

DNA, genes and genomes - Detailed

In our cells

From microscopes to molecules

When researchers first looked at dividing cells through early microscopes, they noticed chromosomes or 'coloured bodies' that underwent intriguing changes when cells divide. We now know that those chromosomes form our genome - well actually, the two copies of our genome that we carry in each of our cells - that contain the entire set of genetic material necessary to make a human.

In most of our cells, people have 23 pairs of chromosomes; one of each pair is inherited from our mothers and the other from our fathers. These chromosomes are made up of long threads of DNA (deoxyribonucleic acid) wrapped in bundles around a protein scaffold.

Although the protein scaffold is important, the DNA in the chromosomes carries the genetic information.

