

Kaustubh Adhikari's name might not be familiar to many of us. But if you Google his name, you will find this 30-year-old Indian scientist is taking the world of human genetics by storm with his recent discovery about grey hair. The possibility of this discovery in the near future bringing an end to our hair greying problem can surely bring a smile on your face. You might find yourself with a bigger smile when you know that the ancestral home of this genius is in Barisal while his in-laws are from Chittagong.

"I have a special bond with Bangladesh. I try to visit Bangladesh every year," says the modest, ever smiling Adhikari.

An international study, with Adhikari as the lead author, led by University College London (UCL) reports the discovery of the first gene identified for greying hair, confirming that greying has a genetic component and is not just an environmental occurrence.

"We have discovered a gene called IRF4, which is associated with our study of hair greying," says Adhikari, statistical geneticist and lead author of UCL Cell & Developmental Biology. "We previously saw this gene associated with hair colour as well, which is caused by a natural pigment called melanin present in our skin, hair and eyes. This gene is involved in regulating production and storage of melanin."

IRF4 is going to help develop forensic DNA technologies that build visual profiles based on an individual's genetic makeup.

Published last week in Nature Communications, a popular science journal, the study started by collecting and analysing DNA samples from 6,630 volunteers from the CANDELA cohort recruited in Brazil, Colombia, Chile, Mexico and Peru, where 45 percent of the volunteers were male while 55 percent were female. Having a collection of people from different backgrounds - mixed Europeans (48 percent), Native American (46 percent) and African (6 percent) ancestry - ensures a large variation in head hair appearance.

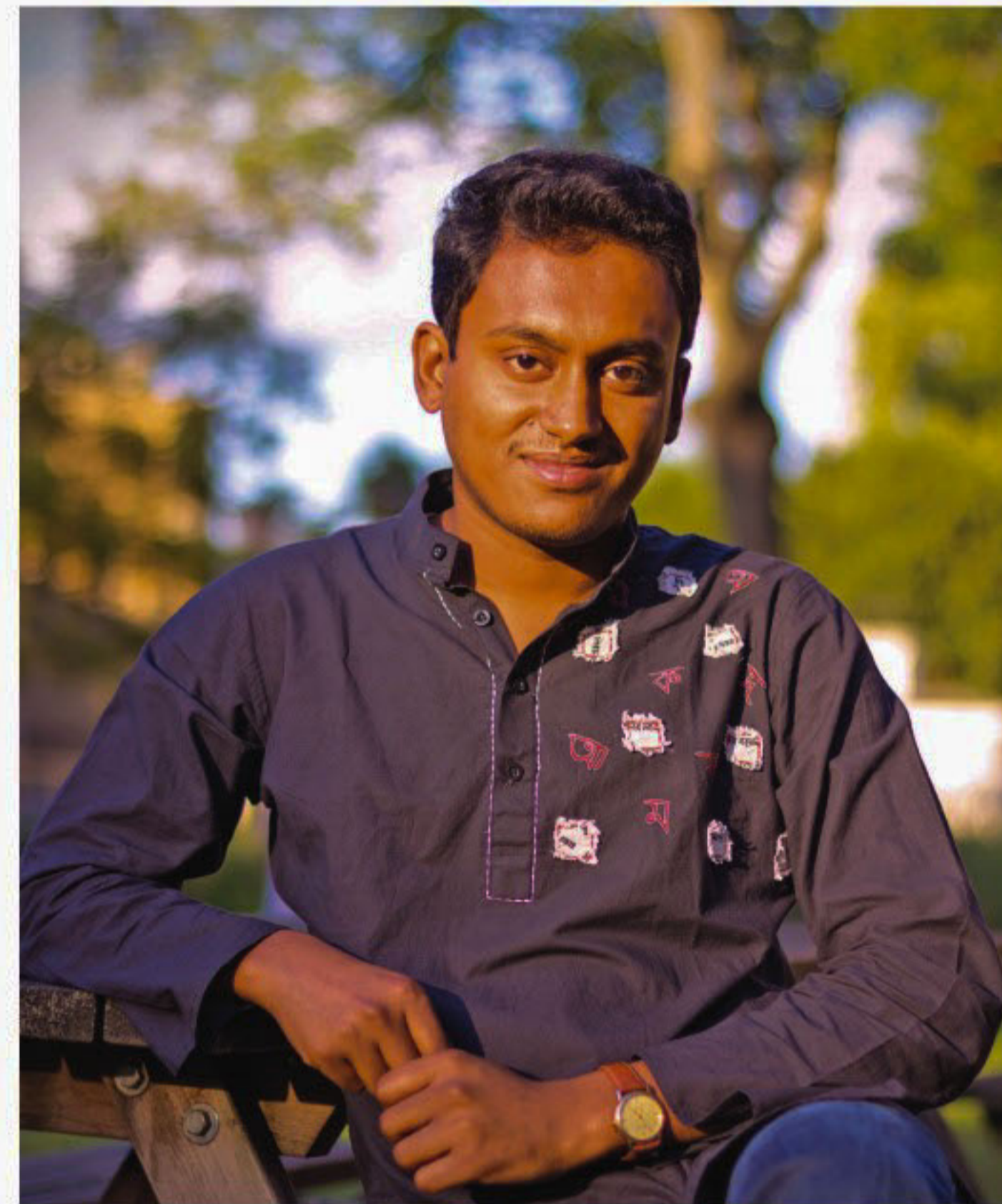
"While both men and women were assessed for hair shape, colour, balding and greying, but only men were tested for beards, mono brows and eyebrow thickness," he adds. "Visual traits for each individual were compared to whole genome analysis results to identify the genes driving differences in appearance."

"We already know several genes involved in balding and hair colour but this is the first time a gene for greying has been identified in humans, as well as other genes influencing hair shape and density," says Adhikari.

# THE GENE CALLED IRF4

FAYEKA ZABEEN SIDDIQUA

PHOTOS: COURTESY



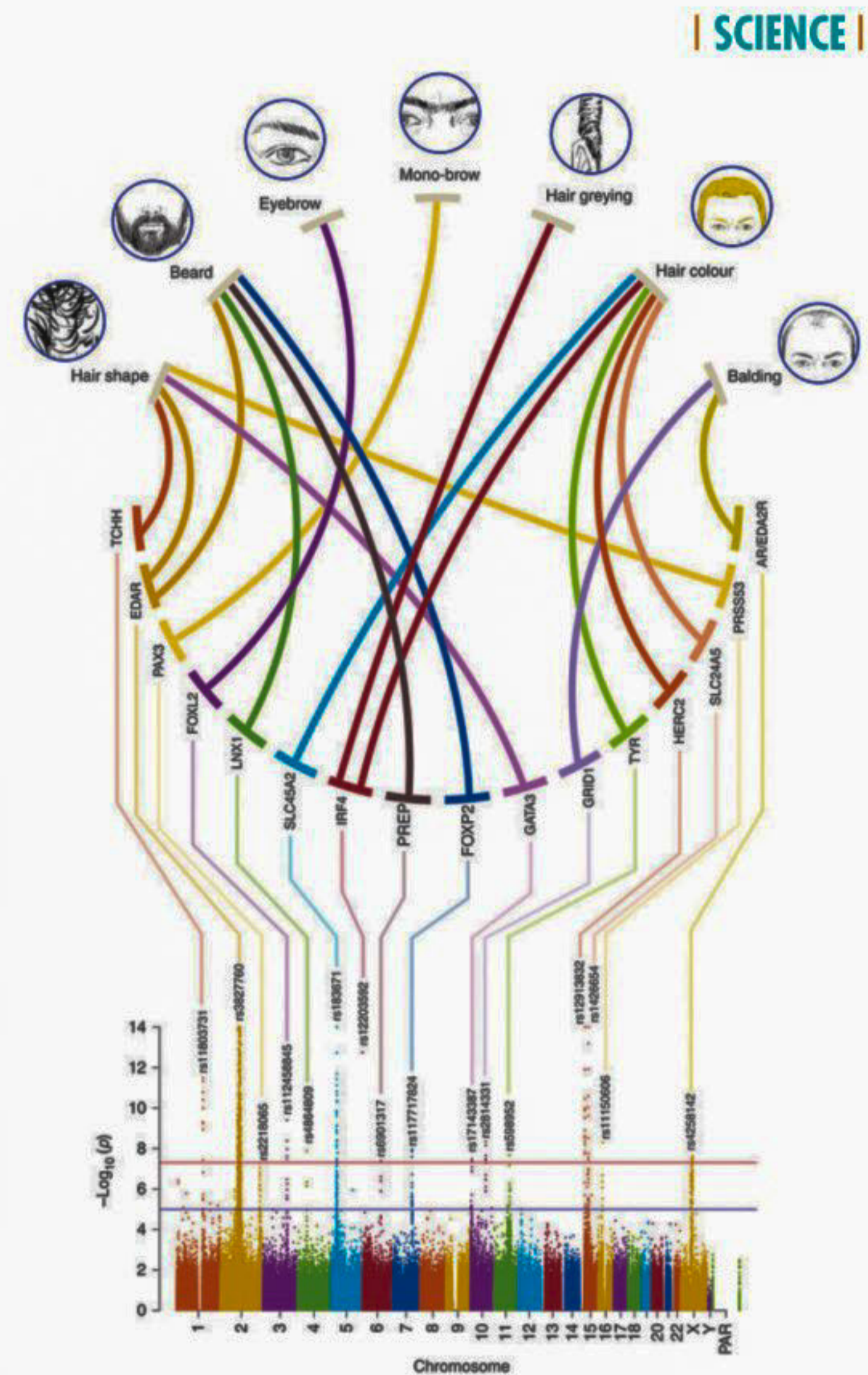
Kaustubh Adhikari

So how is this discovery going to help the world? First, Adhikari and his team have given us the name - IRF4 - so now we know who to blame when we find a grey hair.

Also, this finding is going to help develop forensic and cosmetic applications by increasing our knowledge on how genes affect individual appearance.

Adhikari believes that analysing an assorted group of people, which hasn't been done previously on this scale, has made it possible to create this first of its kind study. Previously in other research, sampling was done only people of European origin while these new results could help forensic reconstructions also in Latin America and East Asia.

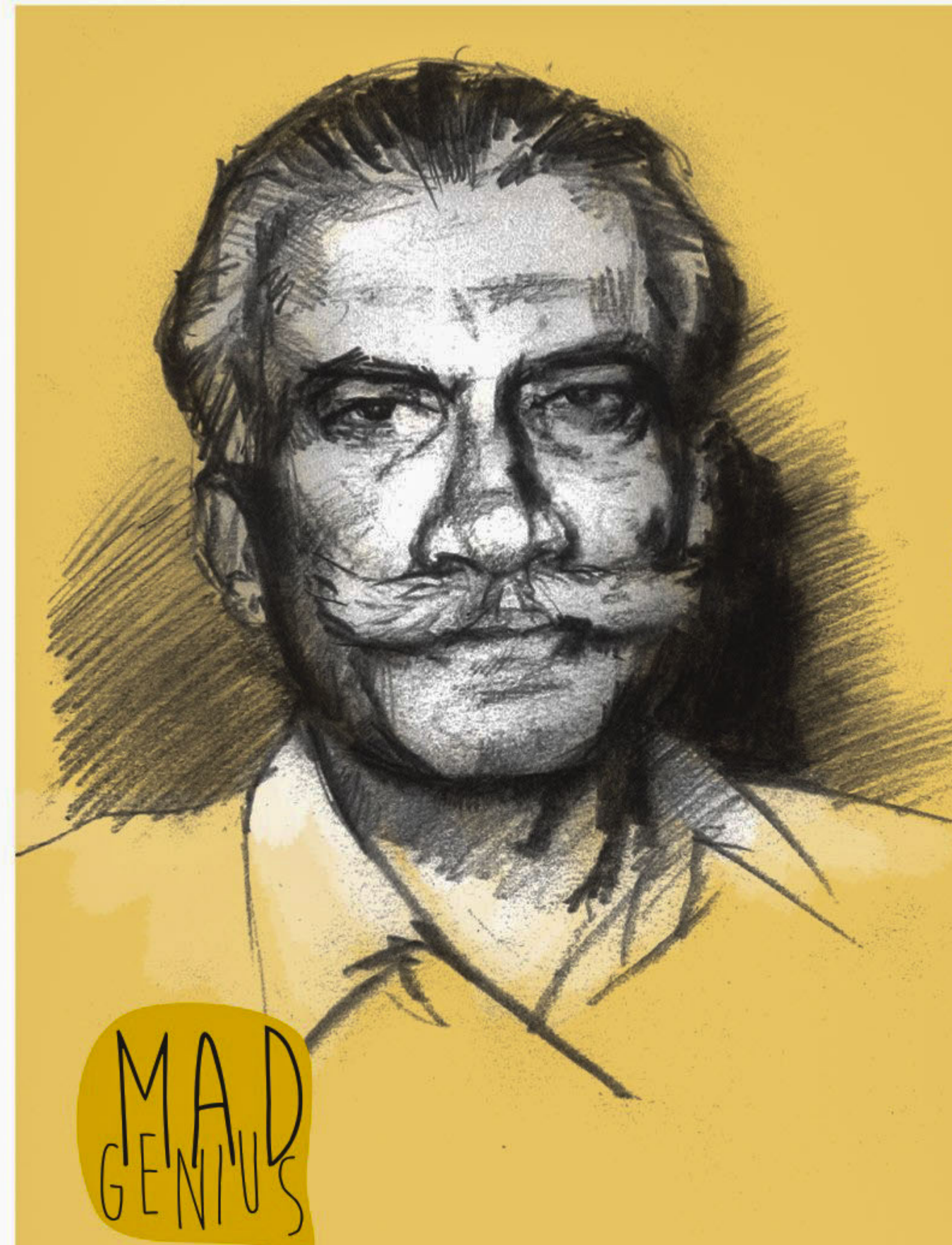
Hair greying is caused by an absence of melanin in hair, thus the scientists want to find out IRF4's role in this



process. Understanding how IRF4 influences the greying of hair could help the development of new cosmetic applications and better treatments that will help the slowing down or blocking of the greying of hair from the very beginning.

Besides greying of hair, another gene, PRSS53, was also discovered to influence the curliness of hair, as investigated by the University of Bradford's Centre for Skin Sciences as part of the study. The scientists also discovered additional genes associated with hair - EDAR for beard thickness and hair shape; FOXL2 for eyebrow thickness and PAX3 for mono-brow prevalence.

"We have just discovered one greying gene, which is not the main reason behind grey hair. Natural or sexual selection and external factors like diet and stress can also influence hair characteristics, and we found statistical evidence in the genome supporting that view," added Adhikari. "The genes we have identified are unlikely to work in isolation to cause greying or straight hair, or thick eyebrows, but have a role to play along with many other factors yet to be identified. We need to conduct further research to develop a better understanding, so that we can discover the specific components and come up with suitable drugs that can delay or stop greying of hair."



## GENERAL MUHAMMAD ATAUL GANI OSMANI (September 1918 – 16 February 1984)

Born in Sunamganj, Sylhet division on 1st September, 1918, General Muahammad Ataul Gani Osmani was the commander in chief of Bangladesh forces during the Bangladesh Liberation War of 1971 who was in charge of making the overall strategy of the operations undertaken by the sector commanders. He presided over the sector commander's conference 1971 and created the entire Bangladesh armed forces. He is popularly known by his honorary title Bongobir (Hero of Bengal). During his service in the Pakistan Army, he was always vocal against the discrimination against Bengali officers of Pakistan army, which made him getting demoted once and his promotion was postponed. Osmani joined the Sheikh Mujib-led Awami League in 1970 and in the 1970 election he was elected as the MNA from Fenchuganj Area of Sylhet. On 17th April Osmani assumed the personal command of Bangladeshi forces in the Liberation war of 1971. A descendant of Shah Nizamuddin Osmani of Dayamir, Osmani led a Spartan life where luxury had no room. He used to wear simple clothes and preferred having a strict culinary taste. For his stern nature and iconic whisker, he was familiar among his colleague as "the man with the moustache". Osmani died on 16th February, 1984 of cancer and was buried in Darga, Sylhet with full military honours.

# THE OVER-VIGILANT NEIGHBOUR

I have a five year old daughter who loves to play outside and I always let her go. Luckily we have a park right next to the front gate, and she is one important reason for us to go to the park. It is hard to pull her inside when all she wants to do is stay outside and play with other the neighbourhood children. The other day she was playing cricket with her cousins and other children, when suddenly I found a woman I did not know, standing with my six year old daughter. She comes jogging around the park every afternoon. "She will get hurt with the cricket ball, you should not let her play cricket," she smiles condescendingly explaining to me why I should accompany her in some other games where she wont get hurt. I thanked her politely for her concern of my daughter being injured. "I don't believe there is any game that my girl cannot play because it is normally seen as a man's game," I added. She did not seem very impressed with my reply, and left me with my daughter. I want my daughter to learn how to follow her own instincts, but how can she do if we don't give them the space to try? Farhana Zaman, Uttara, Dhaka



PHOTO: PRABIR DAS

## SPEND IT WISELY

Every day on my way back home I encounter a number of beggars. The other day a middle aged man came asking for some money. He seemed physically alright, but he kept asking for money. At some point my colleague got irritated and decided to give him some. I know it was his choice, but I did not like the idea. We work long hours for very little pay and because of that I value the money I have worked hard to earn. I fail to see why I should give my hard earned money to someone who does not deserve it. Because that man, like many other beggars we see, is not even in need, he is just too lazy to work but he needs money. Also some are fake, and some beggars just use your money on drugs. If we give them the money they will think that it is better to beg than to work. Rubaiyat Ahsan, Monipuripara, Dhaka

HONESTY OF PURPOSE / GOOD GOVERNANCE ARE THE KEYS TO THE "SUCCESS"

MICRO CREDIT IS THE ORDER OF THE WORLD

"MICRO CREDIT" IS A WELL UNDERSTOOD "SUBJECT" BY THE "BENEFICIARIES"

Term Deposits (MTDR)	
Profit Rate	Duration
08.00 %	03 Months
08.50 %	06 Months
09.00 %	01 Year
10.00 %	02 Years
12.00 %	05 Years
Double	07 Years

\* Condition Apply

### The Dhaka Mercantile Co-operative Bank Ltd.

Head Office

19, Indira Road, Farmgate, Tejgaon, Dhaka-1215

Phone: 914-3318, 812-9438, 914-3727, Fax: +88-02-910-2124, E-mail: info@dmcbl.com

for details 01730-701608