

Examples of patents on plants, etc.

Umbilical Cord Cells

Homo sapiens

US 5,004,681, EP 343217, etc.

As unbelievable as it may seem, human umbilical cord cells have been patented by the US company Biocyte. Any doctor wishing to use umbilical cord blood cells in surgery or transfusions must pay royalties. The cells may be crucial in treating bone marrow diseases.

Cloning

All animal species, including humans

WO 9707668, WO 9707669, others pending

The UK's Roslin Institute is so sure it has an economic winner it is claiming its cloning patents in even the weakest of economies - North Korea and Liberia, for instance. The patents are licensed to PPL Therapeutics, a company which has agreements with major drug multinationals like Novo Nordisk, Boehringer Ingelheim, and American Home Products. More licenses may be granted. Unlike many bioengineering patents, which are specified for "non-humans", Roslin says its cloning patents cover all animals, including humans.

Cotton

Gossypium hirsutum

US 5,159,135, EP 270355, CN 87107233, etc.

Challenged in the US and Europe, but so far still standing, Monsanto's patent on all genetically-engineered cotton should never have been granted. Even the US Government, which is seldom hesitant to help US companies, agrees that the patent should be revoked and has asked its own patent office to do so. Monsanto wants to keep the patent, meaning it will take years and millions of dollars before the case is closed.

Soya

Glycine max

EP 270355, DE 3888040, CN 1030940, etc.

Action by RAFI prevented this species patent on transgenic soya from being issued in the US; but this patent, another in Monsanto's long list of sweeping monopoly claims, has been issued in Europe and many countries. Originally issued to the WR Grace Corp, the patent drew an almost 300 page opposition from Monsanto at the European Patent Office. In 1996, Monsanto did an abrupt turn around on the patent after buying WR Grace's agbiotech division. Now Monsanto says it will defend the patent that it previously opposed as "obvious".

Brassica

rapeseed, broccoli, cauliflower, cabbage, etc.

US 5,188,958, EP 270615, JP 1500718, WO 8707299

One of the most sweeping of a number of extremely broad patents issued in the last decade, Monsanto Corporation's patent on transgenic brassica covers any plant in the entire brassica genus genetically-engineered using the agrobacterium method.

Sangre de Drago

Croton sp.

WO 9206695, EP 553253, US 5,211,944

Shaman Pharmaceuticals went to the Amazon to get sangre de drago ("dragon's blood"), an indigenous peoples' medicinal plant from which Shaman has isolated its patented pharmaceutical. The company talks about "reciprocity" in its relations with the indigenous peoples who it taps for resources and knowledge; but so far the indigenous people who are Shaman's sangre de drago sources have received a few thousand dollars while Shaman has raised millions in the US capital market.

Neem

Azadirachta indica

US 5,411,736, US 5,409,708, EP 436257, etc.

A very widely known and long-cultivated tree with medicinal and agricultural uses in Asia, and especially, India. Today's sad truth is that neem is almost as well known in Northern patent offices, where multinationals have filed dozens of patent claims on neem. Most recently, Monsanto has taken out a pair of patents on neem wax and oil and claimed broad fungicidal and insecticidal uses.

Snakegourd

Trichosanthes kirilowii

US 5,317,009, WO 9304085, EP 647272, etc.

Called "the powder from the flower of the Gods" in Chinese, the National Institutes of Health (US) and New York University have brought snakegourd firmly down to earth with a series of patents that stretch across the globe. The "inventors" claim a snakegourd-derived compound to treat HIV. As with the bitter melon patent,

snakegourd's "inventor" is quite frank about how the plant "has been used in China for many, many years... and is well-known for its therapeutic effect."

Kava

Piper mytheisticum

US 5,585,386, EP 672406, JP 8040894, etc.

The basis of the ceremonial beverage of the same name, Kava is grown in many Pacific countries, including Vanuatu, Samoa, Fiji, Papua New Guinea, Solomon Islands, Federated States of Micronesia, as well as Irian Jaya (Indonesia). Drug companies are racing to patent Kava's many beneficial uses. French cosmetics giant L'Oreal (Nestle is a major stockholder) has patented the use of Kava to reduce hair loss.

Turmeric

Curcuma longa

US 5,401,504

An ancient and Indian ayurvedic medicine, turmeric has been patented by researchers from the University of Mississippi (US). For thousands of years, Indians have applied ground turmeric root to cuts and scrapes to promote healing. But the US patent gives a monopoly to Mississippi for a "method of promoting healing of a wound by administering turmeric to a patient afflicted with the wound." The Indian Council of Scientific and Industrial Research has asked the US to revoke the patent

Barbasco

Clibadium sylvestre

EP 610059, GB 9301920, US application filed

A well-known plant cultivated by Amazonian indigenous people for hundreds of years and used in agriculture and medicine. It is best known as a highly effective poison that stuns and paralyzes fish. Conrad Gorinsky, president of the UK's Foundation for Ethnobiology, has patented a barbasco compound and is marketing it to pharmaceutical multinationals Zeneca and Glaxo. Gorinsky's patent claims many uses including, not surprisingly, regulation of muscular activity.

Mamala

Homolanthus acuminatus / Omalanthus acuminatus
EP 531413, US 5,599,839, WO 9118595, etc.

Like Shaman Pharmaceuticals, the primary "inventor" behind this patent on a Pacific medicinal plant goes to great pains to say how important indigenous knowledge is to their research. They may even be providing some return to Samoan people; but the patent says the "prostratin" compound isolated from this Pacific medicinal plant - found from New Caledonia to Tahiti - belongs to the **US Department of Health and Human Services**, the **US Army**, and Brigham Young University.

Ayahuasca

Yagé / Banisteriopsis caapi
US Plant Patent #5,751

A medicinal plant cultivated since pre-Columbian times across the Amazon basin. A small US company, the International Plant Medicine Corporation (IPMC) took out a US plant patent on a variety of ayahuasca collected from indigenous people in Ecuador. IPMC has ignored requests from indigenous people to give up the patent and is working to develop psychiatric drugs from the plant.

Quinoa

Chenopodium quinoa.

US 5,304,718, WO 9314624, AU 9222922

A staple food crop for millions in the Andes, particularly for Quechua and Aymara people in Chile, Bolivia, Peru, and Ecuador who have bred a multitude of quinoa varieties adapted to variable Andean conditions. One of these, Apelawa (named for the farmers of a small Bolivian town), has been patented by two professors at Colorado State University (US) because this farmers' variety is the key to a male sterility system. The patent claims any quinoa crossed with male sterile Apelawa plants. CPRO-DLO (Netherlands) is also bullish on quinoa and has applied for PBR monopoly in the Netherlands on at least one variety.

J'oublie

Pentadiplandra brazzeana

US 5,527,555, EP 684995, WO 9531547, etc.

Called "I forget" in Gabon, a reference to the sweet bliss of its berries. The sweet compound in J'oublie has been patented by the University of Wisconsin (US), which has licensed it to industry. Dubbed "brazzein" by Wisconsin researchers, the extract of this African plant is 500 times sweeter than sucrose. Wisconsin thinks it may be a hit in the US \$100 billion a year global sweetener market. Researchers are trying to "grow" brazzein in transgenic microorganisms so that berries don't have to be obtained in Africa. The university says brazzein "is an invention of a University of Wisconsin researcher" and "Wisconsin has no connection to Gabon."

Greenheart

Ocotea rodiei

EP 610060, US 5,569,456

From the Guyana Shield region, an extract of the nut of the greenheart tree has been patented by the director of the Foundation for Ethnobiology. The Greenheart patent claims broad medical uses and is being marketed to major pharmaceutical companies. The Foundation boasts that its ongoing studies in Guyana - which it calls "The Greenheart Project" - include "training and the examination of issues relating to sustainable development and intellectual property rights in anticipation of further development of biodiversity resources."

Bitter Melon

Momordica charantia

US 5,484,889, JP 6501689, EP 552257, etc.

A fruit that has been used in Southeast Asia and China for centuries against tumors and infections, bitter melon has been patented by the US National Institutes of Health, the US Army, and New York University for its anti-human immunodeficiency virus (HIV) effects. Even the "inventor" of the bitter melon patent admits it is "very widely eaten in the Chinese community for health reasons" and that the fruit is widely thought to have anti-HIV properties.

Endod

African Soapberry / Phytolacca dodecandra

CA 2034414, US 5,252,330

Patented by the University of Toledo (US), endod has been selected and cultivated by Africans for centuries, particularly in Ethiopia. It is used as a soap and shampoo as well as a poison to stun fish. Endod is lethal to snails - a fact discovered by Ethiopian

scientists - and may be effective controlling schistosomiasis. After an Ethiopian scientist demonstrated endod's potency to Toledo scientists, they took out a patent, hoping to sell endod as a biological control for the Zebra mussel, a pest in the Great Lakes of the US and Canada.