  $m$ . This means that, for a favorable case of  $n \gg m$ , the driving voltage to the motors of a passive cell approaches the hitherto assumed single cell response, while the driving voltage to the motors of an active cell becomes small. In general, the ratio of driving voltages in passive and active cells has a horizontal asymptote at low frequencies; the ratio rises in the mid-frequencies and approaches  $n/m$  at high frequencies.

The consequences of these findings are several. Voltage drops produced in passive hair cells by extracellular potentials resulting from a group of active cells will be attenuated at high frequencies with unity slope. Thus, these voltages would be unlikely to produce motility at ultrasonic frequencies, as we assumed. However, these voltages are greater at high frequencies than the intracellular receptor potentials in the active hair cells by a ratio of  $n/m$ . This means that,

at least in the approximate frequency range of 5 to 20 kilohertz, there is a potential of induced electromotility in hair cells that are removed from the region of peak excitation. The mediator for this motility is the extracellular potential gradient generated by hair cells in the region of maximum excitation ( $n$ ). Induced electromotility apical to the peak excitation cannot feed back to the vibration of the basilar membrane because of the low-pass filtering of the traveling wave. Electrical potentials spreading baseward, however, can produce feedback from OHCs in a limited spatial extent ( $m$ ). This displacement of the feedback region from the peak of the traveling wave is as postulated by modelers of the cochlear amplifier (4). The displacement also helps explain high-side two-tone suppression phenomena. Finally, the reactive voltage divider feature of epithelial cells subjected to external voltage commands, as in current injection experiments with the cochlea (5), studying isolated cells in the microchamber (6), or in situ in electroreceptors (7), permits high-frequency stimulation, as we suggested.

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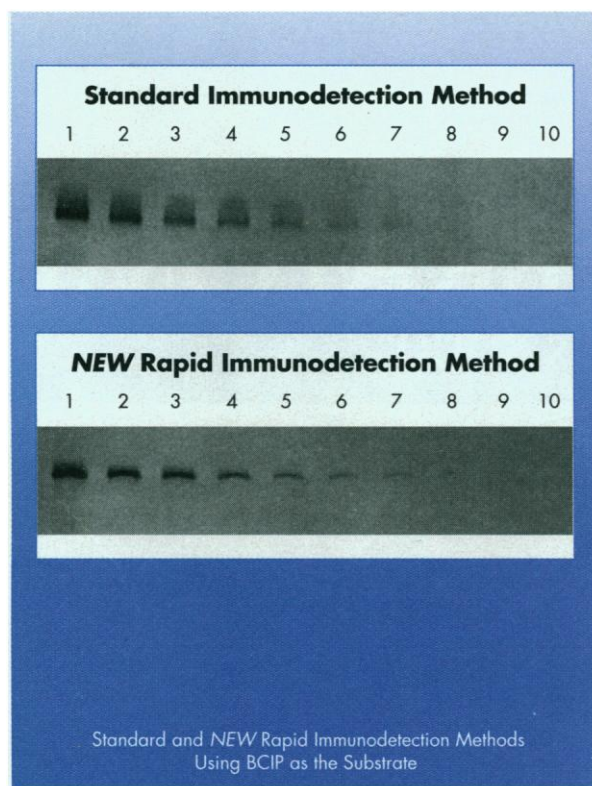
## Corrections and Clarifications

In the Table of Contents of the issue of 19 May (p. 950), the Policy Forum "Environmental implications of electric cars" by L. B. Lave *et al.* should have been listed as appearing on page 993, not page 995.

In the report "Crystal structure of DCoH, a bifunctional, protein-binding transcriptional coactivator," by J. A. Endrizzi *et al.* (28 Apr., p. 556), figures 2A and 2C on page 557 were inadvertently transposed.

In Daniel E. Koshland Jr.'s editorial of 28 April, "Noitall seeks new horizons" (p. 479), it was incorrectly suggested that the world's human population is 4.2 billion. It currently exceeds 5.6 billion.

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