

# mensa world journal

MARCH 2023 EDITION 122



*See p5 for  
details of  
Hellenic  
Mensa's  
AG in May*

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*from the editor...*



- having your breath tested for alcohol has taken on a new meaning according to the latest research on p2  
- our Treasurer brings us up-to-date with finances on p3  
- on p4, check out some of the events happening around the Mensa world along with advance news of the 2023 Photocup and Poetry competitions  
- "Words..." is on p6, and on p7 is our Mensa Profile of the month  
- p8 brings us the MIL Budget for 2023  
- on p9, we learn that men are slowly losing their Y chromosome, but there's a new sex gene discovery, and John Blinke's "Supplementally..." is on p10  
- our MIL Officer Directory is on p11, while two extra pages, 12 and 13, outline the financial year 2021  
- "Therese's Teasers" are on the back cover, as usual.

Happy reading!

Kate

Log in to [www.mensa.org](http://www.mensa.org) to read or download the MWJ in full colour

## Deep Learning Algorithm Can Hear Alcohol in Voice

**La Trobe University researchers have developed an artificial intelligence (AI) algorithm that could work alongside expensive and potentially biased breath testing devices in pubs and clubs.**

The technology can instantly determine whether a person has exceeded the legal alcohol limit purely by using a 12-second recording of their voice.

In a paper published in the journal *Alcohol*, the study, led by PhD student Abraham Albert Bonela and supervised by Professors Emmanuel Kuntsche and Associate Professor Zhen He, from the Centre for Alcohol Policy Research and the Department of Computer Science and Information Technology at La Trobe University, respectively, describes the development of the Audio-based Deep Learning Algorithm to Identify Alcohol Inebriation (ADLAIA) that can determine an individual's intoxication status based on a 12-second recording of their speech.

According to Albert Bonela, acute alcohol intoxication impairs cognitive and psychomotor abilities, leading to various public health hazards such as road traffic accidents and alcohol-related violence.

"Intoxicated individuals are usually identified by measuring their blood alcohol concentration (BAC) using breathalysers that are expensive and labor-intensive," Albert Bonela said.

"A test that could simply rely on someone speaking into a microphone would be a game changer."

The algorithm was developed and tested using a database dataset of 12,360 audio clips of inebriated and sober speakers. According to the researchers, ADLAIA was able to identify inebriated speakers - with a BAC of 0.05% or higher - with an accuracy of almost 70%. The algorithm had a higher performance of almost 76% in identifying intoxicated speakers with a BAC of higher than 0.12%.

The researchers suggest that one potential future application of ADLAIA could be the integration into mobile applications and to be used in environments (such as bars and sports stadiums) to get instantaneous results about inebriation status of individuals.

"Being able to identify intoxicated individuals solely based on their speech would be a much cheaper alternative to current systems where breath-based alcohol testing in these places is expensive and often unreliable," Albert Bonela said.

"Upon further improvement in its overall performance, ADLAIA could be integrated into mobile applications and used as a preliminary tool for identifying alcohol-inebriated individuals."

*Neurosciencenews.com Jan. 6, 2023*

articles - poetry - member achievements...

Send your submissions to the Editor at

[mwjeditor@mensa.org](mailto:mwjeditor@mensa.org)



from your executive committee

## from the Treasurer, Jacek Cywinski

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*Hello! It is time for the financial update. I want to focus on two pieces of information: the approved financial statements for the year ended 31 December 2021 and the approved budget for 2023. To provide you with some background for the 2023 budget, I would like to share with you a brief assessment of 2022 as well.*

### **2021 Financial statements (see pp12 and 13)**

Income statement for the year ended 31 December 2021 shows a surplus of 104,943 GBP, with revenue sitting at 382,160 GBP and costs at 277,217 GBP. The component income decreased by 7.5% in comparison to the previous year. The administrative expenses increased by 16.3% in comparison to the previous year, mostly due to the cancellation of the IBD meeting in Houston (cancellation costs) and name/logo protection costs. The highest cost is running the Mensa International Office (47.2%) followed by the name protection (18.6%). As of 31 December 2021, Mensa International had 967,844 GBP on bank accounts. Due to the level of the multi-year membership fees received in advance in the last couple of years, we decided to recognise it in our accounts as material and spread across 20 years.

### **2022 – year in progress**

Although you will read this in 2023, it takes some time to prepare fi-

nancial reporting for 2022. Therefore, I will refer you to the Revised Budget for 2022, which was updated in October 2022. Some costs related to big ticket items such as Adaptive Testing did not occur. Hence, we saved 65,000 GBP in 2022 because of that. Our revenue for the year is forecasted to be around 2% higher than in 2021.

### **2023 budget (see p08)**

The budget assumes that the component income will be similar to the previous years, which considers the impact of COVID19. In my opinion, the cautious approach is still the best under the circumstances. 2023 budget assumes a small loss due to the variety of factors. Firstly, we assumed safely the turnover (potentially and hopefully underestimated). National Mensas reported less revenue due to lower membership numbers or discounts on membership fees. Secondly, we assumed higher costs (especially travel to the IBD in Dallas). Thirdly, the UK (and probably your country as well) faces unprecedented inflation, so we needed to account for it, as Mensa International Limited is registered in the UK. In general, the costs are potentially overestimated due to the continuous uncertainty caused by COVID19 – the cost of international travel might be still potentially higher rather than lower,



especially that USD stays strong in comparison to other currencies. However, some plane fares have been getting a bit more affordable. Anyway, we can afford the small loss due to previous surpluses and there is no need to increase the rate of component above 7%. Therefore, we should go through 2023 without any difficulties.

Your help in growing our organisation is now more important than ever. Every bit of volunteering means quite a lot, and abovementioned data shows that you have been actively growing the organisation regardless of the extraordinary circumstances. If you haven't recently had much involvement with Mensans in face-to-face meetings, remind yourself of amazing times from the past. It's always good to look at old photos from previous events – let's get back to these times and make it happen again. Please accept my challenge! I am hoping that it will be possible to see you at one of the international events in 2023.

*Continued on p04*

Continued from p03

Thank you for reading my update. If you have any questions do not hesitate to contact me – I totally understand why some people are interested in financial data.

Your Treasurer,

**Jacek**

[treasurer-mil@mensa.org](mailto:treasurer-mil@mensa.org)



## Mensa International Competitions, 2023

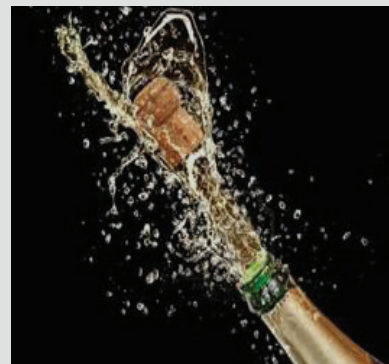
Mensa holds two international competitions each year and all members in good standing from anywhere in the world are welcome to enter with no entry fee.

The first of these is the search for the Mensa International Photographer of the Year 2023, and the second is the Mensa International Poetry Competition, 2023.

Check the mensa.org website and the MWJ for rules and dates, or (if concerning the Poetry Competition), write to the poetry coordinator Kate Nacard at [katenacard1@gmail.com](mailto:katenacard1@gmail.com).

Good luck to all!

## what's on...



**MY-Easter**

**April 1-9, 2023 Denmark**  
(see p5 for details)

**Hellenic Mensa Annual Gathering**  
**May 4-7, 2023**  
**Kalamata, Greece**  
(see p5 for details)

**Mensa Foundation Colloquium**  
**July 4, 2023, 8:30 am**  
*Giftedness Across the Lifespan: The Talent and Potential of Neurodiversity*  
Registration information can be found on the Mensa Foundation website. This event will be presented in person but will also be available via livestream.

**American Mensa Annual Gathering**  
**July 5, 2023, 12:00 pm**  
The 2023 Annual Gathering is dropping anchor on the East Coast, and we're going to make a real splash on the Harbour!  
All details can be found on the AG 2023 website.

**EMAG 2023 - Rotterdam, The Netherlands**  
**August 2, 2023**

Mensa The Netherlands is proud to present EMAG 2023!  
You are all more than welcome to join us in Rotterdam - we'd love to see you there!  
For more details, go to <https://en.rotterdam.info/visitors-info/roaming-rotterdam/> You can also subscribe to get updates.

## MY-Easter

Celebrate Easter in style with 200 young Mensans in  
maximum hygge



After the success of the first MY-Easter in 2022, we are returning to the scene of the awesome: Denmark! The theme is Wild Wild East(er), so get ready for cowboy adventures, martial arts shenanigans, and cuddly bunnies!

Join our 24/7 fun where you can play board games, taste exotic food and drinks, learn from other Mensans, have life-changing conversations and epic nights with karaoke, beer pong, a pub quiz, open mic night, and a costume party to end it all.

All Mensans and +ones above 18 are welcome! The event is geared toward the young, but the comforts of this venue will satisfy even the most demanding young-at-hearts. Super cozy rooms (1-3 beds) with excellent soundproofing, plenty of activity rooms to use, warm dinners designed by our M chef, and a real cocktail bar manned by campers!

### Room prices:

3-beds: 280 euro  
Double/twin: 370 euro  
Single: 460 euro

Prices include 8 nights of accommodation, warm dinner every day + 24/7 access to the self-service Eternal Kitchen, and basic activities.

Sign-up started on 10 January 2023 at [www.my-easter.org](http://www.my-easter.org). If this is your first time, head over there now, create an account and top up with some money before the time comes!

Join the event's Facebook group: <https://www.facebook.com/groups/wildwildeaster> or join the Telegram channel to get all the important announcements: <https://tinyurl.com/MYEaster23>

*See you there!*

### MENSA INTERNATIONAL

TO READ OUR WELCOME LETTER OR ACCESS LINKS  
TO USEFUL INFORMATION & SERVICES FOR NEW  
MEMBERS, PLEASE GO TO

[https://bit.ly/MI\\_welcome](https://bit.ly/MI_welcome)

## HELLENIC MENSA ANNUAL GATHERING – HMAG 2023

After six highly successful meetings in previous years, HMAG 2023 will take place from Thursday May 4 to Sunday May 7, 2023, in Kalamata.

Hellenic (Greece) Mensa Annual Gathering 2023 is acquiring an international character with the participation of Mensans from other countries as well!

The program includes excursions to Pylos and Methoni, as well as visits to Ancient Messene and Mystras. In addition, as always, we will make new acquaintances and have fun with a demanding treasure hunt and board game tournaments.

### HMAG 2023 Program:

#### Thursday May 4

14:00 – 23:00 | Ostria Hotel Check in – Kalamata  
17:30 | Departure by coach from Athens with stopovers  
20:00 – 23:00 | Registration – Hotel Check in  
22:30 – 02:00 | Board games

#### Friday May 5

08:00 – 09:30 | Breakfast  
09:30 – 11:30 | Visit to the Mycenaean Palace of Nestor archaeological site  
12:00 – 16:00 | Departure for Pylos – Visit to the Castle of Pylos – Lunch

For up-to-date information, please see Facebook page <https://www.facebook.com/HellenicMensaAnnualGathering>



## words...

### *Even more sinister...*

Being of sinistral bent myself, I identified with an article I reread recently on left-handedness. My delight was fanned when I discovered that we lefties form an elite 7-10% of the population and that so many of us are creative and artistic. Some would claim we're also more intelligent! In *Right-Hand, Left-Hand*, Chris McManus (of University College London) argues that the number of lefties is increasing and that historically we have a disproportionate number of high-achievers because our brains are structured in such a way that a greater range of abilities is open to us. Other researchers at John Hopkins University found in 2006 that tertiary-educated, leftie men are 15% richer than their dextrous colleagues and 26% richer if they graduated!

However, apart from these findings, along with the peoples of the Andes believing that left-handers have special spiritual abilities, and in Buddhist tantras, the left hand represents wisdom, it seems that the positives remain few. Now, I already knew (well, who could fail to know!) some of the derogatory connotations of being a mollydooker (forgive my using an Aussie term here), but was quite surprised (no – very surprised) to find that historically, the evilness of left-handedness stretches way past the Latin-inspired language of Western Europe (and hence the Americas and Antipodes) to ancient Mesopotamia, ancient China and India. In

ancient Semitic and Mesopotamian languages, while “left” symbolised power, it also symbolised the power to shame society, and was used as a metaphor for misfortune, evil, or punishment from the gods.

Centuries later, this metaphor was integrated into Christianity by early Catholic theologians such as Ambrose of Milan, and modern Protestant theologians such as Karl Barth, to attribute natural evil to God in explaining God's omnipotence over the universe.

In many European languages today, “right” is not only a synonym for correctness, but also stands for authority and justice: German *Recht*, French *droit*, Spanish *derecho*, Portuguese *direito*. The right hand, has long been held as pertaining to skill (witness ‘dexterity’ coming from the Latin *dexter* meaning right-handed), and in Spanish, *diestro* means both right-handed and skilful as does the Italian *destro*.

Meanwhile, the English word *sinister* comes from the Latin word *sinestra*, which originally meant “left” but which took on meanings of “evil” or “unlucky” by the Classical Latin era. But all may not be lost as *sinister* could also come from the Latin word *sinus* meaning the pocket on the left side of the toga. (This sounds good to me – the left hand, the ‘favoured hand’ resting in



the pocket while the right one does all the gesticulating...)

Sadly, though, the left side is often associated with awkwardness and clumsiness, the English expression “having two left feet”, and the Polish, Dutch, German, Bulgarian, the Czech and French all having similar expressions for clumsiness. In ancient China, the left has always been the bad, improper side and in Mandarin the “left path” stands for illegal or immoral means.

In Welsh, the word *chwith* means left, but can also mean strange, awkward, or wrong; in Finnish, *oikea* means both right (correct) and right (the opposite of left); in Swedish, *vanster* means left and *vansterprassel* means adultery and cheating, and, in Polish, *lewy* means both left (opposite of right) and, colloquially, illegal.

It gets worse. Muslims use the left hand for cleaning oneself with water after defecating while the right hand is used for eating. Apart from death, there can perhaps be no greater punishment than having one's right hand cut off so that the ‘toilet’ hand is also the eating hand...

*Continued on p11*

# member profile

by Susan Jensen

*Danijel Lasic, 39, of Croatian Mensa is the kind of father any kid would want to have — organized yet relaxed, responsible yet artistic, and, most of all, really into playing and creating games.*

Born in Sisak, Croatia, Danijel grew up as an only child with a lot of friends. From his earliest memory, he was creating games in his head whenever he had a free moment, such as when he was eating breakfast or waiting in a doctor's office. He would then spend hours each day putting the ideas to paper.

As a toddler, Danijel enjoyed listening to English TV shows and before he was five years old, he was fluent in English just by watching TV. He had an excellent memory for poems, letters and words and was reading and writing long before he began school. He was also able to do mathematics in his head at a very young age.

School was so easy for him that he didn't need to study at home. This proved a problem when he got into more advanced work and lacked the study habits needed to be successful.

Danijel met his wife Silvija when he was nineteen in an online chatroom. They have been married for twelve years and have a 4 ½ year old son and a cat, Luna.

The desire to create games on paper led to a desire to create things on the computer. Danijel earned a Masters degree in computer science



and has been employed in the IT field for fifteen years.

He is passionate about his hobbies which include creating mobile apps and games (he was the first Croatian developer to create a Croatian app for Apple). He enjoys making detailed abstract pencil drawings and playing guitar.

Danijel joined Mensa eleven years ago and enjoys connecting online with Mensans around the globe on Facebook and LinkedIn.

Right now, he and his family live in Augsburg, Germany where he works remotely for an American company.

Danijel's son Jonas is good with numbers, speaks English, German

and Croatian (at a 4 year old level) and is quite creative. Every evening, Jonas chooses a random topic for his Dad to create a story.

The topics he comes up with are broad and creative:

"Dad, tell me a story about 1000 Tuesdays."

"Dad, tell me a story about a small red number 14 named Bob".

"Dad, tell me a story about nothing."

Danijel has yet to attend an in person Mensa event, but hopes to do so in the not too distant, pandemic-free future. He enjoys bouncing ideas off other gamers and welcomes gaming Mensans to email him at:

[lasic.danijel@gmail.com](mailto:lasic.danijel@gmail.com)

SI

# Mensa International Limited

## Budget 2023

### MIL budget 2023

	2022	2022 Revised	2023	2024
Details	Totals			
<b>IBD</b>	<b>100 000</b>	<b>100 000</b>	<b>130 000</b>	<b>140 000</b>
<b>Excomm</b>	<b>24 000</b>	<b>24 000</b>	<b>26 000</b>	<b>27 000</b>
<b>Development</b>	<b>10 000</b>	<b>10 000</b>	<b>10 000</b>	<b>10 000</b>
<b>OFFICE</b>	<b>140 000</b>	<b>140 000</b>	<b>152 000</b>	<b>158 000</b>
Office Salaries	120 000	120 000	130 000	135 000
Social security	15 000	15 000	16 500	17 000
Office other costs	5 000	5 000	5 500	6 000
<b>SERVICES</b>	<b>13 000</b>	<b>10 000</b>	<b>10 000</b>	<b>11 000</b>
Bookkeeping	4 000	3 000	3 000	3 500
Accountancy & Audit	9 000	7 000	7 000	7 500
<b>Website, IT, security &amp; hosting</b>	<b>10 000</b>	<b>25 000</b>	<b>15 000</b>	<b>15 000</b>
<b>Database costs (consultancy)</b>		<b>8 500</b>		-
<b>Legal expenses</b>	<b>100 000</b>	<b>100 000</b>	<b>85 000</b>	<b>90 000</b>
<b>Referendum expenses</b>	<b>8 000</b>	-	<b>7 000</b>	-
<b>OTHER EXPENSES</b>	<b>238 000</b>	<b>65 370</b>	<b>17 500</b>	<b>18 000</b>
Database implementation and processing	120 000	15 870	-	-
International Volunteers		-	3 000	3 000
Mensa Foundation - International Scholarships (2022-2024)	16 000	16 000	-	-
Awards budget	1 000	1 000	1 000	1 000
DIMs	2 000	2 000	2 000	2 000
The First European Mensa Juniors Camp	4 000	4 000	-	-
Mensa International Charitable Foundation - initial funding	10 000	10 000	-	-
IVN	5 000	5 000	3 000	3 000
GLAM	5 000	-	-	-
Adaptive testing	65 000	-	-	-
Supervisor Psychologist Honorarium	2 000	2 000	2 000	2 000
Archives	3 000	3 000	-	-
Honorary President	-	1 500	1 500	1 500
Publications	500	500	500	500
Other fees (including bank and PAYPAL fees)	4 500	4 500	4 500	5 000
<b>Total cost</b>	<b>643 000</b>	<b>482 870</b>	<b>452 500</b>	<b>469 000</b>
<b>Revenue</b>	<b>2022</b>	<b>2022R</b>	<b>2023</b>	<b>2024</b>
Component	430 000	371 000	380 000	400 000
Other income	9 000	9 000	10 000	10 000
DIM	9 000	9 000	10 000	10 000
<b>Total revenue</b>	<b>448 000</b>	<b>389 000</b>	<b>400 000</b>	<b>420 000</b>
<b>Planned Profit (+) / loss (-)</b>	<b>- 195 000</b>	<b>- 93 870</b>	<b>- 52 500</b>	<b>- 49 000</b>
Component	7%	7%	7%	7%



## Men are slowly losing their Y chromosome, but there's a new sex gene discovery...

*The sex of human and other mammal babies is decided by a male-determining gene on the Y chromosome. But the human Y chromosome is degenerating and may disappear in a few million years, leading to our extinction unless we evolve a new sex gene.*

The good news is two branches of rodents have already lost their Y chromosome and have lived to tell the tale. A new paper in *Proceedings of the National Academy of Science* (PNAS) shows how the spiny rat has evolved a new male-determining gene.

### How the Y chromosome determines human sex

In humans, as in other mammals, females have two X chromosomes and males have a single X and a puny little chromosome called Y. The names have nothing to do with their shape; the X stood for "unknown".

The X contains about 900 genes that do all sorts of jobs unrelated to sex. But the Y contains few genes (about 55) and a lot of non-coding DNA – simple repetitive DNA that doesn't seem to do anything.

But the Y chromosome packs a punch because it contains an all-important gene that kick-starts male development in the embryo. At about 12 weeks after conception, this master gene switches on other genes that regulate the development of a testis. The embryonic testis makes male hormones (testosterone and its derivatives), which ensures the baby develops as a boy.

This master sex gene was identified as SRY (sex region on the Y) in 1990. It works by triggering a genetic pathway starting with a gene called SOX9 which is key for male determination in all

vertebrates, although it does not lie on sex chromosomes.

### The disappearing Y

Most mammals have an X and Y chromosome similar to ours; an X with lots of genes, and a Y with SRY plus a few others. This system comes with problems because of the unequal dosage of X genes in males and females.

How did such a weird system evolve? The surprising finding is that Australia's platypus has completely different sex chromosomes, more like those of birds.

In the platypus, one XY pair is just an ordinary chromosome, with two equal members. This suggests the mammal X and Y were an ordinary pair of chromosomes not that long ago.

In turn, this must mean the Y chromosome has lost 900–55 active genes over the 166 million years that humans and platypus have been evolving separately. That's a loss of about five genes per million years. At this rate, the last 55 genes will be gone in 11 million years.

Our claim of the imminent demise of the human Y chromosome created a furore, and to this day there are claims and counterclaims about the expected lifetime of our Y chromosome – estimates between infinity and a few thousand years

### Rodents with no Y chromosome

We know of two rodent lineages that have already lost their Y chromosome – and are still surviving. The mole voles of eastern Europe and the spiny rats of Japan each boast some species in which the Y chromosome, and SRY, have completely disappeared. The X chromosome remains, in a single or double dose in both sexes.

Although it's not yet clear how the

mole voles determine sex without the SRY gene, a team led by Hokkaido University biologist Asato Kuroiwa has had more luck with the spiny rat – a group of three species on different Japanese islands, all endangered.

Kuroiwa's team discovered most of the genes on the Y of spiny rats had been relocated to other chromosomes. But she found no sign of SRY, nor the gene that substitutes for it.

Now at last they have published a successful identification in PNAS. The team found sequences that were in the genomes of males but not females, then refined these and tested for the sequence on every individual rat. What they discovered was a tiny difference near the key sex gene SOX9, on chromosome 3 of the spiny rat. A small duplication (only 17,000 base pairs out of more than 3 billion) was present in all males and no females.

They suggest this small bit of duplicated DNA contains the switch that normally turns on SOX9 in response to SRY. When they introduced this duplication into mice, they found that it boosts SOX9 activity, so the change could allow SOX9 to work without SRY.

### What this means for the future of men

The imminent – evolutionarily speaking – disappearance of the human Y chromosome has elicited speculation about our future.

Some lizards and snakes are female-only species and can make eggs out of their own genes via what's known as parthenogenesis. But this can't happen in humans or other mammals because we have at least 30 crucial "imprinted" genes that work only if they come from the father via sperm.

*Continued on page 11*

# supplementally...

by John Blinke

## Bright Lights

ScienceDaily, November 30, 2022.

“Mysteriously Bright Flash Is A Black Hole Jet Pointing Straight Toward Earth, Astronomers Say.” (Nature Astronomy)

Decades ago, astronomers discovered bright X-ray sources in the sky. When technical advances allowed them to see more detail, they found that the objects were often galaxies with jets of energy streaming away, perpendicular to the disks. Lately, other astronomers have discovered four inexplicably bright X-Ray sources. They think these may be cases where one of those jets is pointing directly at us. You can imagine that a flashlight beam would seem brighter if it pointed at your eyes rather than in some other direction. But in cosmic jets there is a “Doppler boost” that enhances the effect even more. Astronomers expect to see more of these in the future as better instruments come online.

## Star in a Bottle

Science News, December 12, 2022.

“In A Breakthrough Experiment, Nuclear Fusion Finally Makes More Energy Than It Uses.” Contributed by Chip Taulbee.

Scientists at Livermore National Lab’s National Ignition Facility (NIF) have reached the holy grail of power generation: controlled nuclear fusion. After a hundred failures and many

modifications to the apparatus and fuel, a single shot of the NIF laser resulted in more power coming out than had been put in: two million joules in, three million joules out. This only counts the laser energy, not the overall power consumed by the facility. The important thing is that we know inertial fusion is possible under ideal conditions. It’s up to engineers to take us the rest of the way to commercial fusion power production.

## Wimpy

Dr Karl’s Great Moments In Science.

“Lazy Sun Is Less Energetic Than Compost.”

The sun generates enough energy to warm the Earth 150 million kilometers away. Yet, on a watt per volume basis, it only makes as much heat as a compost pile. The trick is that the sun has a lot more volume than a compost pile. And the sun’s energy is mostly produced in the middle fourth of its volume where pressure of the surrounding material compacts the hydrogen to about ten times the density of lead and around 16 million degrees C. This way, hydrogen atoms are close to each other and can

interact often enough to power a star.

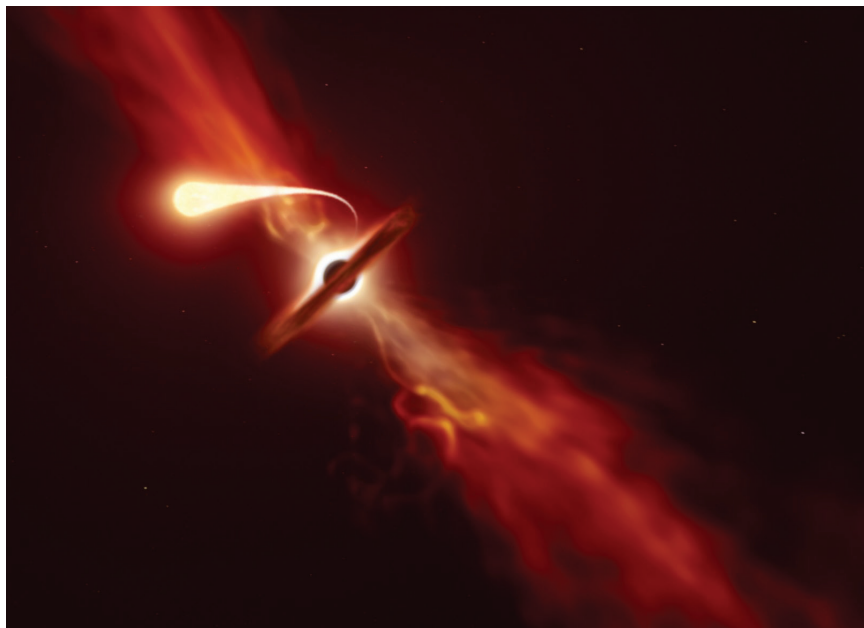
## In Your Head

Eurekalert, December 6, 2022.

“Scientists Uncover Biological Explanation Behind Why Upper Respiratory Infections Are More Common In Colder Temperatures.” (Journal of Allergy and Clinical Immunology)

If it seems to you that you get more colds and flu in winter, you are correct. And it isn’t because we spend more time crammed together indoors. Scientists at Northeastern University have shown that a previously unknown immune mechanism in the nose is suppressed in cold weather. They found that when infectious particles enter the nose, billions of tiny extracellular vesicles (EV) surround invading organisms. They gang up on invaders, occupying all the binding sites that would let them attack host cells. Then the little warriors hustle bacteria-fighting proteins from the nose farther down the air way. This EV activity is reduced drastically in cold weather.

*Photo: University of Birmingham*



*Continued from p06*

Various theories vie for the reason for left-handedness, the foremost being the Geschwind theory. It suggests that exposure to higher levels of testosterone before birth suppress the development of the left cerebral hemisphere and the subsequent highly-developed right hemisphere, which looks after the left side of the body, results in the child being left-handed.

Whatever the reason, happily, society today is a little more accepting of the left-hander than as (relatively) recently as 50 years ago. My sister was forced to write with her right hand in preparatory school, but has ended up drawing with her left hand and playing sports (tennis and golf) with her left hand. I write with my

left hand but play sports with my right. (It's a pity I wasn't a writer of Persian, Arabic, Urdu, Hebrew or any other right-to-left script so that I wouldn't be running my hand left to right over my script and leaving smudges...).

But there are even leftie shops now with such great inventions as left-handed scissors, potato-peelers, corkscrews and can-openers! Heavens! If I really wanted one, I could even have a left-handed trumpet!

Being a leftie is all right, I say! (And just as well champagne bottles aren't fussy about the handedness of who opens them...)

**Kate Nacard**

*Continued from p09*

To reproduce, we need sperm and we need men, meaning that the end of the Y chromosome could herald the extinction of the human race.

The new finding supports an alternative possibility – that humans can evolve a new sex determining gene. Phew!

A “war” of the sex genes could lead to the separation of new species, which is exactly what has happened with mole voles and spiny rats.

So, if someone visited Earth in 11 million years, they might find no humans – or several different human species, kept apart by their different sex determination systems.

*Extracted from theconversation.com December 6, 2022*

## OFFICER DIRECTORY

**Chair:** Mr Björn Liljeqvist  
chairman-mil@mensa.org

**Director of Admin:**  
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**Mensa International Limited**
**Company Limited by Guarantee**
**Statement of Income and Retained Earnings**
**Year ended 31 December 2021**

		<b>2021</b>	<b>2020</b>
	<b>Note</b>	<b>£</b>	<b>(restated)</b>
		<b>£</b>	<b>£</b>
<b>Turnover</b>	<b>5</b>	382,160	430,042
<b>Gross profit</b>		382,160	430,042
Administrative expenses		277,217	238,386
Other operating income	<b>6</b>	–	1,447
<b>Operating profit</b>	<b>7</b>	104,943	193,103
<b>Profit before taxation</b>		104,943	193,103
Tax on profit		–	–
<b>Profit for the financial year and total comprehensive income</b>		104,943	193,103
<b>Retained earnings at the start of the year (as previously reported)</b>		833,512	577,891
Prior period adjustments		(62,518)	–
<b>Retained earnings at the start of the year (restated)</b>		770,994	577,891
<b>Retained earnings at the end of the year</b>		875,937	770,994

All the activities of the company are from continuing operations.

## Mensa International Limited

### Company Limited by Guarantee

#### Notes to the Financial Statements *(continued)*

#### Year ended 31 December 2021

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#### 4. Company limited by guarantee

Mensa International Limited is a company limited by guarantee where every member undertakes to contribute as may be required (not exceeding £1) to the Company's assets if it should be wound up.

#### 5. Turnover

Turnover arises from:

	2021	2020 <i>(restated)</i>
	£	£
Rendering of services	382,160	430,042

In the year to 31 December 2021 84% (2020: 85%) of the company's turnover was derived from markets outside of the United Kingdom & Ireland.

Component income is analysed geographically as follows:

	2021	2020
	£	£
USA & Canada	169,552	200,018
UK & Ireland	59,424	62,491
Europe	134,372	136,482
Asia-Pacific	16,196	28,571
South Africa	1,498	1,088
South America	1,118	1,392
	382,160	430,042

The whole of the turnover is attributable to the principal activity of the company wholly undertaken in the United Kingdom.

#### 6. Other operating income

	2021	2020 <i>(restated)</i>
	£	£
Other operating income	—	1,447

# Therese's BRAIN TEASERS

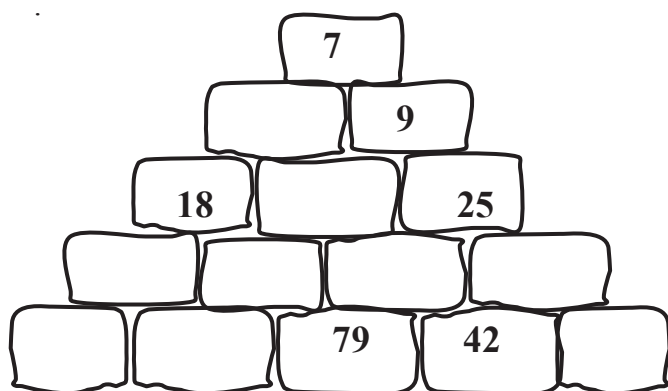
## Cryptosum

Each symbol represents a different digit from 1 to 9. The sum of the digits in each row and column is shown. Find the sum of the numbers along the diagonal line starting from the top left-hand corner.

&	□	◆	∪	23
■	☉	♂	⌘	20
⌘	♂	○	☉	21
○	∪	□	◆	21
13	25	17	30	?

## Cairn

The number on each stone represents the difference between the numbers in the two stones on which it sits. There is a two-digit number in each of the bottom stones, using the digits 0-9 once each.



## Rebus

Not pleasure!

EBUSSS

## Anagram riddle

Eight letters have I, you can change them around  
To spell words which vary by more than a sound:

- Of old Italian region (was really quite hip)
- Half men, half horses (they give me the pip)
- Non-churchgoer, rebel (he's not going to flip)

Now that you've solved me, which words have you found?

## wordsquare

Each of the clues below has a five-letter solution. Rearrange the order of your answers and place in a 5x5 grid so that 1 Across = 1 Down; 2A = 2D etc.

- Tears
- Nonsense
- Map
- Sports ground
- Leaser

## Crypto-culture

Old Swiss coin is preceding breakfast rashers  
for knighted philosopher/essayist. (7, 5)

## Answers

**Cryptosum:** 21 (4 + 8 + 2 + 7) **Cairn:** 61 58 79 42 30 **Rebus:** Bus-in-ess **Anagram Riddle:** Etruscan, Centaurs, Recusant **Wordsquare:** Chart Hirer Arena Rends Trash **Crypto-culture:** Francis Bacon

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