

touching base

It's a Dog's Life

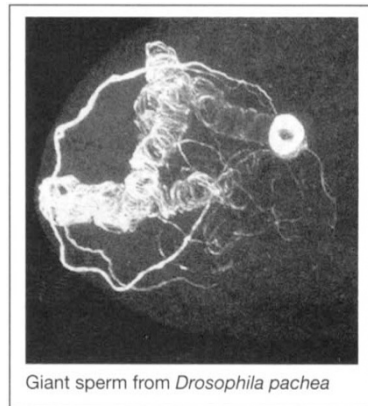
Forensic DNA testing has a strong reputation in the United Kingdom. DNA fingerprinting was pioneered there and there are many cases where concerned citizens have willingly donated blood samples in the hope of narrowing the search for violent criminals. But there are signs that this technology might be going too far, as evidenced by the crime wave currently rocking the picturesque village of Bruntingthorpe. One of the 150 residents is failing to clean up his or her dog's droppings from the streets. As a result, civic leaders led by Dr. Ian Eperon (whom *Newsweek* describes as the 'village geneticist') have therefore decided to combat this messy problem by compiling a DNA database featuring the 30 or so dogs that live in the village. Each dog will have a few hairs plucked so that DNA can be prepared. In the near future, fresh evidence from the canine offender will be matched against the genetic profiles in the database to nab the recalcitrant owner(s).

Psychiatric Pioneer

David Rosenthal, an influential researcher on the genetics of schizophrenia, has died. Working with Seymour Kety and Paul Wender, Rosenthal was well known for his work on the 'Danish adoption studies' in the 1960s. Rosenthal helped to establish a high quality adoption registry, in particular following the adopted children of schizophrenia parents, and produced an important series of papers which helped to demonstrate a partial hereditary basis for schizophrenia at a time when many thought the disease was a 'myth'. He also studied and wrote a book about the Genain Quadruplets, who all suffered from schizophrenia to varying degrees, and performed twin studies demonstrating discordance in disease incidence between male and female twins. In 1970, Rosenthal published an influential textbook on psychiatric genetics, entitled 'Genetic Theory and Abnormal Behavior.' Professor Kenneth Kendler (Virginia Commonwealth University) credits Rosenthal's team with producing "by far the most convincing evidence at the time for a strong genetic component for schizophrenia." Rosenthal died on February 26 of Alzheimer's disease at the age of 77.

Slinky Spermatozoa

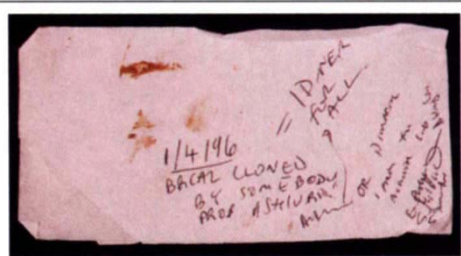
A human sperm, about 50 microns in length, is roughly half the diameter of a human oocyte. By contrast, the sperm of *Drosophila pachea* are 16.5 mm long, and, as recently reported by Tim Karr and Scott Pitnick (*Nature* **379**, 405-406; 1996), most of the tail is accommodated within the egg (0.5 mm diameter). In contrast, the sperm of *D. bifurca* are three times longer, but only 1.5 mm ends up inside the oocyte. "Something very interesting is going on," says Karr, who hopes that such studies will shed light on the evolution of sperm gigantism, and perhaps shed light on some forms of infertility. Of equal interest is how Karr and Pitnick obtained their results: they used a virtual reality 'cave', a specially designed 10x10x10 foot room at the National Center for Supercomputing Applications, University of Illinois. The 'cave' is a fully immersive virtual reality room: behind the walls are sophisticated colour projectors simultaneously projecting three colour images that merge in the room. The observer wears a pair of special polarizing glasses to see the three-dimensional illusion. "The coiling and topology of the sperm inside the egg are too complicated to follow by any other means", says Karr. The data are manipulated in supercomputers to produce exact measurements of sperm in egg impossible any other way.



Giant sperm from *Drosophila pachea*

April Fool

One evening in April 1995, a group of slightly inebriated British researchers gathered in a choice London restaurant. Among them was Alan Ashworth, from the Chester Beatty Laboratory in the Fulham Road, who, possibly a little the worse for wear and clearly satiated on chocolate ice-cream (note the napkin smudges in the picture), boldly predicted that the *BRCA2* gene would be cloned by somebody (probably himself) within the next twelve months. The deed was duly witnessed and initialed by half-a-dozen colleagues around the table. Ashworth proved to be not only correct but also rather conservative: the team with which he was working reported the cloning of the gene at the end of last year in *Nature*. While there has doubtless been plenty of celebrating since then, there is no word as to whether the young gastronome has made good on his promise and treated his friends to dinner.



Betting on *BRCA2*

Hot Stuff

The Institute of Scientific Information has just released its results for the 'hottest' research papers of 1995, based on the numbers of citations each article garnered during the course of the year. *Nature* dominated the listings by filling the first six positions. *Nature Genetics* had three papers in the top 33, on the subjects of mismatch repair in sporadic colorectal cancers (Liu *et al.* **9**, 48-55; #18), and fibroblast growth factor-2 gene mutations in Apert, Pfeiffer and Crouzon syndromes (A. Wilkie *et al.* **9**, 165-172; #29; P. Rutland *et al.* **9**, 173-176; #33). A paper from the inaugural issue of *Nature Medicine* on cystic fibrosis gene therapy ranked number 23. A major caveat in interpreting these statistics is that they are heavily weighted in favour of papers published at the beginning of the year. Thus, two papers from June 1995 on the cloning of the genes for ataxia telangiectasia and Alzheimer's disease did well but failed to crack the top ten.