

O Sun God, Savitr!
Thou dazzling fount of life-persuasive light!
Sublimest mystery speeding from afar!
Swift became that burst too potent on the sight!
This radiant type of strength and youth!
Glowing eternally!



శ్రీ వేపచేదు విద్యా పీఠము

VEPACHEDU EDUCATIONAL FOUNDATION

May the golden-eyed Savitar, come hither!
Shining forth he rises from the lap of the dawn!
Praised by singers, my God Savitar!
Stepped forth and never missed his place!
He steps forth the splendor of the sky the wide!
Seeing, far-shining, the shining wanderer!
- Rig Veda, vii, 65

He alone shines!
All luminaries get illuminated by His Illumination!
The whole Universe is enlightened by His light!
- Kathopanishad

The Telangana Science Journal

Health and Nutrition

TIACS-subscribe@yahooogroups.com (The Indian American Chemical Society)

ॐ भूर्भुवः स्वः तत्सवितुर्वरेण्यं भर्गो देवस्य धीमहि धियो यो नः प्रचोदयात्॥

Home	The Foundation	Management	The Andhra Journal of Industrial News	The Telangana Science Journal	Mana Sanskriti (Our Culture)
Vegetarian Links	Disclaimer	Solicitation	Contact	VPC	Vedah-net

Issue 243

Chief Editor: డాక్టర్ శ్రీనివాసరావు వేపచేదు / डॉक्टर श्रीनिवासरावु वेपचेदु / Dr. Sreenivasarao Vepachedu¹

CONTENTS

THE ENDANGERED DONKEY
SUSTAINABLE ENERGY



Issue 243

5119 కలి కాలము/Kali Era | 2075 విక్రమార్క కాలము/Vikramarka Era | 1939 శాలివాహన కాలము/Salivahana Era

స్వస్తి శ్రీ విళంబి నామ సంవత్సరము/Swasti Sri Hevilambi Year

చైత్రమాసము/CHAITRA Month

Published online 1 APRIL 2018

Copyright ©1998-2018, Vepachedu Educational Foundation, Inc.

ॐ असतो मा सद्गमय । तमसो मा ज्योतिर्गमय । मृत्योर्मा अमृतं गमय । ॐ शान्तिः शान्तिः शान्तिः ॥

O Sun God, Savitar!
Thou dazzling fount of life-persuasive light!
Sublimest mystery speeding from afar!
Swift became that burst too potent on the sight!
This radiant type of strength and youth!
Glowing eternally!



శ్రీ వేపచేడు విద్యా పీఠము

VEPACHEDU EDUCATIONAL FOUNDATION

May the golden-eyed Savitar, come hither!
Shining forth he rises from the lap of the dawn!
Praised by singers, my God Savitar!
Stepped forth and never missed his place!
He steps forth the splendor of the sky the wide!
Seeing, far-shining, the shining wanderer!
- Rig Veda, vii, 65

He alone shines!
All luminaries get illuminated by His Illumination!
The whole Universe is enlightened by His light!
- Kathopanisad

The Telangana Science Journal

Health and Nutrition

TIACS-subscribe@yahooogroups.com (The Indian American Chemical Society)

ॐ भूर्भुवः स्वः तत्सवितुर्वरेण्यं भर्गो देवस्य धीमहि धियो यो नः प्रचोदयात्॥

Home	The Foundation	Management	The Andhra Journal of Industrial News	The Telangana Science Journal	Mana Sanskriti (Our Culture)
Vegetarian Links	Disclaimer	Solicitation	Contact	VPC	Vedah-net

Issue 243

Chief Editor: డాక్టర్ శ్రీనివాసరావు వేపచేడు | डॉक्टर श्रीनिवासरावु वेपचेडु | Dr. Sreenivasarao Vepachedu¹

THE ENDANGERED DONKEY

Donkeys, also called burros and asses, are found throughout the world. They are members of the Equidae family, which also includes horses and zebras. They look a lot like their cousins, but have long, floppy ears and tend to be stockier than horses or zebras. It is known to have been used as a beast of burden since 4000 BCE¹. The average donkey stands 101.6 cm (40 inches) at the shoulder, but different breeds vary greatly. The Sicilian donkey reaches only about 61 cm (24 inches), while the large ass of Majorca stands at about 157.5 cm (62 inches), and the American ass has been measured to 167.6 cm (66 inches).

In color the donkey ranges from white to gray or black and usually has a dark stripe from mane to tail and a crosswise stripe on the shoulders. The mane is short and upright and the tail, with long hairs only at the end, is more cow-like than horse-like. The very long ears are dark at the base and tip. Although slower than horses, donkeys are surefooted and can carry heavy loads over rough terrain. The mule is a hybrid, the offspring of the mating of a male (jackass, or jack) donkey and a female horse. In some parts of the world where horses cannot easily survive or where extreme poverty prevents locals from owning horses, donkeys are the main beasts of burden and source of transportation.

Thanks to China's voracious appetite for the animal and an insatiable Chinese market for donkey pelts², the donkey is an endangered species. Since ancient times the Chinese have consumed donkey, but China no longer has enough of them to satisfy its thirst for the donkey pelt juice containing gelatin called ejiao. China needs at least 4 million donkey pelts per year, but produces only 1.8 million, requiring about 2.2 million pelts imported by steeling and brutally killing donkeys around the world³.

Kenya's donkey population has fallen by half to 900,000 since 2009. From 2011 to 2016, the number of donkeys fell by 60% in Botswana and a fifth in Lesotho. In Kyrgyzstan and India, the donkey populations fell by 20% during 2015 and 2016 alone. Colombia about 10% and Brazil about 5% over the same period transported more than 1,000 km for slaughter. Thieves are stealing donkeys⁴ taking advantage of the surging prices, leaving farmers without their most prized slave laborers, forcing 15 countries to curb the donkey trade by refusing permits for exports. In 2015, Pakistan became the first country to ban the export of donkey hides. Several African countries, including Botswana, now prohibit exports to China⁵.

Gelatin⁶ is a hydrocolloid useful due to its high melting and gelling points and thermo-reversibility. It is a high molecular weight and water-soluble protein. All the amino acids are present in gelatin except tryptophan and have low in methionine, cystine and tyrosine due to the degradation during hydrolysis. The amino acid composition and sequence in gelatin are different from one source to another but always consists of large amounts of glycine, proline and

Issue 243	5119 కలీ కాలము/Kali Era 2075 విక్రమార్క కాలము/Vikramarka Era 1939 శాలివాహన కాలము/Salivahana Era
	స్వస్తి శ్రీ విళంబి నామ సంవత్సరము/Swasti Sri Hevilambi Year
	చైత్రమాసము/CHAITRA Month
	Published online 1 APRIL 2018

Copyright ©1998-2018, Vepachedu Educational Foundation, Inc.

ॐ असतो मा सद्गमय । तमसो मा ज्योतिर्गमय । मृत्योर्मा अमृतं गमय । ॐ शान्तिः शान्तिः शान्तिः ॥

O Sun God, Savitar!
Thou dazzling fount of life-persuasive light!
Sublimest mystery speeding from afar!
Swift became that burst too potent on the sight!
This radiant type of strength and youth!
Glowing eternally!



శ్రీ వేపచేదు విద్యా పీఠము

VEPACHEDU EDUCATIONAL FOUNDATION

May the golden-eyed Savitar, come hither!
Shining forth he rises from the lap of the dawn!
Praised by singers, my God Savitar!
Stepped forth and never missed his place!
He steps forth the splendor of the sky the wide!
Seeing, far-shining, the shining wanderer!
- Rig Veda, vii. 65

He alone shines!
All luminaries get illuminated by His Illumination!
The whole Universe is enlightened by His light!
- Kathopanishad

The Telangana Science Journal

Health and Nutrition

TIACS-subscribe@yahooogroups.com (The Indian American Chemical Society)

ॐ भूर्भुवः स्वः तत्सवितुर्वरेण्यं भर्गो देवस्य धीमहि धियो यो नः प्रचोदयात्॥

Home	The Foundation	Management	The Andhra Journal of Industrial News	The Telangana Science Journal	Mana Sanskriti (Our Culture)
Vegetarian Links	Disclaimer	Solicitation	Contact	VPC	Vedah-net

Issue 243

Chief Editor: డాక్టర్ శ్రీనివాసరావు వేపచేదు | डॉक्टर श्रीनिवासरावु वेपचेदु | Dr. Sreenivasarao Vepachedu¹

hydroxyproline. It is repeated with typical sequence, Gly-X-Y where glycine is the most abundant amino acid in gelatin; X and Y are proline and hydroxyproline. The chemical properties of gelatin vary by amino acid composition and the molecular weight that depend on extraction conditions, animal species, and the tissue⁷. The molecular weight of the donkey gelatin is about 200-3000 Da⁸. Sequence analysis can be used to ensure genuine donkey gelatin.

Ejiao is an elixir of donkey gelatin used for treating conditions from common colds to impotence in China. In March, police in Shanghai arrested 36 people for selling ejiao obtained from other sources and seized products worth 40 m Yuans (almost \$ 6.3m) made from beef leather⁹. The Donkey Sanctuary¹⁰ is a charity formed to protect the donkey from extinction and lobbying for an immediate ban on the donkey trade, while the Chinese government reduced the tariff on imports of donkey pelts from 5% to 2% to keep its rich middle class population happy and content. Who says China is not a democracy interested in making its subjects happy and contented practicing their ancient carnivorous traditions and satisfying the demands of Chinese who believe in miracle elixir from donkey hide?

Donkey therapy helps autistic young adults. The Donkey Sanctuary has six centers around the UK offering Donkey-Facilitated Learning sessions. The sessions use a calm and mindful approach to bring people and donkeys together, and provide opportunities for emotional connection, social interaction, communication and confidence building. Donkeys are social and very aware of their environment and the people within it. People that may struggle to communicate and connect emotionally with others somehow seem to be able to connect with donkeys¹¹.

Issue 243

5119 కలి కాలము/Kali Era | 2075 విక్రమార్క కాలము/Vikramarka Era | 1939 శాలివాహన కాలము/Salivahana Era

స్వస్తి శ్రీ విళంబి నామ సంవత్సరము/स्वस्ति श्री हेविलाम्बी नाम संवत्सर/Swasti Sri Hevilambi Year

చైత్రమాसము/CHAITRA Month

Published online 1 APRIL 2018

Copyright ©1998-2018, Vepachedu Educational Foundation, Inc.

ॐ असतो मा सद्गमय । तमसो मा ज्योतिर्गमय । मृत्योर्मा अमृतं गमय । ॐ शान्तिः शान्तिः शान्तिः ॥

O Sun God, Savitar!
Thou dazzling fount of life-persuasive light!
Sublimest mystery speeding from afar!
Swift became that burst too potent on the sight!
This radiant type of strength and youth!
Glowing eternally!



శ్రీ వేపచేదు విద్యా పీఠము

VEPACHEDU EDUCATIONAL FOUNDATION

May the golden-eyed Savitar, come hither!
Shining forth he rises from the lap of the dawn!
Praised by singers, my God Savitar!
Stepped forth and never missed his place!
He steps forth the splendor of the sky the wide!
Seeing, far-shining, the shining wanderer!
- Rig Veda, vii. 65

He alone shines!
All luminaries get illuminated by His Illumination!
The whole Universe is enlightened by His light!
- Kathopanisad

The Telangana Science Journal

Health and Nutrition

TIACS-subscribe@yahooogroups.com (The Indian American Chemical Society)

ॐ भूर्भुवः स्वः तत्सवितुर्वरेण्यं भर्गो देवस्य धीमहि धियो यो नः प्रचोदयात्॥

Home	The Foundation	Management	The Andhra Journal of Industrial News	The Telangana Science Journal	Mana Sanskriti (Our Culture)
Vegetarian Links	Disclaimer	Solicitation	Contact	VPC	Vedah-net

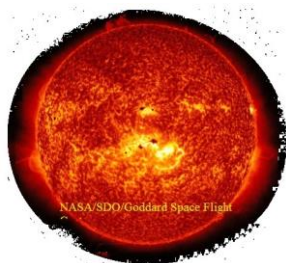
Issue 243

Chief Editor: డాక్టర్ శ్రీనివాసరావు వేపచేదు | डॉक्टर श्रीनिवासरावु वेपचेदु | Dr. Sreenivasarao Vepachedu¹

SUSTAINABLE ENERGY

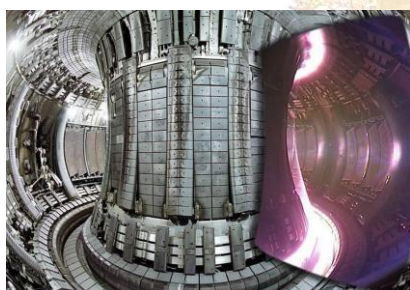
MOKAMAK

The pursuit of fusion energy embraces the challenge of bringing the energy-producing power of a star to earth for the benefit of humankind¹².

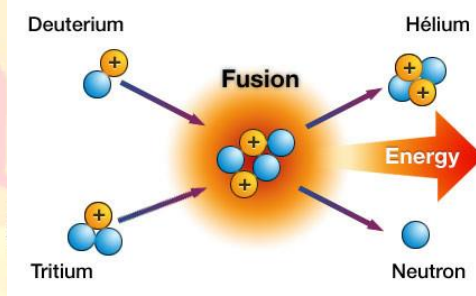


Fusion is the process of production of energy by fusing together light atoms, such as hydrogen, at the extremely high pressures and temperatures (15 million °C), which powers the sun and the stars and makes all life on earth possible. At the high temperatures experienced in the sun, any gas becomes plasma, the fourth state of matter, an electrically-charged gas in which the negatively charged electrons in atoms are completely separated from the positively charged atomic nuclei (or ions). Although plasma is rarely found on earth, it is estimated that more than 99% of the universe exists as plasma.

In this process, gases need to be heated to extremely high temperatures of about 150 million degrees °C whereby atoms become completely ionized.



A simple example is the fusion reaction between two hydrogen isotopes deuterium and tritium forming a helium nucleus, a neutron, and energy.



Fusion energy has the potential to provide a sustainable solution to the ever-increasing global energy needs. In Europe, nearly 2000 scientists and engineers are currently working on a broad range of fusion R&D projects in more than 20 laboratories including the world's largest fusion device Joint European Torus (JET)¹³ that produced fusion energy and achieved the world record for fusion power.

Issue 243

5119 కలి కాలము/Kali Era | 2075 విక్రమార్క కాలము/Vikramarka Era | 1939 శాలివాహన కాలము/Salivahana Era

స్వస్తి శ్రీ విళంబి నామ సంవత్సరము/स्वस्ति श्री हेविलाम्बी नाम संवत्सर/ [Swasti Sri Hevilambi Year](#)

చైత్రమాसము/CHAITRA Month

Published online 1 APRIL 2018

Copyright ©1998-2018, Vepachedu Educational Foundation, Inc.

ॐ असतो मा सद्गमय । तमसो मा ज्योतिर्गमय । मृत्योर्मा अमृतं गमय । ॐ शान्तिः शान्तिः शान्तिः ॥

O Sun God, Savitar!
Thou dazzling fount of life-persuasive light!
Sublimest mystery speeding from afar!
Swift became that burst too potent on the sight!
This radiant type of strength and youth!
Glowing eternally!



శ్రీ వేపచేడు విద్యా పీఠము

VEPACHEDU EDUCATIONAL FOUNDATION

May the golden-eyed Savitar, come hither!
Shining forth he rises from the lap of the dawn!
Praised by singers, my God Savitar!
Stepped forth and never missed his place!
He steps forth the splendor of the sky the wide!
Seeing, far-shining, the shining wanderer!
- Rig Veda, vii. 65

He alone shines!
All luminaries get illuminated by His Illumination!
The whole Universe is enlightened by His light!
- Kathopanishad

The Telangana Science Journal
Health and Nutrition

TIACS-subscribe@yahooogroups.com (The Indian American Chemical Society)

ॐ भूर्भुवः स्वः तत्सवितुर्वरेण्यं भर्गो देवस्य धीमहि धियो यो नः प्रचोदयात्॥

Home	The Foundation	Management	The Andhra Journal of Industrial News	The Telangana Science Journal	Mana Sanskriti (Our Culture)
Vegetarian Links	Disclaimer	Solicitation	Contact	VPC	Vedah-net

Issue 243

Chief Editor: డాక్టర్ శ్రీనివాసరావు వేపచేడు | डॉक्टर श्रीनिवासरावु वेपचेडु | Dr. Sreenivasarao Vepachedu¹

MOKAMAK¹⁴

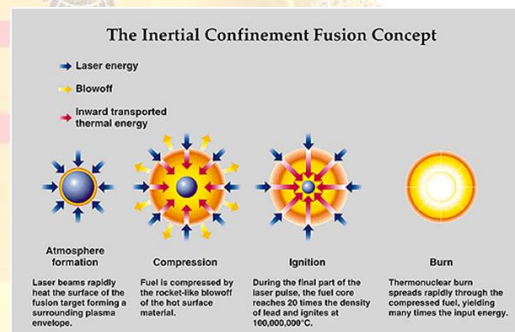
Magnetic Confinement Fusion



The **мокamak**, a torus-shaped (doughnut-shaped) magnetic chamber¹⁵, is the most developed magnetic confinement system and is the basis for the design of future fusion reactors using this method. It was invented in the Soviet Union during the 1960s and soon adopted by researchers around the world¹⁶. The Joint European Torus (JET – pictured), located at Culham Centre for Fusion Energy, is the largest and most powerful tokamak currently operating.

Inertial Confinement Fusion (ICF): A tiny sphere (capsule or pellet), ranging in size from a pinhead to a small pea, is filled with a

mixture of deuterium (D) and tritium (T) and is subjected to a sudden application of high temperature and intense pressure provided either directly by the light of a laser, by the conversion of laser light into x-rays, or by an x-ray generating device such as a Z-pinch machine. This pressure forces rapid heating and a subsequent ablation (blow-off) of some of the material of the outer layer of the capsule/pellet, producing an opposing force (rocket effect) that results in a fast inward compression of the remaining material that heats the interior of the fuel (D and T) forcing the two isotopes to fuse (ignition), which spreads to the remaining fuel and generates additional energy that blows the capsule apart. Thermonuclear fusion by inertial confinement offers the prospect of a long-term energy source based on a secure and essentially limitless fuel. In many respects, this process is similar to the process by which the Sun produces its energy, though the Sun system uses gravitational confinement.



Issue 243

5119 కలి కాలము/Kali Era | 2075 విక్రమార్క కాలము/Vikramarka Era | 1939 శాలివాహన కాలము/Salivahana Era

స్వస్తి శ్రీ విళంబి నామ సంవత్సరము/स्वस्ति श्री हेविलाम्बी नाम संवत्सर/Swasti Sri Hevilambi Year

చైత్రమాసము/CHAITRA Month

Published online 1 APRIL 2018

Copyright ©1998-2018, Vepachedu Educational Foundation, Inc.

ॐ असतो मा सद्गमय । तमसो मा ज्योतिर्गमय । मृत्योर्मा अमृतं गमय । ॐ शान्तिः शान्तिः शान्तिः ॥

O Sun God, Savitar!
Thou dazzling fount of life-persuasive light!
Sublimest mystery speeding from afar!
Swift became that burst too potent on the sight!
This radiant type of strength and youth!
Glowing eternally!



శ్రీ వేపచేదు విద్యా పీఠము

VEPACHEDU EDUCATIONAL FOUNDATION

May the golden-eyed Savitar, come hither!
Shining forth he rises from the lap of the dawn!
Praised by singers, my God Savitar!
Stepped forth and never missed his place!
He steps forth the splendor of the sky the wide!
Seeing, far-shining, the shining wanderer!
- Rig Veda, vii, 65

He alone shines!
All luminaries get illuminated by His Illumination!
The whole Universe is enlightened by His light!
- Kathopanishad

The Telangana Science Journal

Health and Nutrition

TIACS-subscribe@yahooogroups.com (The Indian American Chemical Society)

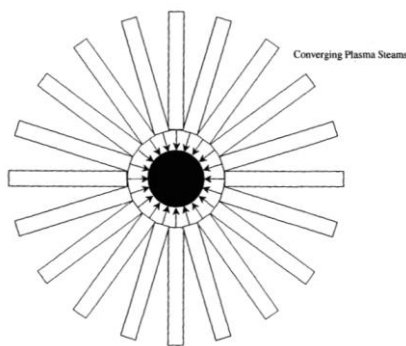
ॐ भूर्भुवः स्वः तत्सवितुर्वरेण्यं भर्गो देवस्य धीमहि धियो यो नः प्रचोदयात्॥

Home	The Foundation	Management	The Andhra Journal of Industrial News	The Telangana Science Journal	Mana Sanskriti (Our Culture)
Vegetarian Links	Disclaimer	Solicitation	Contact	VPC	Vedah-net

Issue 243

Chief Editor: డాక్టర్ శ్రీనివాసరావు వేపచేదు | डॉक्टर श्रीनिवासराव वेपचेदु | Dr. Sreenivasarao Vepachedu¹

Magnetized Target Fusion (MTF)¹⁷ is a propulsion technique that combines features from both MCF and ICF approaches and capitalizes on research results in both areas. The MTF technique offers the promise of both high specific impulse and low dry mass; as such it is well suited to the demands of high delta-v travel to the outer solar system, including human exploration missions. The work reported in this paper was carried out as part of the Human Outer Planet Exploration (HOPE) study, part of the Revolutionary Aerospace Concepts (RASC) program. The HOPE objective was to design a vehicle capable of conducting a human exploration mission of the Jovian moon Callisto. The MTF propulsion system design, as reported here, was developed to satisfy the requirements of this mission. Details of the mission and vehicle are reported separately (Adam, 2003).



Lockheed Martin¹⁸ has obtained a patent associated with its design for a potentially revolutionary compact fusion reactor (CFR)¹⁹, entitled, Encapsulating Magnetic Fields for Plasma Confinement Fusion Power, which is about the power that is generated by a nuclear fusion process in which two or more atomic nuclei collide at very high speed and join to form a new type of atomic nucleus.



Issue 243

5119 కలి కాలము/Kali Era | 2075 విక్రమార్క కాలము/Vikramarka Era | 1939 శాలివాహన కాలము/Salivahana Era

స్వస్తి శ్రీ విళంబి నామ సంవత్సరము/स्वस्ति श्री हेविलाम्बी नाम संवत्सर/Swasti Sri Hevilambi Year

చైత్రమాసము/CHAITRA Month

Published online 1 APRIL 2018

Copyright ©1998-2018, Vepachedu Educational Foundation, Inc.

ॐ असतो मा सद्गमय । तमसो मा ज्योतिर्गमय । मृत्योर्मा अमृतं गमय । ॐ शान्तिः शान्तिः शान्तिः ॥

O Sun God, Savitar!
Thou dazzling fount of life-persuasive light!
Sublimest mystery speeding from afar!
Swift became that burst too potent on the sight!
This radiant type of strength and youth!
Glowing eternally!



శ్రీ వేపచేదు విద్యా పీఠము

VEPACHEDU EDUCATIONAL FOUNDATION

May the golden-eyed Savitar, come hither!
Shining forth he rises from the lap of the dawn!
Praised by singers, my God Savitar!
Stepped forth and never missed his place!
He steps forth the splendor of the sky the wide!
Seeing, far-shining, the shining wanderer!
- Rig Veda, vii, 65

He alone shines!
All luminaries get illumined by His Illumination!
The whole Universe is enlightened by His light!
- Kathopanishad

The Telangana Science Journal

Health and Nutrition

TIACS-subscribe@yahooogroups.com (The Indian American Chemical Society)

ॐ भूर्भुवः स्वः तत्सवितुर्वरेण्यं भर्गो देवस्य धीमहि धियो यो नः प्रचोदयात्॥

Home	The Foundation	Management	The Andhra Journal of Industrial News	The Telangana Science Journal	Mana Sanskriti (Our Culture)
Vegetarian Links	Disclaimer	Solicitation	Contact	VPC	Vedah-net

Issue 243

Chief Editor: డాక్టర్ శ్రీనివాసరావు వేపచేదు | डॉक्टर श्रीनिवासराव वेपचेदु | Dr. Sreenivasarao Vepachedu¹

NOTES AND REFERENCES²⁰

¹ DONKEY MAMMAL

² Donkey skins are the new ivory.

³ At the Oxford Univ Animal Ethics conference, a presentation by the www.thedonkeysanctuary.org.uk/ brought about a virtually unknown, extremely disturbing issue: DONKEY SKINS USED FOR A GELATIN (ELJAO) USED IN CHINA. China's demand for African donkeys prompts export bans.

⁴ Stolen African donkeys sate Chinese demand for traditional medicine

⁵ Dodgy donkey business

⁶ Gelatin Derived from Beef and Pork in American Cereals

⁷ Chemical and functional properties of bovine and porcine skin gelatin, International Food Research Journal 18: 813-817 (2011).

GELATIN HANDBOOK

CN101664474A Traditional Chinese medicine composition containing instant donkey-hide gelatin powder and preparation method thereof

⁸ US 9125851, Active small-molecule donkey-hide gelatin mixture and preparation method and application thereof

⁹ 36 Arrested For Manufacturing And Selling Chinese Herbal Medicines.

¹⁰ Help End Cruel Donkey Meat and Skin Trade!

Donkey Sanctuary

Sellers of Donkey Gelatin, a Chinese Cure in Crisis, Seek a State Remedy

Donkeys in China tortured to make gelatin, disturbing video reveals

GRAPHIC WARNING: Click here to view PETA's video

¹¹ Donkey therapy helps autistic young adults.

Young and Old, Big and Small, Find Joy in Miniature Donkey Therapy

Donkey & Goats As Therapy Animals

Therapy Donkeys of Young's Funny Farm

Donkey Therapy USA

Donkeys find new role as therapy animals thanks to doctor's donkey shelter

Donkey Riding Therapy for Autism <https://www.youtube.com/watch?v=E1IGy8YO6Mg>

Donkey therapy helps Massachusetts children, adults

All Ears - Donkey Therapy Program

¹² 7 Radical Energy Solutions, Made Interactive

Fusion Technology: The Challenge of Harnessing the Sun

Why It's Taking The US So Long To Make Fusion Energy Work

¹³ 'Toroidal magnetic confinement fusion' is the advanced technology that is the main approach for European fusion research and is at the heart of the ITER experiment. <http://www.fusionforenergy.europa.eu/understandingfusion/technology.aspx>

¹⁴ Upgraded Russian tokamak T-15 launch in 2018

¹⁵ <http://www.cfe.ac.uk/Tokamak.aspx>

¹⁶ Tokamak foundation in USSR/Russia 1950-1990: In the USSR, nuclear fusion research began in 1950 with the work of I.E. Tamm, A.D. Sakharov and colleagues. They formulated the principles of magnetic confinement of high- temperature plasmas, that would allow the development of a thermonuclear reactor. Following this, experimental research on plasma initiation and heating in toroidal systems began in 1951 at the Kurchatov Institute. From the very first devices with vessels made of glass, porcelain or metal with insulating inserts, work progressed to the operation of the first tokamak, T-1, in 1958. More machines followed and the first international collaboration in nuclear fusion, on the T-3 tokamak, established the tokamak as a promising option for magnetic confinement. Experiments continued and specialized machines were developed to test separately improvements to the tokamak concept needed for the production of energy. At the same time, research into plasma physics and tokamak theory was being undertaken which provides the basis for modern theoretical work. Since then, the tokamak concept has been refined by a worldwide effort and today we look forward to the successful operation of ITER.

¹⁷ Why Magnetized Target Fusion Offers A Low-Cost Development Path for Fusion Energy

¹⁸ Compact Fusion

Issue 243

5119 కలీ కాలము/Kali Era | 2075 విక్రమార్క కాలము/Vikramarka Era | 1939 శాలివాహన కాలము/Salivahana Era

స్వస్తి శ్రీ విళంబి నామ సంవత్సరము/स्वस्ति श्री हेविलाम्बी नाम संवत्सर/Swasti Sri Hevilambi Year

చైత్రమాసము/CHAITRA Month

Published online 1 APRIL 2018

Copyright ©1998-2018, Vepachedu Educational Foundation, Inc.

ॐ असतो मा सद्गमय । तमसो मा ज्योतिर्गमय । मृत्योर्मा अमृतं गमय । ॐ शान्तिः शान्तिः शान्तिः ॥

O Sun God, Savitr!
Thou dazzling fount of life-persuasive light!
Sublimest mystery speeding from afar!
Swift became that burst too potent on the sight!
This radiant type of strength and youth!
Glowing eternally!



శ్రీ వేపచేదు విద్యా పీఠము

VEPACHEDU EDUCATIONAL FOUNDATION

May the golden-eyed Savitar, come hither!
Shining forth he rises from the lap of the dawn!
Praised by singers, my God Savitar!
Stepped forth and never missed his place!
He steps forth the splendor of the sky the wide!
Seeing, far-shining, the shining wanderer!
- Rig Veda, iii. 65

He alone shines!
All luminaries get illuminated by His Illumination!
The whole Universe is enlightened by His light!
- Kathopanishad

The Telangana Science Journal

Health and Nutrition

TIACS-subscribe@yahooogroups.com (The Indian American Chemical Society)

ॐ भूर्भुवः स्वः तत्सवितुर्वरेण्यं भर्गो देवस्य धीमहि धियो यो नः प्रचोदयात्॥

Home	The Foundation	Management	The Andhra Journal of Industrial News	The Telangana Science Journal	Mana Sanskriti (Our Culture)
Vegetarian Links	Disclaimer	Solicitation	Contact	VPC	Vedah-net

Issue 243

Chief Editor: డాక్టర్ శ్రీనివాసరావు వేపచేదు | डॉक्टर श्रीनिवासरावु वेपचेदु | Dr. Sreenivasarao Vepachedu¹

Projects in Profusion: A Skeptical Look at 3 Wild Fusion-Energy Schemes

¹⁹ US20180047462A1: Lockheed Martin Now Has a Patent For Its Potentially World Changing Fusion Reactor

²⁰ In addition to the primary sources cited above, additional references include:

New York Times, Washington Post, Mercury News, Bayarea.com, Deccan Chronicle, the Hindu, Hindustan Times, Times of India, AP, Reuters, AFP, The Guardian, Pravda, Spiegel, Connexion, etc.

Disclaimer: All information is intended for your general knowledge only and is not a substitute for medical advice or treatment for special medical conditions or any specific health issues or starting a new fitness regimen, political or economic policy.

"Where the mind is without fear and the head is held high, Where knowledge is free, Where the world has not been broken up into fragments, By narrow domestic walls." -- Rabindranath Tagore (1861-1941), Gitanjali, 1912.

వసుధైవ కుటుంబం/ वसुधैव कुटुम्बकम्/ One World One Family/

ఓం/ ॐ/ AUM/ స్వస్తి/ SWASTI!!

ఓం అసతోమా సద్గమయ/ తమసోమా జ్యోతిర్గమయ/ మృత్యోర్మా అమృతంగమయ/ ఓం శాంతిః శాంతిః శాంతిః!

ॐ/ असतोमा सदगमय, तमसोमा ज्योतिर्गमय, मृत्योर्मा अमृतंगमय, ॐ शान्तिः शान्तिः शान्तिः!

Om! Asatoma Sadgamaya, Tamasoma Jyotirgamaya, Mrtyorma Amrtamgamaya, Om Shantih, Shantih, Shantih!

Aum! Lead the world from wrong path to the right path, from ignorance to knowledge, from mortality to immortality, and peace!

స్వస్తి/ स्वस्ति/ SWASTI! ఓం/ ॐ/ AUM!

Issue 243

5119 కలి కాలము/Kali Era| 2075 విక్రమార్క కాలము/Vikramarka Era| 1939 శాలివాహన కాలము/Salivahana Era

స్వస్తి శ్రీ విళంబి నామ సంవత్సరము/स्वस्ति श्री हेविलाम्बी नाम संवत्सर/ Swasti Sri Hevilambi Year

చైత్రమాసము/CHAITRA Month

Published online 1 APRIL 2018

Copyright ©1998-2018, Vepachedu Educational Foundation, Inc.

ॐ असतो मा सदगमय । तमसो मा ज्योतिर्गमय । मृत्योर्मा अमृतं गमय । ॐ शान्तिः शान्तिः शान्तिः ॥