

Captain Hook Awards for Biopiracy 2006

Captain Hook and fellow crooks are in Curitiba where cogs are keeping the COPs in line at the UN's Biodiversity Convention*

The Coalition Against Biopiracy (CAB) exposed the globe's nastiest biopirates and rewarded the most steadfast resisters at the Captain Hook Awards on Friday the 24th of March during the meeting of the Conference of the Parties (COP) to the Convention on Biological Diversity (CBD) in Curitiba, Brazil. This was the fourth global awards ceremony since the Captain Hook Awards were established in 1995.¹ This ETC Group *Communiqué* commends the most courageous cogs and details the dastardly acts of the most devious bio-buccaneers chosen to receive this year's awards.

Issue: After more than a decade of negotiations, the CBD has yet to provide meaningful regulations to stop *biopiracy* – the monopolization of genetic resources and knowledge taken from the farming communities and peoples that have developed and nurtured those resources. The Captain Hook Awards for Biopiracy are given out at the meeting of the CBD's COP to draw international attention to the Convention's failure to put human rights above monopoly rights and for continuing to propagate the myth that equitable benefit sharing is achievable in the context of predatory patent regimes. Cog awards are given to those institutions, peoples' organizations, governments and individuals who have fostered real opposition to biopiracy, defeated predatory patents or defended the intellectual and cultural integrity of farmers and Indigenous Peoples.

Impact: The CBD has provided a framework that facilitates the plunder of diversity because it legitimates intellectual property on life forms and fails to fully recognize Farmers' Rights and collective indigenous rights, including customary forms of knowledge and diversity exchange. The greatest current threat to diversity exchange is the move by the governments of Canada, Australia and New Zealand (joint winners of this year's Captain Hook award in the "Access of Evil" category) to undermine the CBD's six-year old *de facto* moratorium on Terminator technology. The "suicide seeds" are being developed to prevent farmers from re-using seed from their harvest, in order to maximize seed industry profits and to force farmers to return to the commercial seed market for every planting. Seed sterilization technologies are the most brilliant jewel in the biopirates' treasure chest.

Policy: At COP8, governments must demonstrate they care more about protecting and respecting the custodians of biodiversity than about fostering bilateral benefit sharing and meeting the needs of a few powerful economic actors in the gene business. The strongest evidence of a commitment to biodiversity would be establishing an all-out ban on Terminator technology.

*In the Middle Ages, cogs were small ships built with high sides to make them less vulnerable to pirate attacks.

2005 marked a dubious milestone in the history of biopiracy when the word was included in the *Oxford English Dictionary* for the first time. The good news is that the definition² suggests that biopiracy is now recognized as “a form of exploitation” (and as a synonym for *bioprospecting*). The bad news is that its inclusion in the premiere dictionary of the English language is a sign that the practice of biopiracy has become so entrenched that English-speakers recognize it as a distinctive phenomenon and can agree on usage. Not surprisingly, the Coalition Against Biopiracy had plenty of worthy nominees to pick from for the 2006 Awards. Here are the winners of the Captain Hook and Cog Awards for 2006,³ along with citations and supporting information.

CAPTAIN HOOK AWARDS

Worst Threat to Food Sovereignty: Syngenta

For its Terminator-like patent designed to prevent potatoes from sprouting, despite the company's pledge not to commercialize technologies involving sterile seed. US patent 6,700,039 describes a genetic modification method that prevents sprouting unless an external chemical inducer is applied.

And for Syngenta's multi-genome patent applications on thousands of gene sequences vital for rice breeding and extending to dozens of other plant species.

Syngenta is the world's second largest agrochemical corporation and third largest seed company. Despite its public pledge not to commercialize Terminator seeds (i.e., “Syngenta and its predecessor companies have a long-standing policy not to use the so-called ‘terminator’ technology to prevent seed germination”),⁴ the company holds more patents on Terminator technology than any other company. Syngenta's US patent 6,700,039 is particularly offensive to potato-producing communities in the Andes because the patent describes a technology that would prevent potatoes from sprouting unless treated with an external chemical inducer.⁵ In mid-March, more than 40 indigenous leaders, organized by the Quechua-Aymara Association for Nature and Sustainable Development (ANDES) in Peru and the International Institute for Environment & Development (IIED) in London, met in the Sacred

Valley in Cusco to sign a strongly-worded letter to Syngenta protesting the development of Terminator potatoes. The indigenous communities are calling on Syngenta to abandon its Terminator-like patent on tubers. According to Alejandro Argumedo, Associate Director of ANDES, “Syngenta could prove that they are on the right side by abandoning their patent on the terminator potato.”⁶

Syngenta also takes the 2006 biopiracy prize for its mega-genome patent applications on rice that could effectively allow the company to monopolize key gene sequences that are vital for rice breeding as well as dozens of other plant species.⁷

Greediest Biopirate: J. Craig Venter

For undertaking, with flagrant disregard for national sovereignty over biodiversity, a US government-funded global biopiracy expedition on his yacht, Sorcerer II, to collect and sequence microbial diversity from the world's oceans and soils. The genetic material will play a role in his most ambitious project to date: building an entirely new artificial organism.

Since 2002, Venter's Institute for Biological Energy Alternatives (IBEA) has been awarded \$12 million from the “Genomes to Life” program of the US government's Department of Energy (DOE) to create new life forms in the laboratory that could be engineered to produce energy or clean up greenhouse gases. Exotic microbes known as “extremophiles” were among those collected by Venter during his high seas biopiracy expedition and will serve as the raw materials for creating new energy sources and new life forms. In the Sorcerer's wake, governments are left with unresolved ethical and ecological concerns about the human-made creation of novel life forms, troubling questions about public domain diversity and private patenting and huge gaps in the capacity of society and the inter-governmental community to address new technologies.⁸

Biggest Threat to Genetic Privacy: Google, Inc.

For teaming up with J. Craig Venter to create a searchable online database of all the genes on the planet so that individuals and pharmaceutical

companies alike can “google” our genes – one day bringing the tools of biopiracy online.

Google’s motto, “Don’t be Evil,” may soon take a backseat to a new mission statement unveiled by CEO Eric Schmidt in early March 2006: “We want to be able to store everybody’s information all the time.”⁹ Already causing concern over the way it uses (or could use) the vast amount of Google-user information it has collected and stored over the years, the company has now set the sights of its all-seeing eyes even higher. Google’s massive computer power and cutting-edge data-mining capacity make it a logical partner for Venter and his ever-expanding collection of DNA samples taken from humans, animals and microbes that live in soil, sea and air. In *The Google Story*, the 2005 book by Mark Malseed and David A. Vise, Venter referred to the pairing of a giant search engine and massive amounts of genomic data as “the ultimate intersection of technology and health.” Venter expects that the details of one’s genetic code “should be broadly available through a service like Google within a decade.”¹⁰ Since the publication of *The Google Story*, however, Google has downplayed its role in the project, perhaps because the ethical issues related to genetic privacy are even stickier than the cyber-privacy issues currently bogging down the company.

Extreme Makeover Award: Delta & Pine Land

For vowing, since 1998, to commercialize Terminator technology. Initially, D&PL promoted genetic seed sterilization for use in the South to prevent farmers from re-using seed. After massive protest, the company changed its tune and said Terminator was primarily intended for Northern farmers. Now the company is greenwashing Terminator by promoting it as a biosafety tool to contain gene flow – for farmers everywhere!

The world’s largest cottonseed company based in Scott, Mississippi (USA), Delta & Pine Land co-owns, with the US Department of Agriculture, three US patents describing a genetic modification technique to render seeds sterile. D&PL recently published a glossy brochure on Terminator technology (which the company refers to as “Technology Protection System”) entitled “Providing the Potential to Enhance Biosafety & Biodiversity in Production Agriculture.” The brochure extols the virtues of seed sterilization as a

way to increase biosafety and biodiversity and to provide *more* choice to farmers! The logic is difficult to follow, but the idea is that companies will be more willing to invest in plant breeding – resulting in more plant varieties, presumably – if they can be assured of a higher return on their investment. The way to ensure increased profit is to force farmers to return to the commercial seed market for every planting. D&PL is the only seed company that has publicly and consistently embraced Terminator, though the reasons it provides to the public for doing so have undergone several transformations over the last eight years. A recent report from ETC Group reveals the most likely reason D&PL is doggedly pursuing seed sterilization technology: if Terminator were commercialized, the extra seed costs for farmers – in just seven countries that ETC Group considered in its investigation – could easily exceed US\$1.2 billion per year.¹¹

Most Shameful Act of Biopiracy: US Government

For imposing plant intellectual property laws on war-torn Iraq in June 2004. When US occupying forces “transferred sovereignty” to Iraq, they imposed Order no. 84, which makes it illegal for Iraqi farmers to re-use seeds harvested from new varieties registered under the law. Iraq’s new patent law opens the door to the multinational seed trade, and threatens food sovereignty.

A joint report by Focus on the Global South and GRAIN exposes the period’s most shocking and shameful act of biopiracy: One of many legacies left by Iraq’s occupiers is the introduction of a system of intellectual property rights over seeds.¹² Provisions for “Plant Variety Protection” (PVP) now imposed in Iraqi law via Order no. 84 mean that plant breeders have exclusive monopoly rights for a period of time – usually twenty years – on every registered plant variety. The result is that Iraqi farmers cannot legally plant or exchange seeds of any registered plant variety without making compensation to the breeder who is the legal owner of the variety. This new system will supplant the informal seed supply system – including seed-saving and free exchange of planting materials among farming communities – that had existed in Iraq for generations. As registering plants under PVP legislation is essentially the exclusive domain of corporations, Order no. 84 effectively hands control of Iraq’s agricultural system to the multinational

seed industry.

Worst Déjà Vu: Human Genographic Project

For resurrecting the old (much discredited) Human Genome Diversity Project (HGDP) with new corporate money. IBM and the National Geographic Society are spending \$40 million dollars and establishing ten research centers around the globe to collect and analyze more than 100,000 DNA samples from indigenous people, claiming this will help them understand their ancestry.

In 2005, the National Geographic Society and IBM announced they would collaborate on a project to collect, store and analyze DNA samples taken from Indigenous Peoples. Others – with less desirable DNA – are welcome to participate in the project by paying \$99 to submit a cheek swab. The ultimate goal is to create a global database of human populations. The stewards of the \$40 million project had hoped to steer clear of the controversies associated with the HGDP of the 1990s by stressing that this latest incarnation has great historical value and that the pharmaceutical industry will not have access to the DNA samples. The National Geographic Society says that the project will enhance understanding of the evolution and migration of human populations over hundreds of millennia. Indigenous Peoples have actively resisted the project, however, arguing that a “science-based” mapping of Peoples poses a serious threat to their rights, which are based on the fact of their original inhabitation of the land. Debra Harry, executive director of the Indigenous Peoples Council on Biocolonialism, explains that the project pits one knowledge system against another. Besides, she says, “We don’t need this speculative information – we already know where we come from.”¹³

Access of Evil Award: Canada, Australia, New Zealand

For repeated attempts to undermine the de facto moratorium on Terminator technology at the Convention on Biological Diversity (CBD). And for their betrayal of Indigenous Peoples at the CBD’s Working Group on 8(j) in Spain

Farmers have been selecting seeds and adapting their plants for local use for over 200 generations. An

estimated 1.4 billion people in the developing world depend on farmer-saved seeds as their primary seed source. For these reasons, there has been a *de facto* moratorium on seed sterilization technologies at the CBD since the year 2000. The governments of Australia, New Zealand and Canada have insisted on new wording in proposed recommendations to the CBD that threaten to undermine the moratorium. The “Terminator Trio” is pushing for “case by case risk assessment” of GURTs (Genetic Use Restriction Technologies) with the intention of allowing Terminator to be approved for field-testing at the national level, without consideration of social and economic impacts.

It is not difficult to understand why Terminator seed technology is the biotech industry’s Holy Grail. The multinational Gene Giants want to increase market share – and that means penetrating new markets in the South. The commercial seed market is worth about US\$21 billion, but the total market – including farmer-saved seed and state-run seed programs – is valued at almost twice that, or around \$US45 billion. If farmers who now use farm-saved seeds were forced to buy new seeds every time they planted, what economic impact would it have on those countries? According to a new report prepared by ETC Group: Brazilian soybean farmers who are now using farm-saved seed would see their seed costs increase by approximately \$US407 million each year. Argentina’s soybean farmers would pay an extra US\$276 million. Wheat farmers in Pakistan would face a price rise of US\$191 million, while cotton farmers in that country would pay out an additional US\$33 million. Rice farmers in the Philippines will pay another US\$172 million. Farmers in the North will also suffer. Terminator wheat, alone, will conservatively cost Canadian farmers an additional US\$85 million dollars per year.¹⁴

Biggest Tiny Claim On Nature: Nanosys, Inc.

For securing a US patent on ‘metal-oxide nanorods’ covering more than a third of the chemical elements of the periodic table.

Nanotechnology, the manipulation of matter at the most fundamental level of nature (i.e., atoms and molecules), is expected to be the transformational technology of the 21st century, revolutionizing manufacturing across all industry sectors. Globally,

billions of dollars are pouring into basic research and the number of nanotech-related scientific articles, patents, and investment portfolios is surging. When Harvard University's Charles Lieber obtained a key patent (US patent 5,897,945), on nano-scale metal oxide nanorods, he didn't claim nanorods composed of a single type of metal – but instead claimed a metal oxide selected from up to 33 chemical elements.¹⁵ Harvard's claims on nanorods include those comprised of titanium, zirconium, hafnium, vanadium, niobium, tantalum, chromium, molybdenum, tungsten, manganese, technetium, rhenium, iron, osmium, cobalt, nickel, copper, zinc, cadmium, scandium, yttrium, lanthanum, a lanthanide series element, boron, gallium, indium, thallium, germanium, tin, lead, magnesium, calcium, strontium and barium. In a single patent, Lieber's claims extend to nearly one-third of the chemical elements in the Periodic Table. Patent lawyers have identified Harvard's patent (licensed to Nanosys, Inc.) as one of the top 10 patents that could influence the development of nanotechnology.

Worst Betrayal: **Genencor et al.**

For patenting, cloning and selling “extremophile” microorganisms that were collected from lakes in Kenya without the permission of Kenyan authorities or the collaborating Kenyan researcher. The microorganisms produce industrially-important enzymes (used to fade blue jeans) that reap millions of dollars for industry but nothing for Kenya.

In the late 1980s, scientists connected to Leicester University (UK) collected microorganisms living in the hot geysers of two of Kenya's lakes.¹⁶ The organisms produce enzymes that were found to be great fabric softeners and “faders” – giving fabrics a stone-washed appearance popular with consumers. By 1995, the microorganisms were in the hands of Dutch company Royal Gist-Brocades, and were passed on to US company Genencor when it bought the Dutch company in 1995. Genencor patented them and then began producing them (through cloning) on an industrial scale. Genencor, since acquired by Denmark-based Danisco (2005), sells them to detergent manufacturers and textile companies. The Kenyan Wildlife Service maintains that the collectors never had the proper permits to take the microorganisms for commercial use in the first place. To make matters murkier, the Kenyan researcher who proposed the original bioprospecting

expedition so that she could write a dissertation on the topic of extremophiles living in Kenya's lakes – she was a Ph.D. student at the time and is now a professor of Botany in Kenya – suspects that her supervisors at Leicester University took the samples without her knowledge.¹⁷ She cannot recall anyone asking her for permission to use them. It seems that her UK supervisors conducted clandestine research on the samples, discovered their commercially useful properties on their own and then sold them.

Most Hypocritical: **Joint Winners:**

University of California-Davis

For patenting a blight-resistant gene extracted from a rice variety developed by the Bela peoples of Mali, and for failing to deliver on the Genetic Resources Recognition Fund to benefit Mali's farmers. The Philippines-based public plant breeding institute – the International Rice Research Institute – handed over the blight resistant rice sample to UC-Davis researchers in 1990. But when IRRI requested access to the blight resistant gene derived from the sample, UC-Davis demanded a \$10,000 fee.

In March 1997, the University of California (Davis, CA) issued a press release about its newly created Genetic Resources Recognition Fund with the provocative headline: “Fund Aims to Repay Developing Nations for Valuable Genes.” In 1990, plant pathologist Pamela Ronald attended a meeting at the International Rice Research Institute (IRRI) in the Philippines where researchers were trying to locate a disease resistant gene in a rice variety from Mali. Pamela Ronald was given samples of the African rice and, in 1995, Ronald successfully isolated the “Xa21” gene, the first cloned gene known to convey resistance to bacterial blight of rice caused by *Xanthomonas oryzae* P.v. *oryzae* (Xoo).

The University of California proceeded to patent the Xa21 gene and offer licenses. Troubled by the ethics of genetic property rights, Ronald prompted UC-Davis to develop the “Genetic Resources Recognition Fund” to recognize and compensate developing nations for the use of their valuable genes.¹⁸ Companies that licensed the gene would be encouraged to contribute to the fund if and when they began to profit from commercialization of the gene. Once funds accumulated, the university would identify the developing country or countries that

should benefit from the fund. As it turned out, the Xa21 gene was never licensed, and no funds were ever distributed to communities in Mali. In 2004, the *Sacramento Bee* reported that IRRI, the public plant breeding institute that originally provided the rice sample to UC-Davis, was charged a \$10,000 fee to get access to the patented Xa21 gene that was isolated from Mali's rice variety.¹⁹

As ETC Group (then RAFI) wrote in 1997: The Genetic Resources Recognition Fund is not a solution. The fund is based on a patent, and patents are not benefit sharing agreements. The fund links compensation for the use of the South's genetic resources to the goodwill of corporations and financially-strapped Northern public universities. The Fund offers neither the accountability nor financial stability that is necessary to insure long-term conservation, utilization and further development of plant genetic resources in the South. The Gene Recognition Fund may have been established as a well-meaning gesture, but it's still a Northern institution controlling money and decisions about how to reward someone else's innovation.

The Biotechnology Industry Organization (BIO):
For writing Bonn-inspired bioprospecting guidelines for use by BIO member companies and then inviting the companies to ignore them.

In 2005, Washington, DC-based BIO published its bioprospecting guidelines for use by member companies. Virtually ignoring the existence of the Convention on Biological Diversity (the US is not a party to the CBD, though it is a signatory), BIO states, "Since bioprospecting is not presently regulated in a consistent or comprehensive manner within countries or at the international level, member companies have extensive discretion to shape their conduct to meet whatever requirements countries impose with respect to bioprospecting activities."²⁰ Rendering its own guidelines practically useless, BIO explains that they were "developed with the understanding that each member company is not required to follow the Guidelines, and that the Guidelines would not in any sense be enforceable against an individual member company. For example, there is no provision in the Guidelines that gives BIO any authority to take action against a member company for engaging in conduct inconsistent with that specified in the Guidelines. Indeed, a significant purpose of the guidelines is educational..."

COG AWARDS

Cog awards are given to those institutions, peoples' organizations, governments and individuals who have fostered real opposition to biopiracy, defeated predatory patents or defended the intellectual and cultural integrity of farmers and Indigenous Peoples.

Best Peoples' Defense:

Joint winners:

In Defense of Maize Network and the Huichol People (Mexico)

For widening the scope of their fight – from a protest against GM contamination of native maize to an integrated territorial struggle that holistically encompasses self-government, water, forests, fauna, paths, sacred land, language and teaching.

Deccan Development Society (India)

For two decades of organizing successful seed sovereignty systems among Dalit women's communities in Medak District of Andhra Pradesh. Also for their groundbreaking grassroots research into the effects of Bt cotton that persuaded the government of Andhra Pradesh to kick Monsanto out of the state.

On March 20, 2006 the Deccan Development Society presented a petition to the Prime Minister of India signed by half a million farmers and citizens from the South Indian states of Andhra Pradesh, Karnataka and Tamil Nadu. The petition calls on the Indian government to uphold and strengthen the *de facto* moratorium on Terminator seeds at the UN Convention on Biological Diversity. For more information about the Deccan Development Society: <http://www.ddsindia.com/www/default.asp>

Best Defense of Food Sovereignty:

La Via Campesina

For their global Seeds Campaign begun in 2003, asserting the rights of small farmers to select, sort, exchange and re-sow their seeds and resisting control by the multinational seed and biotech industry.

La Via Campesina is the world's largest international peasant farmer movement. To learn more about Via Campesina: http://viacampesina.org/main_en/index.php

**Best Advocate:
The African Group at CBD**

For defending biodiversity and Farmers' Rights by leading strong opposition to Terminator technology at the UN Convention on Biological Diversity since 1998.

**Lifetime Achievement Award:
Community Biodiversity Development and Conservation Programme**

For ten years of farmer-led research around the world, developing and sharing farming methods to enhance agricultural biodiversity, protect seeds, cultures and livelihoods and affirming food sovereignty.

The Community Biodiversity Development and Conservation Programme (CBDC) is a global initiative developed by governmental and non-governmental organisations involved in agricultural initiatives in Africa, Asia and Latin America, in cooperation with Northern partners. CBDC is dedicated to strengthening the ongoing work of farming communities in conserving and developing the agricultural biodiversity that is vital to their livelihood and food security. For more information: <http://www.cbdcprogram.org/>

**Best Exposé:
Edmonds Institute and African Centre for Biosafety**

For their research resulting in the 2006 report, Out of Africa: Mysteries of Access and Benefit Sharing, which documents 34 recent cases of biopiracy involving African plants, animals and microbes.

Out of Africa: Mysteries of Access and Benefit Sharing was written by Jay McGown, and published by the Edmonds Institute in cooperation with the African Centre for Biosafety.²¹ The 50-page report documents cases of biopiracy and describes a continent-wide free-for-all of biodiversity and traditional knowledge acquisition, apparently without the prior informed consent of those from whom biodiversity (or traditional knowledge) has been taken. *Out of Africa* is available here: <http://www.edmonds-institute.org/>

**Most Satisfying Victory, Finally:
Magda Aelvoet, former president of the Green Group in the European Parliament, Dr. Vandana Shiva, of the Research Foundation for Science, Technology and Natural Resource Policy and Linda Bullard, of the International Federation of Organic Agriculture Movements**

For challenging, in 1995, a patent at the European Patent Office (EPO) on the preparation of a fungicide derived from the seeds of the neem tree. For centuries, farmers have used neem oil for its fungicidal properties. The patent was revoked by the EPO in 2000, but it took almost five more years for the EPO to finally dismiss an appeal of the 2000 revocation.

The 8 March 2005 decision by the EPO's Technical Board of Appeals dismissed an appeal brought by the original defendants – biotech company Thermo Trilogly and the United States. The EPO ruling represents the first conclusion of a biopiracy case in the history of the EPO.²²

ENDNOTES:

¹ Past Captain Hook Award ceremonies were held in Kuala Lumpur in 2004 (COP7), The Hague in 2002 (COP6) and in Nairobi in 2000 (COP 5).

² According to the *Compact Oxford English Dictionary* online, the definition of *biopiracy* is: bioprospecting, regarded as a form of exploitation of developing countries.

³ The Coalition Against Biopiracy acknowledges that winning a Captain Hook Award is not an allegation of illegality. Most of the biopirates who won awards in Curitiba have done nothing illegal. Some nominees have claimed monopoly patents or taken actions that may be considered morally offensive or technically unacceptable, but in many cases, the Hooks have acted out of ignorance. The problem is that intellectual property regimes and internationally trade agreements legally condone patents that are predatory on the indigenous knowledge or sovereign genetic resources of other people.

⁴ From Syngenta's web site, http://www.syngenta-fi.com/en/about_syngenta/our_views.aspx.

⁵ Sanjay Suri, "Trouble Cooking Over Potatoes," International Press Service, March 22, 2006; available on the Internet: <http://www.ipsnews.net/news.asp?idnews=32592>.

⁶ IIED, "Disown patent on 'terminator' potato, indigenous farmers tell business leader," March 21, 2006. <http://www.iied.org/mediaroom/releases/210306.html>

⁷ ETC Group, "Syngenta – The Genome Giant?" ETC Group *Communiqué*, January/February 2005. On the

Internet:

<http://www.etcgroup.org/article.asp?newsid=493>. See also: Berne Declaration (Switzerland), Swissaid (Switzerland), the German NGO “No Patents on Life” and Greenpeace, “Syngenta – a step closer to ‘owning’ our food,” 11 August 2005. On the Internet: http://www.swissaid.ch/news/e/documents/pm_reisgenom_110805_e.pdf.

⁸ ETC Group *Communiqué*, “Playing God in the Galapagos,” no. 84, March/April 2004. See also, James Shreeve, “Craig Venter’s Epic Voyage to Redefine the Origin of the Species,” *Wired*, Issue 12.08, August 2004.

⁹ Mark Malseed, “Google’s wealth of information raises privacy concerns,” *The Morning Call Online*, March 14, 2006; available on the Internet: <http://www.mcall.com/news/opinion/anotherview/all-a-amar14.0.1467397.story?coll=all-newsopinionanotherview-hed>.

¹⁰ Quoted in David A. Wise, “What lurks in its soul?” *Washington Post*, November 13, 2005, available on the Internet as of March 14, 2006: <http://www.washingtonpost.com/wp-dyn/content/article/2005/11/11/AR2005111101644.html>.

¹¹ See Ban Terminator Campaign news release, “Terminator Seed Battle Begins: Farmers Face Billions of Dollars in Potential Costs,” 22 March 2006; available on the Internet:

<http://www.etcgroup.org/article.asp?newsid=548>.

¹² Focus on the Global South and GRAIN, “Iraq’s new patent law: A declaration of war against farmers,” October 2004. <http://www.grain.org/articles/?id=6>.

¹³ Debra Harry quoted in Stephen Leahy, “Testing Blood to Track History,” *Wired News*, April 19, 2005, <http://www.wired.com/news/medtech/0,1286,67250,00.html>. See also, Indigenous Peoples Council on Biocolonialism, “Indigenous Peoples Oppose National Geographic & IBM Genetic Research Project that Seeks Indigenous Peoples’ DNA,” Press Release, April 13, 2005

and Chris Richards, “Interview with Debra Harry and the Indigenous Peoples Council on Biocolonialism,” *New Internationalist*, December 2005.

¹⁴ ETC Group, “The Potential Economic Impact of Terminator Seed Technology: Estimates for Selected Crops and Countries,” March 2005.

¹⁵ For more information on nanotechnology and intellectual property: ETC Group, “Nanotech’s ‘Second Nature’ Patents: Implications for the Global South,” June 2005. <http://www.etcgroup.org/article.asp?newsid=509>.

¹⁶ Jay McGown, *Out of Africa: Mysteries of Access and Benefit-Sharing*, edited by Beth Burrows and published by the Edmonds Institute in cooperation with the African Biosafety Institute, 2006. <http://www.edmonds-institute.org/outofafrica.pdf>.

¹⁷ Marc Lacey, “Lake Bogoria Journal; An Age-Old Salt Lake May Yield a Washday Miracle,” *New York Times*, February 21, 2006. See also, Christine W. Gichure, Ph.

D., Kenyatta University, “Who Benefits from African Research?” 2005, and Cormac Sheridan, “Kenyan dispute illuminates bioprospecting difficulties,” *Nature Biotechnology*, doi:10.1038/nbt1104-1337, 2004.

¹⁸ For more information on the Genetic Resources Recognition Fund:

<http://indica.ucdavis.edu/publication/index.php?page=grrf>

¹⁹ Editorial, *Sacramento Bee*, “The Public Domain: Time to Re-examine Industry-faculty Ties,” June 13, 2004.

²⁰ <http://www.bio.org/ip/international/200507memo.asp>.

²¹ Jay McGown, *Out of Africa: Mysteries of Access and Benefit-Sharing*, edited by Beth Burrows and published by the Edmonds Institute in cooperation with the African Biosafety Institute, 2006. <http://www.edmonds-institute.org/outofafrica.pdf>.

²² Research Foundation for Science, Technology and Ecology, The Greens/European Free Alliance in the European Parliament and International Federation of Organic Agriculture Movements, “Landmark Victory in World’s First Case Against Biopiracy: European Patent Office Upholds Decision to Revoke Neem Patent,” 8 March 2005.

The 2006 poster showing all Captain Hook and Cog Award winners is available for download at <http://www.captainhookawards.org>

The Action Group on Erosion, Technology and Concentration, formerly RAFI, is an international civil society organization headquartered in Canada. The ETC group is dedicated to the advancement of cultural and ecological diversity and human rights. The ETC group is also a member of the Community Biodiversity Development and Conservation Programme (CBDC). The CBDC is a collaborative experimental initiative involving civil society organizations and public research institutions in 14 countries. The CBDC is dedicated to the exploration of community-directed programmes to strengthen the conservation and enhancement of agricultural biodiversity. The CBDC website is www.cbdcprogram.org.