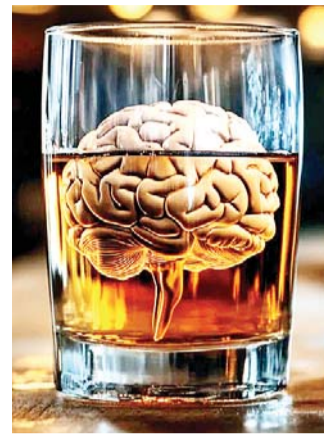


#MIND

Alcohol disrupts brain's ability to adapt



This groundbreaking research reveals how alcohol undermines these mechanisms, offering new insights into the broader effects of AUD. Importantly, the findings suggest potential therapeutic targets for addressing cognitive impairments associated with AUD.



Researchers have shed new light on how chronic alcohol use alters brain signaling pathways, specifically focusing on how it impairs cognitive flexibility. Alcohol Use Disorder (AUD) affects about 400 million people worldwide and is a leading cause of serious illnesses such as cancer, cardiovascular disease, liver disease, and stroke.

Beyond these physical impacts, AUD profoundly disrupts brain functions critical for learning, memory, and adaptability. Key elements of cognitive flexibility. The new findings in *Science Advances* demonstrate the significant role of cholinergic interneurons (CINs) in this process. Zhenbo Huang, an associate Research Scientist at the laboratory of Jun Wang in the Texas A&M University College of Medicine, and colleagues have demonstrated that alcohol disrupts the brain's ability to adapt by altering the burst-pause firing patterns of CINs, specialized neurons that release acetylcholine, a key neurotransmitter.

CINs are critical gatekeepers in the brain's striatum, influencing reward-driven learning and motivation by modulating dopamine signaling. "Dopamine neurons drive the brain's reward system, while CINs act as the gatekeepers, filtering stimuli that activate these neurons," says Wang, an associate professor at the Texas A&M College of Medicine. Using advanced tools such as optogenetics, which uses light to control cells, the researchers uncovered that stimulating CINs in animal models of chronic alcohol exposure produced an altered firing pattern compared to models without chronic alcohol exposure.

Normally, CINs fire in a 'burst-pause' pattern, a quick burst of activity followed by a



The Strangest Of Animals

The Central Zoo Authority, New Delhi, has identified 73 endangered species for conservation breeding, and the mouse deer is one of them. The Hyderabad Zoo started the Mouse Deer Conservation Breeding Programme in 2010, with a founder stock of two males and four females. Later, some more mouse deer were brought in from other zoos to improve the genetic diversity. As the breeding started and numbers increased, animals were kept in three blocks of 60 small cages. The cages were enriched with bamboo, palm, shrubs and bushes. Hollow wooden pipes were placed in the cages so that the deer could hide.



Anjali Sharma
Senior Journalist & Wildlife Enthusiast

It was, perhaps, the first photograph taken in the wild of this elusive, tiny deer, that spends all its life in the undergrowth of a forest.

Among the 12 species of deer found in India, the mouse deer is the smallest. Actually, the ten species of the mouse deer in Asia (a single species in West Africa) are the smallest hoofed ungulates of the world. My interest in this species was ignited when in November 2019, I heard that a lost species, Vietnam mouse-deer, *Tragulus versicolor* has been seen (camera trapped) after 30 years. They live such a reclusive life that it is easy to miss them.

The Indian mouse deer, also called *Indian chevrotain* (*Moschiola indica*) is endemic to the Indian subcontinent. It is mainly found in peninsular India, with some old records from Nepal. Sri Lanka has a separate species called *spotted chevrotain* (*Moschiola meminna*). The Indian mouse deer is small, 25-30 cms at shoulder height, and weighs from two to four kgs.

#HEALTH

A Nutritious Addition

While Iranians call pistachios 'smiling nuts,' Chinese call them 'happy nuts,' and the wellness world calls them 'skinny nuts' because they are so.



That nuts are a great source of protein, good fats, fibres, vitamins, and minerals is a well-known fact. But did you know that pistachios or pista rank a little higher than other nuts? Yes, while every nut is 'irreplaceable and has something unique to offer in terms of health,' pistachios check all the boxes when it comes to 'nutrition and taste.'

While Iranians call pistachios 'smiling nuts,' Chinese call them 'happy nuts,' and the wellness world calls them 'skinny nuts' because they are so. But what makes these shelled nuts a powerhouse of nutrients? The healthy fats in pistachios help to maintain a heart-healthy lifestyle, further lowering the risk of stroke and many other health problems. In addition, pista is known to increase the body's defences against internal and external free radicals, enhance digestion, and generally improve health. Further, these nuts rank the lowest in calories per



serving, meaning that you can eat more of them for fewer calories. Just 30 of these, which is about 100 quality calories, make a perfect portion.



Benefits of munching on Pistachios

Complete, clean source of plant protein: Pistachios are a complete source of protein, which means they contain all 9-essential amino acids in adequate amounts. Gram-for-gram pistachios have as much protein as an egg. **Lowest in calories:** Pistachios are some of the lowest-calorie nuts at a mere 100 calories in a single serving, equivalent to 30 pistachios. You can thus eat more for fewer calories. (30 pistachios is a perfect serving.)

Satiating and minimally processed: Besides protein, they are abundant in fibre and fat (heart-healthy MUFAs), making them very satiating. The protein-fat-fibre combo makes pistachios a great partner in your weight loss journey. Just 30 of these keep you feeling fuller for longer because of the super protein-fat-fibre combo, so, no mindless snacking.

Rich in antioxidants: Do you know why pistachios are colourful? It is the only nut that contains anthocyanins, a plant pigment that gives pistachios a purple colour. It is the same pigment that is present in blueberries.



PART: I



Hunting and trapping by tribals and frequent forest fires are the biggest threats to these small deers. During traditional tribal hunts, called *mahashikhar*, nets are laid in a large section of the forest to chase wildlife, sometimes with the help of trained dogs, to trap them. Dogs also help to ferret out the mouse deer from their dens. Their tiny pointed legs are made to skitter around in the undergrowth, not to run long distances. They are no match to trained dogs, so, many are killed. The Central Zoo Authority, New Delhi, has identified 73 endangered species for conservation breeding, and the mouse deer is one of them. The Hyderabad Zoo started the Mouse Deer Conservation Breeding Programme in 2010, with a founder stock of two males and four females. Later, some more mouse deer were brought in from other zoos to improve the genetic diversity. As the breeding started and numbers increased, animals were kept in three blocks of 60

small cages. The cages were enriched with bamboo, palm, shrubs and bushes. Hollow wooden pipes were placed in the cages so that the deer could hide. By 2017, the captive population had increased to 250. Some animals were released in a very scientific and systematic way in the Amrabad Tiger Reserve, Kinnerasani Wildlife Sanctuary, and Mrugavani National Park. Before release, they were kept in pre-released enclosures in Amrabad Tiger Reserve, where food was provided. As the animals became acclimatized to their new environment, food was reduced, so, they started foraging natural food. After a few weeks, the cages were opened to release the animals in the wild. All animals were fitted with micro-chips and ear tags. The programme appears to be successful as a mating pair and a fawn was photographed in the released area.

To be continued...
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#ART EXHIBITION

ART IN EVERY HUE

A distinguished radiologist and an accomplished artist, Dr. Sushma Mahajan, seamlessly blends the precision of medicine with the boundless imagination of art. Her 3-day exhibition, 'Vibrant Hues,' celebrated the harmony of life and creativity, inviting visitors to experience emotions, philosophy, and vitality through watercolours.



Tusharika Singh
Freelancer Writer and City Blogger

The convergence of science and art found its expression in 'Vibrant Hues,' a three-day exhibition by renowned radiologist and artist, Dr. Sushma Mahajan, held at the Alankar Gallery of Jawahar Kala Kendra in Jaipur. This event, inaugurated by former Chief Election Commissioner, Sunil Arora, captivated art enthusiasts with its rich portrayal of emotions and philosophical musings rendered in watercolours.

Arora, while admiring Dr. Mahajan's creations, remarked, "It is extraordinary to see such deeply emotive art emerging from someone rooted in the medical profession. These works transcend the medium, inviting us to reflect on the human condition." Adding to the accolades, Jaipur Police Commissioner, Biju George Joseph, praised the vivid interplay of colours, stating, "These artworks exude a balance of internal stability and discipline, reflecting the artist's profound connection with her craft."

Dr. Rajesh Kumar Vyas, a cultural critic and poet, described the exhibition's title, 'Vibrant Hues,' as infused with the essence of nature and life. He highlighted how each piece evokes sensitivity and inspires innovation. Film actor and director, Ashok Banthia, lauded the exhibition's title, 'Vibrant Hues,' noting how the palette seemed to breathe life into the compositions.



Sunil Arora taking a look at the paintings with Sushma Mahajan.



A Symphony of Life in Watercolours

Dr. Mahajan's collection of 54 artworks showcased an enchanting interplay of natural and architectural elements. From frolicking animals, dogs, horses, elephants, rabbits, and squirrels, to meticulously detailed flora and

urban landscapes, her brushwork demonstrated a harmonious blend of Indian culture and global diversity. Particularly striking were her 3D-inspired cityscapes, which drew viewers into immersive visual narratives.

A Celebration of Artistic Dedication



Art lovers and enthusiasts gathered at the exhibition, captivated by the vivid interplay of emotions and creativity in Dr. Mahajan's artworks. The gallery buzzed with visitors, each drawn to the immersive vitality and meticulous craftsmanship that characterized the collection. The exhibition reflected a unique dialogue between the structured discipline of medicine and the uninhibited flow of artistic expression. It showcased how creative pursuits can enrich lives, offering moments of inspiration and solace amid the demands of a professional career. 'Vibrant Hues' stood as a testament to the transformative power of art, a celebration of life's myriad colours, textures, and forms. Though the three-day showcase has concluded, its essence lingers as a reminder of the boundless possibilities that arise when passion meets purpose.

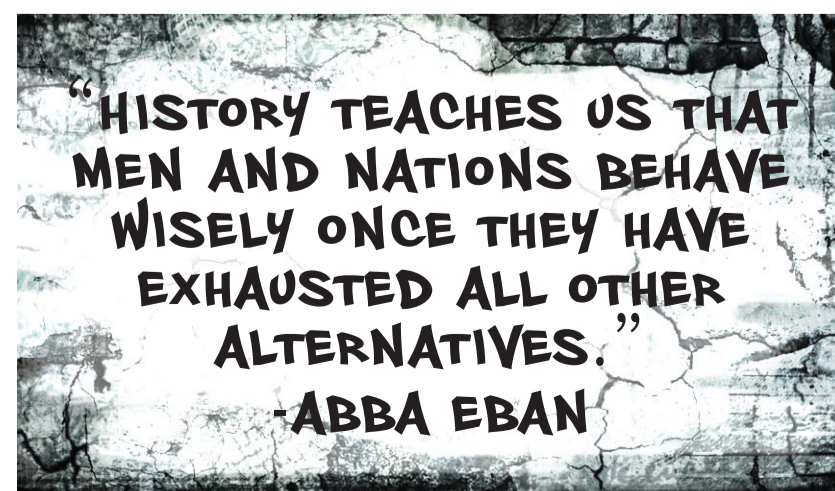
Art as a Balm for Life's Stresses

Speaking about her journey, Dr. Mahajan shared, "Art is boundless, a realm where established boundaries dissolve. It offers solace, harmonizing life's stresses and infusing positivity." Her philosophy resonated deeply with visitors, who found her work both meditative and uplifting. She emphasized that art is a universal need, offering a creative outlet not just for professional artists, but also for individuals across all

walks of life, including doctors, who often navigate high-pressure environments. Dr. Mahajan's artistic journey has traversed the country, earning her acclaim in venues such as the Visual Arts Gallery at India Habitat Centre, New Delhi, with her exhibitions 'Curious Charms' and 'The Beautiful World.' This is her seventh exhibition and it cements her reputation as a visionary who brings fresh perspectives to the canvas.



THE WALL



BABY BLUES



ZITS



By Rick Kirkman & Jerry Scott

By Jerry Scott & Jim Borgman