



A BULLETIN
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TIFAC

INTELLECTUAL PROPERTY RIGHTS (IPR)

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Amla Related Patents

Amla or *Emblica officinalis* or *Phyllanthus emblica* is a small genus of trees, native of India, Srilanka, Malaysia and China. It is known as *adiphala*, *dhatri* and *amalaka* in Sanskrit, *amla* in Hindi or Bengali, *amali* in Gujrati, *amalakamu* and *usirikai* in Telugu, *nelli* in Tamil, *Kanada* and *Malayalam*. The tree is cultivated very widely in India; in fact it is being done at very large scale in some states of the country. Amla fruit is known for many of its medicinal properties for a long time and is reported to be acrid, cooling, refrigerant, diuretic and laxative. Dried fruit is useful in haemorrhage, diarrhoea and dysentery. Amla is an important constituent of *triphala*, a known ayurvedic formulation used as laxative and treating biliousness. The dried fruit is detergent and is used as shampoo. These are so many known applications of this tree and its products that many companies dealing in traditional medicines use amla fruit for preparing different formulations for treating several diseases, as health tonic etc. Wealth of India gives many details of this plant including the detailed chemical composition of the fruit, seeds, bark and leaves. Based on such wonderful utilities of this plant, one would expect a large number of patents related to amla. However, not many patents have been granted. A patent search was carried out using key words *Emblica officinalis*, Indian gooseberry, *amla* and *Phyllanthus emblica*.

Some patents have been granted by the USPTO in which amla appears in the claims and the list is provided below:-

Title	Assignee
1. Freeze dried ginseng berry tea. (April 2001)	E.Excel International, USA
2. Natural antioxidant compositions, method for obtaining same and cosmetic, pharmaceutical and nutritional formulations thereof (August 2000)	Natreon Inc., USA
3. Vitamin/ mineral composition (April 1995)	Creative Nutrition Canada Corp.
4. Herbal compositions. (December 1997)	Shah Eladevi (inventor), England
5. Ayurvedic composition for the prophylaxis and treatment of AIDS, flu, TB and other immunodeficiencies and the process for preparing the same. (June 1996)	Surendra Rohtagi (inventor), India

The patent at serial number 1 claims a composition of herbal tea in which amla is one of the constituents along with many other ingredients including arjuna, clove, cinnamon, turmeric, with amla and *ocimum basilium*. The patent by Natreon was discussed in the last issue of the bulletin. The patent by Creative Nutrition claims a composition comprising *shilajit* used for restoring energetic balance or intensity to enhance a bio energetic field in a mammal. Amla in the form of *triphala* has been used to purify the *shilajit* extract. The patent granted to Rohtagi, an Indian national,

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Amla Related Patents

relates to an ayurvedic composition comprising of amla and other herbs for treatment of some serious diseases. The composition can be dispensed in powder form and in capsule or syrup form. Processes for preparing various compositions have also been claimed. Similarly, the patent granted to Eladevi relates a composition comprising amla as an important constituent. It is claimed that compositions are useful in treating psoriasis and eczema.

There are four patents at the application stage in the Japanese Patent Office. There are:

Title	Applicant/ Assignee
1. Hyaluronidase inhibitor and food and beverage containing the same. (March 1999)	Takara Shuzo Co Ltd, Japan
2. Gray hair dyeing composition (April 1997)	Unilever NV England.
3. Peroxy lipid formation inhibitor composed of plant extract (March 1992)	Ichimavu Pharcos Co Ltd., and Toreede Unido KK.
4. Aging preventive food agent and production thereof (March 1991)	Toreede Unido KK

The application by Takara Shuzo Co Ltd., claims a composition having an extract of amla fruit, bark and seed useful as a therapeutic agent for rheumatism and deformatant arthritis. This composition, which acts as an inhibitor, is added to food, beverages; bread, confectionery etc. The application uses the word 'amlā' indicating a link with India at some stage of the invention. The Unilever application relates a hair blackening composition extracted from amla fruit with an aqueous and / or organic solvent and at least one soluble ferric salt, preferably ferric ammonium sulfate 12 hydrate or ferric chloride. The application on peroxy lipid formation inhibitor relates to a composition containing one or two or more extracts

obtained from fruits of *Emblīca officinalis*, *Terminalia chebula* Retz or *Terminalia bellerica*. The inhibitor is mixed in food, beverages etc. The last application deals with a composition comprising extract of amla fruit to obtain aging preventive food agent to be used as a tonic. All these applications will need to be monitored for knowing the exact nature of claims when patents have been granted. It is possible that some extracts from amla fruit may have been claimed.

There are two applications pending in the EPO. The first one is by Eau de Cologne & Parfumerie - Fabrik Glockengasse of Germany relating to an amla plant extract for cosmetic purposes. Incidentally, the inventor is a person of Indian origin - Dr Shyam Singh Verma. The second one is also by the same company relating to an extract of amla plant for cosmetic purposes. These two applications should be different from each other. These applications, may be monitored to learn about the exact nature of claims.

There are as many as 5 PCT applications on the subject and the list is given below.

Title	Applicant
1. Preparation containing active ingredients of plant origin for use in cosmetics.	Eau de Cologne & Parfumerie- Fabrik Glockengasse, Germany
2. Composition having depigmenting activity and uses thereof. (1996)	Hanna, Claude and Hanna, Raja (France)
3. Cosmetic preparations containing extracts from <i>Phyllanthus emblica</i> and <i>Centella (1998) asiatica</i> and / or <i>Bacopa monnieri</i> .	By Shyam Singh Verma
4. Cosmetic preparations containing extracts from <i>Phyllanthus emblica</i> and <i>Centella asiatica</i> and / or <i>Becopa monnieri</i> (1999)	By Shyam Singh Verma
5. Plant extracts useful for fighting against hair loss and preparation (1999).	Hassan Halaby

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Amla Related Patents

The applications at serial numbers 1, 3 and 4 were first filed in Germany and at 2 and 5 were first filed in France. The first application appears to be the same which was earlier filed in the EPO. The application by Claude Hanna relates to compositions, comprising extract of amla plant, having depigmenting activity. The composition is expected to regulate skin pigmentation. The inventions of Dr Verma relate to composition meant for skin care; extract of amla plant is one of the constituents of these compositions. The application by Hassan Halaby relates to extracts obtained by decoction and steam distillation of a combination of plants comprising 35-80% of myrtle (leaves and fruits), 20-65% of amla (fruit) or a combination of 2-15% of aniseed, 2-15% zzyphus (leaves and fruits) and 6-25% of myrobalan. The composition will be useful for controlling hair loss. The current status of these applications is not known. Further, it has been observed that all these applicatoins have deisgnated a large number of countries.

There is one applicaiton by Lupin Laboratories entitled "Ayurvedic formulation from amla and ritha" is pending with the Indian Patent Office. The applications was filed in1997.

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Prior informed consent while obtaining patent on biological material of human origin- is it essential ?

Modern biotechnology keeps raising new issues which are at times at the borderline dividing technology (science) and ethics. The commercial aspects associated with technology, make the choice difficult in such situations. Often, a given society may arrive at a decision by evaluating relative importance of each alternative in the context of public good, private property and privacy. One such issue has been raised by Recital 26 of Article 6 of the EC Directive on Legal Protection of Biotechnological Inventions.

European Commission had issued Directive on Legal Protection of Biotechnological Inventions (directive 98/44/EC), which was to be implemented by the member states by July 30, 2000. The said Directive introduced some exclusions from patentability on the ground of morality. Article 6(1) of the Directive states " Inventions shall be considered unpatentable where their commercial exploitation would be contrary to *ordre public* and morality; however, exploitation shall not be deemed to be so contrary merely because it is prohibited by law or regulation". Explanations about *ordre public*

and morality are provided in Recital 39 of Article 6. Article 6(2) excludes the process of human cloning, modifying the germ line genetic identity of human beings, uses of human embryos for industrial or commercial purposes and process of modifying the genetic identity of animals which are likely to cause them suffering with out any substantial medical benefit to man or animal.

Articles of the Directive are based on recitals which are explanatory portions of Articles and are meant to provide a background to law and help interpretation of legal provisions in the Directive. Recital 26 of Article 6 states:

"Whereas if an invention is based on biological material of human origin or if it uses such material where a patent application is filed, the person from whose body the material is taken must have had an opportunity of expressing free and informed consent thereto, in accordance with national law".

This Recital if applied as a condition would mean that anyone who intends taking a patent around biological material from a human being, must take the consent of that individual for filing a patent application related to the concerned biological material. Apparently, industry and patent agents are not very happy

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Prior Informed ...

with this Recital because they do not want any condition limiting what may be patented. The main argument being forwarded is that Recitals are neither law nor can they be treated as the direction of law. Therefore, there is a feeling that if Recital 26 is not followed the spirit of Article 6 is not changed and there is no violation of the law.

On the other side people argue that Recitals cannot be delinked from law and secondly, in this case, the matter needs to be evaluated in a much broader context. There is an implied direction in the Recital that national law having any direct or indirect influence on the action taken in this regard must be kept in view. We observe in our day to day life that a doctor is not expected to disclose a patient's illness / disease to anyone else. The reason is that it is implied that a patient confides in a doctor and therefore a strong element of confidentiality is built into the relationship. If a doctor indulges in making such disclosures, it would be considered an unethical practice. A court judgement in UK had ruled that to use data obtained in confidence without the confider's consent for any purpose other than that for which it was obtained is a breach of confidence, because the duty of confidence arises from the data being given for a limited purpose.

Considering that patenting is a commercial activity, the prior informed consent of the concerned individual, whose biological material is being used for obtaining patent, makes a lot of sense as the degree of breach of confidence would be considered by many of a much higher degree than that in the case of doctor and patient relationship. From the privacy angle, which perhaps, each individual is entitled to enjoy, one needs to examine carefully the morality of an action not based on prior informed consent (PIC) of the individual whose biological material is being used for obtaining patent. If this right of privacy is not honoured, its repercussions would be felt in many walks of life. It may just be possible that the basic instinct of human beings to articulate and express themselves in different situations and ways, many a times devoid of any personal gain or gratification, may get seriously hampered leading to a loss for the whole society.

However, each society will have to decide its own yardstick for morality and ordre public which would be determined by an evolutionary process and perhaps, cannot be thrust upon. Certainly, Recital 26 will come in the way of those companies / industries / research institutions/ researchers who would seek patent protection on biological material without PIC of the individual whose biological

material is being used for obtaining the patent. As models for PIC in such cases are not established or well known, the legitimate inventions satisfying the condition of PIC may also have to wait before inventions are patented. Recital 26 of Article 6 of the EC Directive has injected fresh air in the ethical debate surrounding biotechno-logical inventions.

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Amla Related Patents

It can be seen that the activity on patenting of amla related compositions and processes have picked up in the decade of nineties. Most applicaitons/ patents are for the uses for which amla has been used for many years. However, the compositions/ processes claimed in patents may not be identical to what are already known or may be different in efficacy. Therefore, experts working in area must evaluate these patents carefully for planning future research and development. It is also likely that there may be direct or indirect effect on the export of amla based products from India. Industries dealing with such products need to take a note of these rapid developments and position tehmselves accordingly.

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Case Study on Clean Air Engine

A US patent has been recently granted on June 19, 2001 for an invention relating to clean air engines for transportation and power applications. The patent stands assigned to Clean Energy Systems, Inc of California, USA.

Background

The current art in generating power for transportation purposes basically utilize internal combustion engines. These devices burn hydrocarbon fuels with air which contains 23.1% oxygen, 75.6% nitrogen and other gases. The emission resulting from the combustion fuels for IC engines (gasoline or diesel) with air contain total organic gases, reactive organic gases, oxides of nitrogen, oxides of sulphur and particulate matter. No near term solutions appear in sight to drastically reduce the amount of pollutants emitted by the use of present technology. Each environment regulating authority is bringing in stronger regulations putting demands for new technologies.

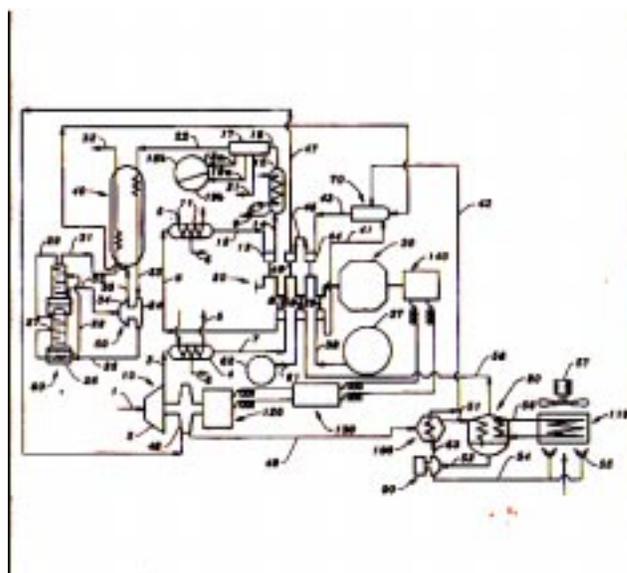
Other energy sources being developed by exploiting non combustible sources include fuel cells and solar cells. Many technological and economic problems still remain to be sorted out. Therefore, wide scale use of these sources for vehicles and for electric power generating facilities do not appear to be practical.

Summary of the invention

The invention basically relies on using oxygen in stead of air and the oxygen is derived from the atmospheric air. It consists of a hybrid power system that combines a Rankine cycle thermal cycle with and auxiliary electric motor for start up and chill down requirements. The thermal power cycle of the engine begins by compressing ambient air to high pressure, cooling the air during compression and during the expansion to liquid air temperatures in a rectifier where the generation of oxygen and nitrogen takes place. The cold gaseous nitrogen generated is used to cool the incoming air and then is discharged to the atmosphere.

Simultaneously, the cold gaseous or liquid oxygen generated by the rectifier is pressurised to gas generator pressure levels and delivered to the gas generator at near ambient temperature. Fuel, gaseous or liquid, from a supply tank is pressurised to the pressure level of the oxygen and also delivered to the gas generator where the two reactants are combined at substantially the stoichiometric mixture ratio to achieve complete combustion and maximum temperature hot gases (6500 degree R). These hot gases are then diluted with water downstream in a mixing section of the gas generator until the resulting temperature is lowered to acceptable turbine inlet temperature.

The drive gas obtained through this process consists of high purity steam, when using oxygen and hydrogen as the fuel, or a combination of high purity steam and carbon dioxide, when using oxygen and light hydrocarbon fuels like methane, propane, methanol etc. Following the expansion of



Legend

10 dynamic turbocompressor	80 condenser
20 reciprocating engine	90 recirculating water feed pump
30 power transmission	100 water heater
40 heat exchanger	110 condenser coolant radiator
50 turboexpander	120 alternator
60 rectifier	130 battery
70 gas generator	140 electric motor

Fig. 1

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the hot gas in the turbine, which powers the vehicle or the electric power plant, the steam or steam plus carbon dioxide mixture are cooled in a condenser to near or below atmospheric pressure where the steam condenses into water, thus completing the Rankine cycle. Approximately, 75% of the condenses water is recirculated to the gas generator while the remainder is used for cooling and discharged to the atmosphere as warm water vapour.

Since this thermal cycle requires time to cool the liquefaction equipment to steady state low temperatures, an electric motor driven by an auxiliary battery can be used to power the vehicle and initiate the Rankine cycle until chill down of the liquefaction equipment is achieved. When the chill down is complete the thermal Rankine engine, connected to an alternator, is used to power the vehicle or stationery power plant.

Figure 1 is a schematic illustrating an embodiment of the invention and its elements, along with their connectivity.

Claims

There are in all 35 claims covering various embodiments described in the patent document. The first claim is being reproduced below.

A low or no pollution emitting combustion engine to provide power for various applications including vehicle propulsion or stationery electric power generation, the engine comprising in combustion:

an air inlet

a source of fuel at least partially including hydrogen;

an air treatment device including an inlet coupled to said air inlet, a means to remove nitrogen from air and an oxygen rich outlet;

a fuel combustor, said fuel combustor receiving fuel from said source of fuel and oxygen from the

said outlet of said air treatment device, said combustor combusting said fuel with said oxygen to produce elevated pressure and elevated temperature combustion products including steam, said combustor having a discharge for said combustion products;

wherein, at least part of non steam portion of the combustion products is removed from the combustion products after discharge from said combustor, so that the combustion products have more steam than the combustion product at said discharge; and

a return line for routing at least a portion of the steam rich combustion products back to the said combustor.

It may be noted that the inventor has cited patents issued way back in the early part of the last century as prior art documents and in the process ensuring the novelty and non obviousness of the invention. The earliest patent cited was granted in 1907.

PFC on the move...

Three patent awareness workshops were organized in the month of May. The first one was organized at H.P. Krishi Vishwavidyalay, Palampur on May 16 in association with the State Council for Science, Technology & Environment, Himachal Pradesh. The second one was held at the Central Pulp & Paper Research Institute Saharanpur on May 25. The third one was held at the National Academy of Agriculture Research Management, Hyderabad on May 31. More than 200 scientists and technologists participated in the proceedings.

2. A patent entitled "Method of organogenesis and tissue regeneration / repair using surgical techniques" was awarded to Maulana Azad Medical College, Delhi. The patent application was facilitated by PFC in August 1997.

3. Two patent applications were filed in Japan.

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Patents for Opposition

The following patent applications have been accepted by the Patent office and published in the Gazette of India. These can now be opposed by filing opposition applications within a period of four months from the dates given. Six digit numbers allotted after acceptance by the Patent office are given before the applicant names and patent application numbers given in brackets. Names of the branches of the Patent office are denoted in the application number, e.g. 'Bom' for Bombay branch. An opposition application should be submitted at the appropriate office where the concerned application was originally filed.

PATENT APPLICANTS

INVENTION

A. 7 April, 2001

185681. Siemens Aktiengesellschaft, Germany (647/Cal/95)

Rotor winding of electric machine with at least one arrangement comprising plurality of conductor bars extending along a longitudinal axis and stacked on one another along a vertical axis.

185682. Burst Com Inc, USA (899/Cal/95)

An apparatus for broadcast video burst transmission cyclic distribution.

185683. Kawaswaki Juko Gyo Kabushiki Kaisha, Japan (1048/Cal/95)

A method of manufacture of a sintered cement clinkers and an apparatus thereof.

185684. Acner Geller, Israel (1147/Cal/95)

A container having a rectangular base and its manufacture.

185685. GGU Gesellschaft Fur Gesundheits-Und U Mwfelforschung Mbh & Co, Germany (1237/Cal/95)

A method of producing a consolidated medicament reservoir and an apparatus for carrying out the method.

185686. Mohsin-Al-Tameem, Saudi Arabia (1354/Cal/95)

A device for excision of a fistula.

185687. The University Of Queensland Of St Lucia Queensland 4072 Australia (1355/Cal/95)

A process for preparing an aluminosilicate derivative from clay minerals.

185688. Samung Electronics Co.Ltd, Korea(1466/Cal/95)

A refrigerator.

185689. Molex Inc, USA (1565/Cal/95)

An electrical connector for mounting to a printed circuit board.

185690. Menarini Industrie Farmaceutiche Riunite S.R.L, Italy (322/Cal/97)

Process for the preparation of 2-halomethyl-penems.

185691. Chemagis, Israel (1716/Del/94)

A process for the manufacture of androstane-17 carbothioates.

185692. BTG International Limited, UK (23/Del/96)

A process for the preparation of naphthoquinone derivatives.

185693. CSIR, India (0167/Del/96)

An improved process for the preparation of paddy liquor.

185694. Chief Controller Research & Development, Ministry of Defense Govt. of India (247/Del/96)

A process for the preparation of fruit pulps and fruit juice powders.

185695. University Of Hawaii, USA (454/Del/96)

A method for producing cryptophycins.

185696. CSIR, India (505/Del/96)

A process for the preparation of cyclotrimeratrylene (CTV) molecules useful as potential carrier of metal ions.

185697. Chief Controller Research & Development, Ministry of Defense Govt. of India (525/Del/96)

A process for preparation of tetra -(2-aminoacetic acid) hydroperiodide.

185698. CSIR, India (682/Del/96)

An improved process for the preparation of 3-substituted -r-oxo 6 7-dihydroindolo f(3-a) quinolizine derivatives.

185699. CSIR, India (690/Del/96)

A process for the preparation of a novel nontoxic lipopolysaccharide (lps).

185700. Sanofi, France (779/Del/96)

Process for the preparation of a new substituted 1-phenyl-pyrazole carboxamide its salts and its quaternary ammonium salts.

International News

A trilateral technical meeting of the Japanese Patent Office (JPO), the United States Patent and Trademark Office (USPTO) and the European Patent Office (EPO) held at Tokyo in mid June 2000 has issued a Report on Business Method Related Inventions. According to this report a technical aspect is necessary for a computer - implemented business method to be eligible for patenting. While JPO and EPO require that the computer related technical aspect must be expressed in the claim, whereas for the USPTO, the technical aspect may be implicitly recited in the claim.

According to new patent examination guidelines issued by the Japanese Patent Office (JPO), a computer program can now be protected as a product patent claim. The third party is prohibited to produce, sell, use or import such a claimed program. Also, the business method inventions are dealt within the framework of software inventions.

(Patent World, No. 131, April 2001)

Derwent Information's book, "Caught in a Web: Intellectual Property in Cyberspace" edited by Richard Poynder (ISBN 0-901157-01-5) is available for £15.99. The book provides a sobering look into the pressing issues that face intellectual property in the digital age with specific emphasis on the tensions between rights based intellectual property and emerging technology.

(Copyright World, Issue 109, April 2001)

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International News

In order to protect intellectual property rights on the net, the German government is intending to introduce a tax on the Internet. The new tax would ensure that the author of cultural products available on the Internet were property rewarded.

The British Broadcasting Corporation has won the right to the domain name bbcnews.com in an international ruling from an American gambling company. Similarly, Madonna has also won her fight to use the website address madonna.com, which was being used as a pornography site by Dan Parisi, an American entrepreneur.

(World Patent Information, Vol 23, No. 1 March 2001)

Cell Factors, a UK biotechnology company has been awarded a US patent covering technique to produce cells for treating brain diseases. This invention has broad claims and will apply to any use of genetic immortalisation of neural cell. The patent is likely to affect a numbers of firms working in the area of regenerative medicine.

(WISTA IPR Biotechnology, Vol 2 Iss 10, April 2001)

Domestic News

Morpen Laboratories Ltd based in New Delhi has filed 3 patents related to dermatology and anti-biotic segments. Two of there are the process patents. The company is a newcomer in the patent regime and is using the patenting tool to meet the composition head on.

(Economic Times, 5 May 2001)

Business Software Alliance (BSA) is working jointly with NASSCOM for creating awareness programmes on software piracy for companies and users. BSA estimates that over \$ 12 billions is lost annually from such intellectual property theft. Piracy in India is over 59% of the market and represents \$ 214 million in revenues and over 14,000 jobs lost. BSA also works with law enforcement agencies in taking action against software piracy. It is in talks with the Karnataka Government to conduct seminars for the State's Police force. BSA has also helped the police in Hyderabad and Delhi in identifying and tracking down pirated software.

(Business Standard, 23 May 2001)

Steps have been initiated by the Ministry of Commerce and Industry to start operations of an intellectual property appellate board as proposed in the Trade Marks Act, 1999 and the Geographical Indications of Goods Act, 1999. The board will be a forum for appeals against the orders of Registrar of Trade Marks and Geographical Indications. Dr. R.A. Mashelkar, DG, Council for Scientific and Industrial Research is a member of the 6 member Commission.

(Economic Times, 28 May 2001)

The United Kingdom has setup a 6-member International Commission on Intellectual Property Rights. The Commission will consider how national IPR regimes should best be designed to benefit developing countries, within the context of the international agreements, including the TRIPS. The Commission will also examine issues such as traditional knowledge and access to genetic resources, human genome and its implications.

(Business Standard, 29 May, 2001)

Please send us questions and topics you would like to see in the coming issues

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