

Burberry chief checks out with Cara & Co in tow

Jane McFarland
Fashion Director

Christopher Bailey, the driving force behind the top British brand Burberry for the past 17 years, took his farewell bow at London fashion week last night.

To a soundtrack of Smalltown Boy, sung by Jimmy Somerville, Bailey presented his final collection of lesbian, gay, bisexual, transgender and queer/questioning (LGBTQ+) inspired primary-coloured athletic wear and embroidered knits featuring a rainbow check.

"My final collection here at Burberry is dedicated to some of the best and brightest organisations supporting LGBTQ+ youth around the world," Bailey said. "There has never been a more important time to say that in our diversity lies our strength and our creativity."

Always the highlight of London fashion week and a big draw for international editors, Burberry's shows have been responsible for launching the careers of British models such as Cara Delevingne and Edie Campbell. Both appeared on last night's runway, marking a rare return by Delevingne to the catwalk.

Bailey, 46, has invited British singers including Alison Moyet, Jake Bugg and Adele to perform at his shows over the years. The designer, born in Halifax, West Yorkshire, also brought Burberry into the digital era, live-streaming runway shows and offering a "see now, buy now" retail model.



Burberry's Christopher Bailey with Cara Delevingne, left, and Adwoa Aboah



Delevingne makes a rare return to the catwalk in London last night, wearing Burberry, the label that launched her career

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE CONFERENCE

REPORTS JONATHAN LEAKE

Having a zest for life plays key role in warding off dementia

A study of 'super-agers' who are mentally fit into their nineties shows the standard approach to the illness may be flawed

HEALTH

They smoke, they drink and brain scans suggest that they should be getting dementia but a group of "super-agers" – aged 80 to 100 and found to be mentally sharper than most fiftysomethings – are confounding medical beliefs.

Researchers who followed the group for years found that their brains seem resilient to age, keeping their powers of memory, cognition and language, despite lifestyles that often included the bad habits that doctors warn against. The super-agers retained these powers despite their brains having many symptoms associated with dementia – including neurofibrillary tangles, deposits of deformed proteins that are supposedly highly toxic for brain cells.

Emily Rogalski, professor of cognitive

neurology at Northwestern University in Chicago, said what the super-agers had in common was a positive attitude to life and an unusually high proportion of a rare type of brain cell called a von Economo neuron.

Her team's findings emerged from post-mortem examinations of the brains of 10 super-agers who agreed to undergo extensive testing of their personalities and mental powers while they were alive and have their brains dissected after death. They were part of a group of 74 super-agers followed by the researchers.

"The findings suggest that super-agers have unique personality profiles," Rogalski said, in a paper she is presenting today at the American Association for the Advancement of Science annual conference in Austin, Texas.

"Excellent memory capacity is biologically possible in late life and can be maintained for years even when there is significant neuropathologic burden."

Her findings, that great age and changes in brain structure need not always mean mental decline, are a rare piece of good news in a field that has seen billions spent on research with little hint of a cure in sight. There are 850,000 people with dementia in the UK, with numbers expected to exceed 1m by 2025. Most research has focused on trying to

reverse the spread of amyloid and tau, the deformed proteins that form clumps and tangles in the brains of many people with dementia. However, some scientists suspect that this approach is flawed and the real causes are more subtle.

Rogalski's approach is to try to find what those causes might be, by looking at people who stay well, rather than those who become ill. She found that 71% of super-agers smoked, above average, and 83% drank alcohol regularly, with one lady suggesting that her daily 5pm martini helped keep her well.

Another was that super-agers are rare – Rogalski estimates that fewer than 5% of people fit the bill.

However, perhaps the most fascinating finding was that all shared a highly positive attitude to life, even when hit by disaster and hardship.

One super-ager described "growing up extremely poor" and being left divorced with two children but added that she still considered herself independent, giving and optimistic.

Another "highly extrovert" woman who suffered emotional and physical abuse in childhood and severe health problems as an adult, had risen to a senior managerial position and held it till she was 78. Just before dying, aged 92, she still considered herself "fiercely inde-

pendent and rebellious". In a separate paper published this month Rogalski and her colleagues suggest that a particular type of brain cell, called von Economo neurons after the man who discovered them, seems to play a central role in maintaining brain health and positivity.

The neurons are found only in the brains of higher mammals with large brains, such as elephants, gorillas and humans, and are thought to offer high-speed connections between different brain regions – a kind of mental motorway. In humans they are found mainly in a small region known as the anterior cingulate cortex.

Why, though, should some people have brains better equipped to resist ageing? Such cells form in late pregnancy and early childhood so it could be largely down to luck.

Rogalski said personality tests on super-agers suggested a "unique personality profile, highlighting optimism, resilience and perseverance as well as active lifestyles... reading and travel were constant themes", as were "positive social relationships".

She and her colleagues had a direct taste of this when they invited the super-agers to meet at their research centre. "They all demanded a cocktail-hour party then. Now they want another one."



David Attenborough is still working aged 91

CONFERENCE NEWS IN BRIEF

Bees confused by 'safe' weedkiller

Bees exposed to "safe" levels of glyphosate weedkiller become disoriented, suggests research by an American high school student.

The findings are a challenge to agrochemical firms that have spent millions on research and advertising to suggest glyphosate is safe for bees.

Mary Zgurzynski, overseen by her scientist mother, timed the insects' progress through a maze. Even tiny doses of glyphosate seemed to wreck their co-ordination.

Picasso's bronzes outwitted Nazis

Pablo Picasso's abstract art has long puzzled art conservationists, who cannot work out how he made his paintings and other materials.

The artist produced a number of bronze sculptures during the 1940s in occupied Paris, where such metals were in extremely short supply.

Now researchers at the Art Institute of Chicago, who analysed the works using X-ray fluorescence and other methods, think they were made from household items melted down by a local foundry, often in the dead of night to avoid detection.

Remember this: sleep helps you

"Sleep on it" really is good advice, say scientists who have found that failing to get enough sleep disrupts brain chemistry.

"Sleep loss disrupts a molecular pathway in the hippocampus, the region of the brain associated with learning and memory," said Professor Ted Abel of the University of Iowa.

Lost sleep also makes a protein called cofilin more active. The effect is to shrink dendrites, the branches of nerve cells that pass on signals. The better news is that the changes can be reversed – by getting a good night's sleep.

Scots study offers hope of reducing migraine agony

Julia Horton

Trying to find the cause of migraines and similar conditions has been a headache for scientists and sufferers for years.

Now pioneering Scottish research has revealed evidence fuelling hopes of better treatment for all kinds of head pain.

The study, led by Dundee University, found that headaches were caused mainly by neurological changes rather than changes to blood vessels, such as dilation of arteries, as had been previously thought.

Experts identified more than a dozen new genetic factors behind headaches and discovered that about half of the hereditary causes were found in people with psychological conditions.

The authors said the findings marked a key step forward that could help to develop targeted treatments, which were more likely to reduce pain for the millions of people

afflicted by migraine, depression and neurosis.

Weihua Meng, the study's leader and a lecturer in genetic epidemiology at Dundee University, said: "Before our study the science world thought that migraine was mainly a vascular-driven disorder, but what we found suggests headaches are mainly caused by neurological changes."

"Our findings will not only contribute to the understanding of the causes of headache and the relationship between headaches and psychological disorders like depression and neuroticism, they might also bring potential genetic targets for drug treatment for patients with headaches and psychological disorders."

The study is the largest of its kind into how headaches are passed from parents to children. It was based on analysis of medical data from nearly 225,000 volunteers stored in the UK



Weihua Meng, left, wants new therapies for the condition

Biobank, a vast source of information on health and illness, which researchers use to try to work out the causes and possible treatments for numerous conditions.

Experts found 14 new

genetic loci – points on the chromosome where one or more genes are located – which seemed to play a role in causing headaches. Previous research had implicated about 50 other genetic loci.

Simon Evans, chief executive of the charity Migraine Action, welcomed the research as another step in the fight against headaches, which opened up "interesting avenues for further research into the causes of migraine and potential new therapies".

The data did not differentiate between factors such as the severity of headaches that volunteers in the databank suffered. Further work is under way on a questionnaire to gain more detailed data so that researchers can determine the treatments that could work best for different types of headache.

Cluster headaches, also known as suicide headaches, are the worst for sufferers according to Migraine Action. This type causes severe pain to about 150,000 people in the UK. Migraine is the most common, affecting 8m, including 700,000 in Scotland.

Each day, headaches cause about 80,000 people to miss

school or work. They can cause debilitating symptoms including flashing lights and nausea. Treatment is estimated to cost the NHS nearly £2bn a year.

About 70% of people with migraines have a family history of the condition, and children whose parents suffer from them have up to a 75% chance of getting them.

People with migraines often have depression, and vice versa, but until now the significant genetic nature of the link was not clear.

Current preventative treatments for migraine include antidepressants, which often cause unpleasant side effects. The only treatment for chronic migraine is Botox, which is difficult to get on the NHS, Migraine Action warned.

The study was co-written by scientists from the UK Biobank, Edinburgh University and the International Association for the Study of Pain. It was published in EBioMedicine, a health journal.