

CURRENT SCIENCE

Volume 119 Number 5

10 September 2020

EDITORIAL

How justified is IPR towards ‘life’?

In 2011, a monkey in Indonesia, mostly by chance, clicked a button on the camera set up by David Slater, a wildlife photographer. The result was a fabulous *selfie* of the monkey, a crested black macaque, that became globally famous. While people were deeply savoring the unexpectedly infectious smile of the macaque in its own *selfie* image, an equally unexpected controversy brewed out of this: who is the ‘right’ owner of that *selfie*? Slater, the photographer who harvested the image from his camera or, the monkey, which clicked its own image? (Julia Carrie Wong, 2017, *The Guardian*, <http://www.theguardian.com/environment/2017/jul/12/monkey-selfie-macaque-copyright-court-david-slater>). While the controversy is yet to be settled (and indeed may never be), Slater apparently estimated his royalty to be beyond £11,000. But those who are kind to the animal, especially People for the Ethical Treatment of Animals (PETA), argued that the royalty should go to the monkey! – if it has a bank account that is.

Fun aside, the argument of the animal lovers is that whether or not the royalty could be credited to the animal’s account, at least the credit must be given to the monkey. But why just the credit? I do feel that the entire episode seems to serve as a pointer to reflect on the fairness or otherwise of IPRs (Intellectual Property Rights) towards the ‘life’ *per se* because the present policy is completely silent on another important component of IPR.

Among the range of IPRs offered to the ‘creations of the mind’ as defined by WIPO (What is Intellectual Property?, <http://www.wipo.int/about-ip/en/>), the most recent inclusion is the rights offered to those, who by their intellect, have translated certain unique feature of the biological material, into a product that enhances human welfare. Such an IPR provides the possessor, an opportunity to own, and if he/she wishes, to *en cash* his(her) ‘creation’. One of the best and globally discussed examples of such IPR on biological material comes from a component called P-57 extracted from a leafless xerophyte, *Hoodia gordonii* growing in the Kalahari deserts of Africa.

Hoodia, also called *Bushman’s hat*, by the shape of its floral whorl, has been used by the native San tribe for its ability to overcome hunger and thirst, and also for treating indigestion and infections. South African Council for Scientific and Industrial Research (CSIR) extracted an

ingredient labelled P-57 from the plant and sold the rights to a UK based *Phytofarm*, which in association with Pfizer released a product with the claim that it would suppress hunger. Suppressing hunger or appetite leads to restrained food consumption and hence to reduce obesity – a serious health problem of the most of the prosperous countries, USA, in particular. The episode became an example of fairness in sharing benefits among all the stake holders because South African CSIR identified even the San tribe as one of the beneficiaries of the profits from marketing the product.

All seemed fine. But no one cared for the real loser in the chain! Market promotion of the product created such a huge demand for the plant material that it prompted an over-extraction of Hoodia’s populations from the wild, so intensively that the plant became an endangered species. Note that the loop of beneficiaries of the profits from marketing the product included the scientists (or CSIR) for recognizing the unique feature of the plant, the companies for commercializing the product and the San tribe for their traditional knowledge. Sadly, there was least concern on the loser in the whole process – Hoodia *per se*! IPR regulations do not take into account the negative consequences of granting the rights on use of the biological material. Biological material is not in the list of beneficiaries; nor are there any regulatory clauses in the IPR that recognize and respect Hoodia’s Right to Protect Itself (RPI). In fact, as a consequence of such tilted policy of IPR, Hoodia reached the edge of extinction from the world – all due to the human-centric, capitalistic approach of the IPR system: pay those who cry but be blind to those who silently die.

Hoodia’s RPI is not a part of IPR because plants do not cry; nor do they have a lawyer to take up their case. So is the case with all the biological material of the world that humans so much depend on. IPRs are offered to ‘mind’s creations’ with least concern for the fate of the biological material from which that very creation is based on! In fact, no biological material except humans, can express and claim the RPI.

It is a different matter, that the claim made on Hoodia drug that it suppresses the appetite, did not stand the critical tests and the company was sued for its false claims (Kathleen Doheny, Hoodia: Lots of hoopla, little

science, <https://www.webmd.com/diet/features/hoodia-lots-of-hoopla-little-science#1>). But by then the damage was done. Based on the IPR, a global company, with the sole interest of pushing its profits had caused the destruction of the very plant from which its profits were to be harvested. Loss of the plant population also cost to the survival of an entire tribe as its daily life depended on this plant.

In some sense all have lost in the process: the company, the tribe and the plant. And there are enough legalities and lawyers to argue for the companies, for the tribe, but sadly *none for the plant*. What if there was an attorney exclusively arguing for the plant's 'Right to Protect Itself' in the wake of any IPR granted? Because there are neither lawyers who could fight for the cause of, nor are there any regulatory provisions to protect, the RPI of biological material, the asymmetry persists; humans who exploit the uniqueness of the biological material get rewarded while the biological material *per se* continues to be exploited.

This asymmetry, of providing the IPR to human creativity (IPR) and not offering RPI to biological material, has perhaps emerged because of the historical path. IPR to biological material emerged as a poor copy of offering patents to engineering designs. To illustrate this let us consider two parallel examples.

Patent given to an engineering invention: Let us say, based on Newton's third law of motion, an engineer develops a system to launch rockets and gets a patent for his invention. Clearly there are two critical components of the invention: one, the natural law: every action generates an equal and opposite reaction; second, the human intellect that used this law to create a machine that launches rockets. Note that offering patent to this invention does not in any way affect the natural law (the third law of motion). Any amount of repeated use of the natural law does not reduce or erode its 'power'!

IPR given on biological material: For this we shall consider the globally recognized IPR from India that is credited as the best model for Access Benefit Sharing. Scientists from Tropical Botanical Garden Research Institute (TBGRI), Thiruvananthapuram, 'discovered' that *Trichopus zeylanicus*, also called Arogya Paccha, is used by the Kani tribe to beat their tiredness and fatigue. Scientists obtained IPR for their invention and translated it into a commercial product called *Jeevani*. The invention earned financial benefits. In fact certain proportion of the benefit was also passed on to the Kani tribe.

Here again there are two components of the invention: one, the plant and the other, the intellect of the scientists. However unlike in the case of rocket launcher, production of *Jeevani* would cost to the very survival of *T. zeylanicus*.

In fact, even as the *Jeevani* reached market, there was negative feedback on the plant. Though tribal people were to cultivate plant populations, there was no fool-proof mechanism that ensured the sustainability of the species. In other words the story of *T. zeylanicus* paralleled that of Hoodia.

Thus offering IPRs on biological material is distinctly different from the patents on engineering inventions. In the former, if proper measures are not taken, the very source (biological material) on which the invention is based is likely to be eroded in time with the application of IPR, whereas in the latter, the natural law on which the invention is based, would never be affected – a distinction that has not been recognized when formulating the rules for granting IPRs based on biological material. The process of offering IPR on any biological material without recognizing its RPI is tantamount to our failure to recognize the distinctive and the invaluable feature of the source material. The specific phytochemical composition that has led to IPR, is a consequence of millions of years of evolution of that species and hence it is perhaps universally unique and an irreproducible feature. On the contrary, the inventor's effort and intellect that fetched him the IPR are neither unique nor irreproducible. If not for the TBGRI team, in due course of time, some others could invent the use of *T. zeylanica*. But without *T. zeylanica* no one could invent *Jeevani*. In other words, the inventor's success depends entirely on the biological material, but not the other way round. Unfortunately, it is not the universally unique feature of the plant that is recognized while offering IPR, but the replaceable effort of the inventor. And this failure to recognize the unique feature of biological system has also led to an asymmetry in valuing the two components of invention: the biological material and the human intellect. Clearly, biological material should be treated much more carefully and should be considered more important than human creation. The reason that it is not happening now, is because, there are no volunteers, nor regulatory bodies, to stand by the biological material.

It is therefore essential that regional, national and global bodies must be setup to assess the consequences of granting the IPRs based on biological material. These bodies should be assigned with the responsibilities of drawing strategies to ensure that RPI is granted to the biological material, and executed on its behalf. And debates need to be held on (a) the rights and responsibilities of humans in using biological material for their welfare, (b) appropriate measures to be taken to ensure that RPI is brought into action, and finally, (c) the methods to correct the injustice done to 'Life' in general while granting an IPR.

Finally, if we, the *Homo sapiens* are indeed sapein, then considering the RPI of other colleague-species with whom we share this planet, should be viewed as the utmost responsibility of us, the most civilized species on earth. Else, we may not deserve to be called *sapiens*.

K. N. Ganeshaiyah

School of Ecology and Conservation,
University of Agricultural Sciences, GKVK,
Bengaluru 560 065, India
e-mail: knganeshaiyah@gmail.com