

DNA raises the claims bar

A DNA test that identifies whether particular toxins have caused cell damage could have a considerable impact on litigation in disease claims. Kieran Jones and Kathleen Potter report

DNA testing is regularly in the news in connection with criminal investigations, but such testing has not been prevalent in the UK for disease claims.

Unsurprisingly those involved with the research say the new technology could have a potentially massive impact on compensation claims. They claim that DNA testing can reveal whether an individual has suffered harm as a result of exposure to a toxin.

The testing identifies how up to 36,000 parameters of an individual's DNA are affected by a chemical, so scientists can tell with 99.9% certainty if a person was harmfully exposed to a particular toxin.

The techniques allow researchers to scan an individual's DNA to establish whether specific genes have been altered due to such exposure.

This type of testing will be crucially important in identifying the cause of diseases, such as certain types of cancer, for which there are a number of possible causes – with work-related exposure to chemicals being just one.

Admissible evidence

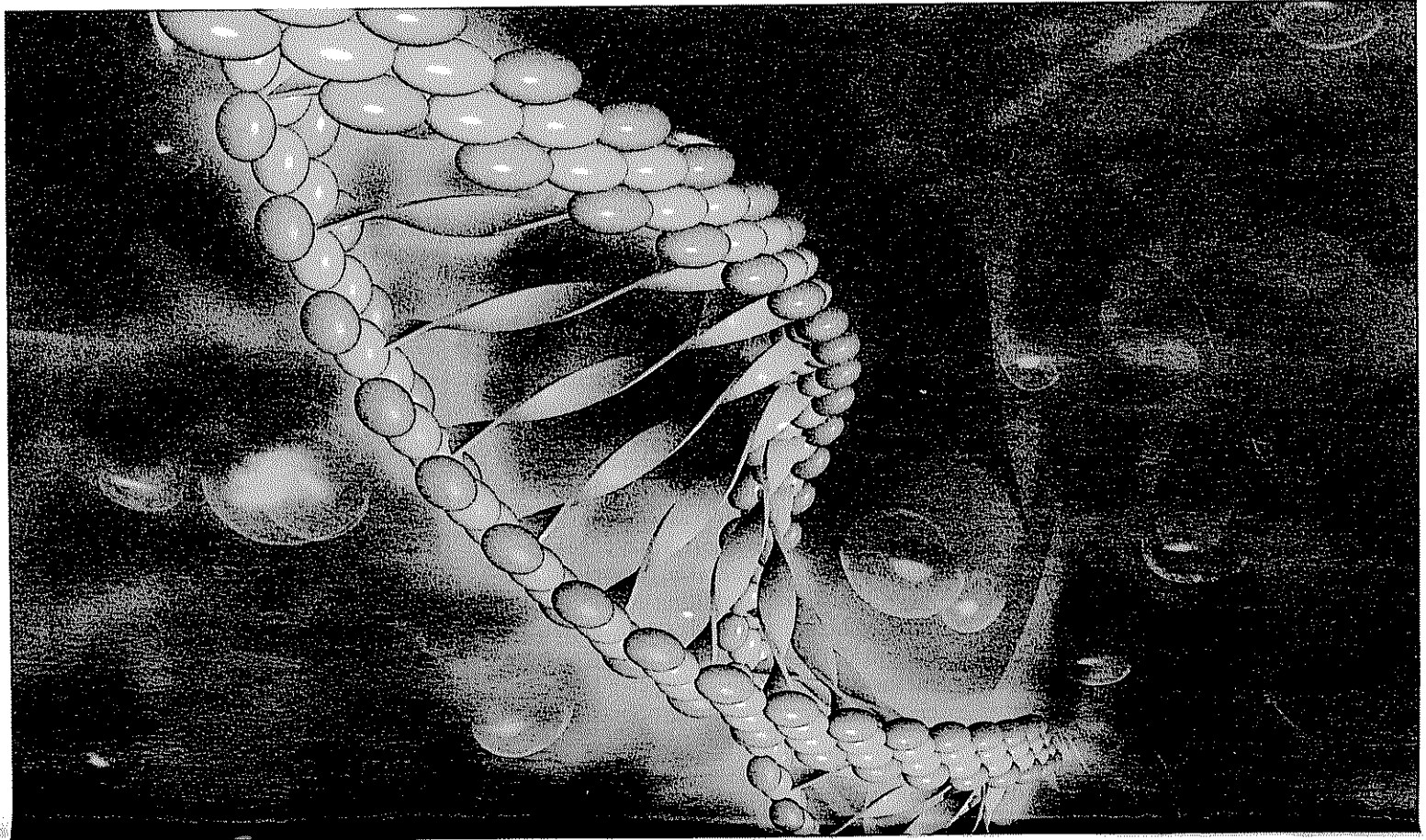
The admissibility of such scientific evidence in court cases in the US has been endorsed by the American Bar Association. In the England and Wales system the provision of such evidence is controlled by Rule 35 of the Civil Procedure Rules and, broadly, it will be for the court to decide having considered the methodology and basis for findings whether such evidence is admissible.

This of course presupposes that claimants will be willing to undertake DNA testing. While this is unlikely to be particularly invasive, there are certain public perceptions surrounding such testing and there may be suspicions as to how the results are used.

It could be argued that there should be no reluctance on the part of a claimant to undergo such tests. Virtually all medical examinations, within the context of disease litigation, require tests to be undertaken – be it a lung function test in a case of asthma or an asbestos-related condition, or an audiometric test for deafness.

DNA testing, if introduced, could objectively prove causation. But causation is complicated in disease claims.

For a claimant to succeed in recovering damages he does not simply have to prove causation, but must prove negligence or breach of duty. In a fair proportion of these cases a claimant may succeed, but may have more difficulties in proving that a defendant's breach caused the condition.



Likewise, a defendant who has no argument or breach may be found liable to pay damages, despite the fact that the claimant's condition could have been caused by a number of factors, other than exposure at the hands of the defendant.

The technology should also be of use in class action-type litigation, where it can prove difficult to distinguish those claimants who have genuine claims.

The propensity, now, is for all who have been exposed to potentially harmful substances to pursue claims regardless of the fact that their individual extent of exposure is likely to have varied.

Deserving claimants

In practical terms this results in similar levels of compensation being paid to all, whether affected by the exposure or not, and can lead to the more deserving claimants losing out.

With the new techniques it should be possible to identify which individuals were actually harmed and should be compensated.

Presumably, mass screening would be necessary as opposed to the current approach of relying on epidemiological evidence.

The prospect of being able to identify the

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impact of substances on DNA also gives rise to an interesting debate in respect of latent conditions, which may not have shown up.

We await the decision of the House of Lords with the pleural plaques test case litigation, but arguments will no doubt be pursued on behalf of claimants who, on testing, demonstrate changes to specific DNA which may act as a marker of their exposure.

Do we therefore face the prospect of widespread DNA screening to identify whether genes have indeed been altered?

The impact of testing is unlikely to be restricted solely to the issue of whether an individual was exposed to chemicals or not, and the effect of that exposure. It is also likely to lead to issues of the wider use of genetic information.

For example, where a claimant had a pre-disposition to the condition that he ultimately developed, it may be argued on behalf of the defendant that it was the

pre-disposition, rather than the exposure, which caused the injury.

Likewise, there may be information available from DNA samples which may help reduce the value of a claim, if it could be shown that regardless of a defendant's actions a claimant would have had limited life expectancy.

A developer of the DNA testing technique, Bruce Gillis, is keen to point out that only the condition being investigated is tested for, and only the DNA relevant to the exposure is tested.

It would appear that there is the ability for others to undertake wider tests and there is likely to be some debate about how DNA evidence is used. **IT**

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