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Sequencing on chips

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Capillary array electrophoresis (CAE) has made it possible for Celera Genomics to race through the human genome sequence faster than anyone had imagined possible. But as sequencing apparatus is made still smaller it becomes still faster, so now CAE is moving onto chips Liu *et al*. report the latest advance - packing multiple microchannels onto a single chip - in the May 9 Proceedings of the National Academy of Sciences (*Proc. Natl. Acad. Sci. USA* 2000, **97**:5369-5374). Their samples are transferred from a standard 96-well plate via an automated injector, into ports spaced every 4.5 mm. The 16 microchannels then converge towards a scanning region 10 mm wide. After optimizing injection speed, run temperature and other variables, Liu *et al*. achieve 99% accuracy for approximately 500 base-pair runs that take only 16 minutes. Larger chips capable of covering 600 bases in less than 25 minutes, in each of 48 or 96 channels, are in the testing phase.

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