

Patent system 'stifling science'

By James Morgan
Science reporter, BBC News

Life-saving scientific research is being stifled by a "broken" patent system, according to a new report.

"Blocking patents" are delaying advances in cancer medicine and food crops, says the Canada-based Innovation Partnership, a non-profit consultancy.

The full benefits of synthetic biology and nanotechnology will not be realised without urgent reforms to encourage sharing of information, they say.

Their findings will be reported next week to UK policymakers and NGOs.

The report is compiled by the Innovation Partnership's International Expert Group on Biotechnology, Innovation and Intellectual Property.

It cites examples of medical advances which have been delayed from reaching people in need - in both the developed and developing world.

These include HIV/Aids drugs and cancer screening tests.

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Pat Mooney, ETC Group

The authors offer guidelines for a transition from "Old IP" to "New IP", in which companies, researchers and governments recognise that sharing information is mutually beneficial.

"If we are to turn the atoms of publicly funded discovery into molecules of innovation... we have to make sure research avenues stay open," said the report's lead author, Professor Richard Gold.

"That doesn't mean there will be no patents. It simply means that patents don't become a barrier to early stage research.

"We do not want to end up in the same situation with nanotechnology that we are in with genetics."

Fortress IP

The traditional view is that strong patent protection stimulates innovation, reassuring companies that it is safe to invest in research without fear of being stung by rivals.

Under this "old" model of intellectual property (IP), biotech firms raced to file a "fortress" of patents around newly discovered genes, closing off avenues of research for their competitors.

But this strategy is ultimately counter-productive for both industry and consumers, argues the report, not least because it deters grass roots research in universities.

Work on the BRCA1 and BRCA2 genes that can cause breast cancer has been held up by legal disputes over patents held on the genes by Myriad Genetics, a biotech firm based in Utah, US.

Meanwhile, patients in European countries were denied access to the cancer screening kits, because national health services were unwilling to meet the cost.

The Myriad case is "an anatomy of old IP gone wrong", said Dr Gold, Professor of Intellectual Property Law at McGill University in Montreal.

"Myriad is not the exception - it is the rule. Others are following and will continue to follow, unless we drastically change things."

To facilitate sharing of information, he believes companies should be encouraged to form "patent pools", allowing them to cross-license their technologies without losing out on royalties.

An example is the pool established by the international partnership Unitaid to provide HIV patients in developing countries with access to affordable anti-retroviral drugs.

Partnerships

Governments should develop public-private partnerships to conduct early stage research, and seek other ways to encourage innovation - via tax credits, for instance.

Meanwhile, patent offices must standardise their information gathering and do more to help firms in developing countries gain access to accurate patent information, the report recommends.

Reform now would ensure that society feels the full benefit of new fields such as synthetic biology, a discipline that could lead to cells with novel genomes which perform useful functions, such as making biofuels or absorbing greenhouse gases.

Dr Craig Venter, the man who led the private sector effort to sequence the human genome, has already raised eyebrows by applying to patent the method he plans to use to create a "synthetic organism".

Fears that these patents may be too broad have been raised by the ETC Group, which campaigns for the reform of biotech patenting.

"The patenting system is not functioning. It is more of a barrier than an incentive," said Pat Mooney, the organisation's executive director.

"In pharmacy, we no longer see much discovery - we see firms playing safe and holding onto their turf.

"Meanwhile, in nanotechnology, we have seen some dangerously broad patents, which cut off whole areas of research.

"Patent offices must get up to speed with new areas of science, so they know exactly how much they are giving away."

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