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**US researchers file for patent on the lucuma fruit,  
a “flagship product” of Peru**

by Edward Hammond

US researchers are seeking a patent on the lucuma, fruit of the lucumo tree (*Pouteria lucuma*), a native of Andean valleys that is highly esteemed in its native Peru. Rutgers, the state university of New Jersey (US), filed the application. The University claims that its scientists have discovered that lucuma seed oil has beneficial effects on the skin, but research suggests that Rutgers’ “invention” is in fact taken from traditional knowledge.

An international patent application (WO/2010/056908) published in 2010 seeks patent rights in Europe, Asia, and other regions. US and European patent applications have also been published.<sup>1</sup> If granted, the patent will give Rutgers exclusive rights over the use of lucuma seed oil on the skin. The University already has a commercial partner, Lipo Chemical,<sup>2</sup> which is owned by a large Miami-based investment firm named HIG Capital.<sup>3</sup>

In Peru, one of the reasons why lucuma is considered special is its native status and its strong association with the country’s rich cultural heritage. Nowhere else is lucuma grown and consumed so much, and the fruit has been a part of the Peruvian diet for millennia. The remains of lucuma have been found at several of the oldest and most iconic archaeological sites in the country, and the fruit is represented on some of Peru’s most famous textiles and ceramics, created by diverse cultures over thousands of years.

The lucuma bears resemblance to some of the fruits collectively called *sapotes*, such as canistels and mameys, although different kinds of “sapote” are not necessarily close

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<sup>1</sup> European Patent Office application EP2352489, published 20 May 2010 and US Patent and Trademark Office application 20110318403, published 29 December 2011.

<sup>2</sup> Bird K 2010. *Lucuma fruit has anti-aging and wound healing potential*. *Cosmetics Design USA*. 15 December. URL: <http://www.cosmeticsdesign.com/content/view/print/347760>

<sup>3</sup> Vantage Specialty Chemicals 2010. H.I.G. Capital Makes Investment in Specialty Chemicals Company (press release). 13 July. URL: [http://www.vantagespecialties.com/news/index.asp?news\\_id=6](http://www.vantagespecialties.com/news/index.asp?news_id=6). In an interesting political twist, HIG Capital is managed by its founding partner Tony Tamer. Tamer is a co-chair of the Mitt Romney for President campaign in Florida, is a personal friend of Romney’s, and the two formerly worked together at Bain & Company in Boston. In 2011, Tamer hosted a fundraising lunch for Romney in an exclusive Miami hotel, at a cost of US \$2,500 per plate.

relatives. The lucumo tree is technically not tropical, as it can be found at high elevations in the Andes (up to 3000 meters), preferring relatively dry locations.<sup>4</sup>

In 2005, the Peruvian government selected lucuma as one of ten national “flagship products” (*productos bandera*) linked to the country’s international identity. According to Peru’s governmental intellectual property institute, INDECOPI, “*Flagship products of Peru are products or cultural expressions whose origin or transformation has occurred on Peruvian territory with characteristics that represent the image of Peru outside of the country.*”<sup>5</sup>

But Rutgers University apparently did not get the memo.

The Rutgers patent application declares, among other questionable claims, that there is “*virtually no information on the effects of lucuma on human health*”, an assertion revealed as dubious by research on traditional use of the fruit and plant. In fact, sources available on internet, much less specialized library holdings, contradict many of Rutgers assertions and raise a direct challenge to the University’s claim of an invention.

Rutgers patent application seeks to control use of lucuma nut oil in pharmaceuticals, cosmetics, and other preparations applied to the skin to heal wounds and promote skin health. It claims the nut oil as matter, no matter how it is extracted. It also claims standard nut oil extraction techniques when applied to lucuma. Rutgers has tried to more specifically identify active component(s) of the oil, but its published efforts have thus far been unsuccessful.<sup>6</sup>

But use of lucuma in traditional medicine has been amply documented for many years. For instance, a new world medicine text published in Paris in 1864 (*El Medico botanico Criollo*) notes that the latex of immature fruit is used to treat skin problems, including warts and wounds.<sup>7</sup> An 1888 French text notes that the seed is used to treat stomach and urinary tract problems<sup>8</sup> and, also in 1888, the Society of the Chemical Industry (UK) noted medicinal use of seed extracts to treat bladder problems.<sup>9</sup>

In contemporary times, benefits of using lucuma on the skin are known in Peru and touted in product claims and media reports. In a report by Peru to the UN Food and Agriculture Organization in 1995, government scientists placed lucuma among the

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<sup>4</sup> For a more extensive description, see: Gutiérrez Rosati AO 1980. *Consideraciones Sobre la Biología Floral del Lúcumo* (Lucuma obovata H.B.K.). Universidad Nacional Agraria la Molina.

<sup>5</sup> INDECOPI 2010. *Guía Informativa Productos bandera del Perú*. URL: [http://www.indecopi.gob.pe/repositorioaps/0/14/jer/guias\\_informativas/prodban\\_jun.pdf](http://www.indecopi.gob.pe/repositorioaps/0/14/jer/guias_informativas/prodban_jun.pdf)

<sup>6</sup> Rojo LE et al. 2010. *Wound-healing properties of nut oil from Pouteria lucuma*. Journal of Cosmetic Dermatology 9:185-195.

<sup>7</sup> Cited in Planchon L 1888. *Étude sur les produits de la famille des Sapotées*, p. 105. Montpellier.

<sup>8</sup> Planchon L 1888. p. 106.

<sup>9</sup> Society of the Chemical Industry (UK) 1888. *XX - Fine Chemicals, Alkaloids, Essences and Extracts*. Journal of the Society of Chemical Industry, Volume 7, p. 340.

country's most important plants with food and medicinal uses, noting that latex is used to treat skin lesions and infections.<sup>10</sup>

In addition to its patent application, Rutgers has devised a new English common name for the lucuma, dubbing it "Incan Golden Fruit", and has noted ancient Peruvian ceramics that resemble the fruit.<sup>11</sup> (Those ceramics, however, were made by the Moche culture, which is distinct from that of the Inca.) Available documents don't state why Rutgers is renaming lucuma, but it is reasonable to assume that the University believes that "Incan Golden Fruit" will sound attractive to consumers shopping for skin care products.

Peruvians, however, are unlikely to embrace Rutgers' new name. On top of the patent, the University appears intent on hijacking images of Andean cultural heritage to promote sales, which is notably ironic considering that Rutgers ignores information about traditional medicinal use of lucuma in its patent application.

The patent and marketing efforts of Rutgers call attention to an important issue facing countries that have ratified the Nagoya Protocol to the Convention on Biological Diversity. While the Protocol's Article 8a says that "simplified measures" for access to genetic resources should be afforded to non-commercial researchers, a defensible definition of "non-commercial research" is hard to find. Many projects that appear, or start out, without commercial ends change over the course of time into research with commercial aspects.

Rutgers, a public research university that is part of the government, also shows yet again that public and non-profit entities such as schools and research institutes cannot be assumed to be conducting "non-commercial" research and cannot be afforded less stringent access rules without facilitating biopiracy.

Rutgers' failure to cite traditional medicinal uses of lucuma, and its rebranding of lucuma as "Incan Golden Fruit" also highlight the need for access laws to address complex interrelationships of genetic resources with traditional knowledge and culture. How else to respond to Rutgers' attempt to market lucuma by means of its cultural associations, even as it dubiously claims a novel invention?

Unfortunately, this paradox is not unusual in the cosmetic and nutraceutical industries. There, products often rhetorically link beauty and health to themes of "traditional wisdom" and the "exotic". These efforts, however, are much less about respect for indigenous people and knowledge than they are about appropriating images that sell products.

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<sup>10</sup> Government of Peru 1995. *Informe nacional para la conferencia técnica internacional de la FAO sobre recursos fitogenéticos*, July, p. 156.

<sup>11</sup> An internet search on "Incan Golden Fruit" returns numerous instances. See, for example: Inside Cosmeceuticals (2011) *Post-HBA Global Report: From Rice-Bran to Incan Fruit for New Skin Care Ingredients*, URL: <http://www.insidecosmeceuticals.com/news/2011/07/post-hba-global-report-from-rice-bran-to-incan-fr.aspx>