

FIXING GENES

It's the second week in January 2021 and you don't feel well. You decide to pick up your credit card and scan the information held on it into your computer and send it off to the doctor. In no time at all he e-mails you a prescription designed to suit your genetic make up. A personal pill to cure your particular illness. Guaranteed to work for you and not cause any side effects. A fanciful scenario, perhaps, but not too fanciful.

The Human Genome Project is coming to fruition and, early this year, we may soon know every gene it takes to make up a human being. That knowledge will revolutionise medicine. Drugs will be easier to design once we're sure of the targets that we want to strike within our bodies. Side effects will be easier to avoid once we know the different ways people will react to medicine because of their genetic make up. And there's the prospect of fixing faulty genes that lead to conditions like cystic fibrosis, sickle cell anaemia, and cancer.

And it is not just knowing about human genes that will be useful. In an attempt to 'know thine enemy', laboratories around the world are checking out the genetic make up of the organisms which attack us. Antibiotic resistance may well be a thing of the past. We will watch bugs developing resistance and develop new drugs that will attack different sites along their DNA that have not developed any resistance.

