Genomics research is beginning to spawn a whole set of industries, dedicated to testing people for particular genetic information.

“The quest to harness the power of DNA to develop personalised medicine is on the threshold of a major milestone: the $1,000 genome sequencing”, according to Ron Winslow and Shirley Wang, writing in the Wall Street Journal.

This $1000 (approx £700) price tag is thought to put genome sequencing within the reach of ordinary people. And it’s a goal that the personalised genomics industry has been striving to reach.

Yet, it’s a goal that not everyone is happy with. Doctors and scientists regularly question the value of personal genomics screening, pointing out that the science is complex and in many cases we simply don’t know what the findings really mean for the individual.

Professor Adam Hedgecoe and colleagues at the ESRC-funded Cesagen centre have been investigating how the genomics industry talks about the future of the technology. “These companies are creating expectations. They are selling these products. But how do they create expectations and how do they do it at a time when there is significant resistance to what they are doing.”

Although politicians and doctors may question whether the genomics industry is ethical, it faces little regulation. This is a web-based industry and, like music file sharing sites, it is difficult to regulate.

The Human Genetics Commission has developed a code of conduct for the genomics industry. This code aims to ‘make sure that companies only market high quality tests, with good customer support and that they do not seek to misuse (or inaccurately describe) the power of modern genetics as a marketing tool.’ But as Professor Hedgecoe explains, “it’s hard to draw up a voluntary code of conduct because it is impossible to enforce any nationally based legislation.

“The kind of services offered by a company like 23andMe, which provides genomics testing without genetic counselling, is illegal in Germany. But what are the Germans going to do? They aren’t blocking mailshots or preventing people from sending their DNA for testing.”

The fact that it is illegal in Germany doesn’t mean that Germans can’t access the services offered by these companies, which raises questions about how we should regulate these web-based firms.

In the past, genetic tests typically took quite a long time to reach the market. Now, with new technologies, this has been greatly speeded up. Today, if a gene is linked to a disease, a test could be offered to the public virtually within days.

Professor Hedgecoe believes that genomics has great potential to inform and improve healthcare, but highlights that the science is complex. It is likely to be many years yet before we realise the full potential of this technology to improve healthcare.

In the meantime, research like Professor Hedgecoe’s at Cesagen is needed to understand how to help consumers navigate an industry which is rapidly putting personal genetic data within the grasp of the ordinary citizen.