CAPSULE



Science of Chocolate Researchers from New York

University have decoded the science behind the best tasting chocolate. The study, published in Proceedings of the National Academy of Sciences, pointed out that a process known as conching gives chocolate its silky smooth texture. Conching involves mixing ingredients for several hours which breaks the ingredients into smaller grains, reduces friction and provides the great taste. The study was done by researchers from the University of Edinburgh.



In deep trouble

A study pushlished in Geophysical Research Letters has pointed out that radioactive carbon from nuclear bomb testing has been detected in tissues of crustaceans living in deep ocean trenches, including the Mariana Trench. The level of Carbon-14 in the atmosphere doubled after the tests and many organisms consumed this carbon. Now scientists have shown evidence for increased levels of C-14 in marine organisms after the bomb tests began in 1950s.

Kolkata researchers use novel compound to kill cancer cells

The synthesised derivatives have better efficacy in killing cancer cells

R. PRASAD

Researchers at Kolkata's the Indian Institute of Chemical Biology (CSIR-IICB) and the Indian Association for the Cultivation of Science (IACS) have designed and synthesised about 25 quinoline derivatives that show potent anticancer activity. The compounds were tested in vitro against human Topoisomerase 1 (topo1) activity and their efficacy to kill cancer cells was carried out using breast, ovarian, cervical and colon cancer cell lines. The results of topo1 inhibition activity, cellular mechanisms and the cancer cell line studies carried out at IACS and the compounds designed and synthesised by IICB researchers were published in the Journal of Medicinal Chemistry.

"Preliminary data based on cell line studies suggest that the compounds from IICB might be effective against breast and colon cancer," says Srijita Paul Chowdhuri from the School of Biological Sciences at IACS and one of the first authors of the paper.

"The success of the project is due to the years immaculate design by going back-and-forth with our hypothesis through computational analysis followed by synthesis and X-ray crystallography even before the biological validation began," says Biswajit Kundu from the Medicinal Chemistry Laboratory at IICB and one the first authors of the paper.

Essential enzyme

Topoisomerase 1 is a fundamental enzyme that is essential for replication. DNA is in a supercoiled state and has to be unwound before replication can take place. For the DNA to uncoil, the topol enzyme has to first bind to



Holds promise: The compound might be effective against breast and colon cancer," say Srijita Chowdhuri (left) and Biswajit Kundu • SPECIAL ARRANGEMENT

the DNA and form a complex. Once the complex is formed, the topol enzyme cleaves one strand of the DNA thus allowing the DNA to uncoil. Once uncoiling is completed, the topo1 enzyme rejoins the cleaved DNA strand for replication to take place.

Existing drugs and the quinoline derivatives synthesised by the IICB team have the ability to trap the complex thereby not freeing the topol to rejoin the cleaved DNA strand. As the number of trapped complexes in the DNA increases, the amount of free topo1 enzyme available to repair the cleaved DNA strand reduces. Also,

other enzymes involved in replication and transcription (where DNA is converted into RNA) come and collide with the trapped topol and this causes more DNA breaks. As a result, replication gets affected leading to DNA break and cancer cell death.

The mode of action of the existing drugs and the synthesised compounds is the same. The difference lies in the time the complexes remain trapped when the drugs or the synthesised compounds are used and therefore the ability to kill cancer cells.

Compared with normal cells, topo1 enzyme is produced in far excess

amount in cancer cells and so more complexes are formed. As a result, though topo1 enzyme is found even in normal cells, there is greater likelihood of the drugs specifically targeting the cancer cells.

"The existing drugs bind to the complex and trap it only transiently. This is because the drugs can be easily removed by body fluids. So within about 20 minutes, all the DNA breaks are repaired," says Dr. Benu Brata Das from the School of Biological Sciences and DBT-Wellcome India Alliance fellow at IACS and one of the corresponding authors of the paper. "So the existing drugs have less ability to kill cancer cells.'

Stable complex

"The existing drugs are not metabolically stable and so become inactive very fast. So using the existing drugs, the complexes can be trapped only for a brief period," says Dr. Arindam Talukdar from IICB and the other corresponding author. "But our compound can trap the complex for as long as five hours. All the 25 quinoline derivatives we synthesised show similar efficacy towards human topo1 inhibition." The ability of the synthesised derivatives to trap the complex for a much longer time might translate into better efficacy in killing cancer cells.

"The speciality of our compound is that they do not react with or bind to topo1 or the DNA when they are in isolation. They bind only when topo1 and the DNA form a complex. Thus, our designed compounds can be seen as targeted therapies," says Dr. Talukdar.

IICB jointly with IACS has already filed a patent in India for all the 25 qui-

A global deal for postponing pralaya



D. BALASUBRAMANIAN

The Earth and the atmosphere surrounding it receive radiation from the Sun, and get "heated". Some of the gases in the atmosphere, notably carbon dioxide (CO2) absorb this heat radiating from the earth's surface and bounce it back. This is what keeps the earth- land and seas- at a temperature range "comfortable" for us humans and the other organisms inhabiting the earth today. We thus live in a large "green house".

What happens when the level of these greenhouse gases increases? The temperature will rise. And this rise has been due to increases in the levels of CO2 and other gases, produced upon burning carbon-rich fuels (coal, wood, petroleum products). Over the last 100 years alone, the global temperature has risen by close to 2 degree. And if we do not reduce or stop these fuels and use alternate sources of energy (solar, wind and others), the global temperature will rise further.

Two degree rise has been dangerous

We already see it in the form of the melting of ice caps and glaciers, causing a rise in sea level. This can submerge small island countries such as Maldives and Mauritius. It has also led to a change in the global climate, causing errant monsoons, cyclones, tsunamis, El Nino and so on, affecting life on earth and in the oceans (fish, algae, coral reefs).

Temperature rise and climate change affect not just some countries but the entire globe, on which all species live-humans, animals, plants, fish, microbes. And if it is left uncontrolled, disaster looms for all life across the globe. Climate change, plus relentless industrial farming and fishing are leading to the extinction of 1 million species from Mother Earth within decades.

Paris Agreement 2015

It is for acting against this catastrophe that the UNO brought countries across the world get together and in 2015 came up with what is called the Paris Agreement 2015 wherein they decided to make all efforts contain the temperature rise to no more than 1.5 degrees. While 195 countries across the globe signed the Paris Agreement and promised to take steps towards it, some oil producing/ importing) countries such as Turkey, Syria, Iran and USA have not. President Trump says climate change is "fake"!

We need to do two urgent things. One is to reduce, indeed replace carbon-based fuels, with other forms of energy generation that do not generate greenhouse gases; hence solar power, wind power and others. The second is to enhance all natural methods which absorb CO2. Forests and plants do this best. Photosynthesis is done by all varieties of plants- algae in water, mangroves on the coast, crops and forests on land. They absorb atmospheric CO2 and produce oxygen for us to breathe. Tropical forests do this best; hence, deforestation in the Amazon, tropical Africa and in India must end. These regions also house over 200 million species of plants, animals and fungi. They are thus termed as Key Biodiversity Areas (KBAs); likewise are Marine Protection Areas (MPAs). They restore and protect biodiversity, increase yields and enhance ecosystem protection and defense. They alone help us preserve over 17% of land realm and 10% of marine areas by 2020, and preserve millions of species from extinction. But we need to do more beyond next year.

Global Deal for Nature

It is with all this in mind that a diverse group of scientists and ecologists from across the world have come up with a companion pact to the Paris Agreement, called: "A Global Deal for Nature: Guiding Principles, Milestones and Targets". This policy document is published on 19 April 2019 in the journal Science Advances, which should be read by every concerned citizen and government. Global Deal for Nature (or GDN) has five fundamental goals: (1) representation of all native ecosystem types and stages across their natural range of variation; (2) maintain viable populations of all native species in natural pattern of abundance and distribution - or "saving species"; (3) maintain ecological functions and ecosystem services; (4) maximize carbon sequestration by natural ecosystems and (5) address environmental change to maintain evolutionary processes and adapt to the impact of climate change.

These five goals of GDN have three Priority themes. Theme 1 is on protecting biodiversity. Towards this, they have listed a total of 846 ecoregions across the world and given milestones on how to protect as much as 30% of them by the year 2030. Theme 2 is on mitigating climate changes by conserving carbon storehouses or climate stabilization areas (CSAs) and Other Effective area-based Conservation Measures (OECMs). Theses involve saving about 18% of existing areas across the world (e.g., tundra, rainforest) as CSAs and about 37% of the areas as OECMs (indigenous peoples' lands, such as in the Amazon Basin, Congo Basin, Northeast Asia, Continental India). Theme 3 is on reducing threats to ecosystems, and concerns reducing major threats (such as overfishing, wild life trade, laying new roads cutting across forest lands, and building major dams).

Yes, we can afford it!

And in order to do all this, the gross cost is estimated to be \$ 100 billion per year. Considering that these are over 200 nations across the world (plus the private sector, which too should also be involved), this is a sum well worth achievable if we are to leave the world livable for our children, and all the flora and fauna that have enriched our earth since the last 550 million years. And if one wishes count the pennies gained for this investment, Barbiers et al. point out that biodiversity conservation can actually offer \$ 50 billion annual profit for the sea food industry and save the insurance industry \$52 billion annually through reducing flood dam-

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NBRI: Arsenic bioremediation using two soil bacteria

The bacteria increase bioavailability of metals, facilitate plant growth

ASWATHI PACHA

Using two indigenous strains of bacterium isolated from arsenic-contaminated field, researchers from CSIR-National Botanical Research Institute (CSIR-NBRI), Lucknow and the University of Lucknow have shown that arsenic can be effectively removed from contaminated soil with the help of microbes.

What adds value to these strains (Bacillus flexus and Acinetobacter junii) is the fact that they can promote plant growth too.

Different forms of arsenic

Several studies have pointed out that using arsenic-contaminated water for agricultural purposes can lead to increased concentration of arsenic in fruits and grains, proving toxic to humans.

The researchers studied the two bacteria under different concentrations of arsenate and arsenite, the toxic forms of heavy metal. Arsenic treatment did not stunt or delay the growth of both the bacterial strains.



Deformed fingers due to arsenic contamination

B. flexus exhibited resistance to high levels (150 mmol per litre) of arsenate and A. ju*nii* to about 70 mmol per litre of arsenite. This is higher than previously reported arsenic tolerant bacteria and so were regarded as hyper-tolerant

Further gene detection studies pointed out that both the bacteria have a special ars C gene, which aids in arsenic detoxification.

Plant growth promoters

The bacterial strains were further scrutinised to understand if they can help in plant growth too. In studies carried

out in the lab, both the bacteria were able to solubilise phosphorus. Phosphate solubilising bacteria have been reported to increase phytoavailability of phosphate, thus facilitating plant growth.

These two bacterial strains were also found to produce siderophores and ACC deaminase enzyme. Siderophore increase the bioavailability of iron and other metal ions in polluted soil environment and ACC deaminase is a well known plant growth promoting enzyme.

These bacteria can live symbiotically in the roots of plants in arsenic- contaminated soils and help them uptake the required nutrients without causing toxicity

The paper published in the Journal of Applied Microbiology notes that these indigenous strains demonstrated the "potential to accumulate arsenic within the cells and transform it into less phytotoxic forms, making the strains more proficient candidate for bioremediation".

More studies in the field are needed to validate the results.

CCMB scientists sequence Asiatic lion genome

Y. MALLIKARJUN

For the first time, the entire genome of Asiatic lion, an endangered species, has been sequenced by scientists from CSIR-Centre for Cellular and Biology, Molecular Hyderabad.

De novo sequencing and annotation have resulted in a draft assembly of the entire genome of a male Asiatic lion. "This firsthand information would help us to better understand the evolution of Asiatic lions and also make possible comparative analysis with other big cats," says Dr. Ajay Gaur, the lead author of the study, which was recently published online in BioRxiv, the pre-print website.

Comparitive study

With the complete genome of royal Bengal tiger, African Cheetah and Jaguar available, comparative studies of all these big cats would be possible. He said only partial genomic information of the African lion was available now. Comparative genomics between African and Asiatic lions could be



undertaken once the complete genome of the African lion is sequenced.

The population of the endangered Asiatic lion is very low - only 523 animals are present in the Gir forests. The genome sequencing would enable scientists to develop specific markers to study population genetics (the differences at the gene level within a population) and get newer insights into its population status and subsequent

management. Comparative analysis with other felids and mammalian genomes unravelled the evolutionary history of the Asiatic lion and its position among other felids. The study noted that the evaluation of genetic diversity placed the Asiatic lion in the lowest bracket of highlighting the gravity of its conservation status. The genome is estimated

genomic diversity index

to be 2.3 Gb (Gigabase) long and is found to have 20,543 protein-coding genes.

Multi-pronged approach Dr. Gaur says that they

found several candidate genes which are up-regulated in Asiatic lion and a few of them were specific to males. As regards the crucial as-

pect of conservation of Asiat ic lions, he says there is a need to adopt a multipronged approach and the study will enable better disease and population management of the endangered big cat by identifying characteristics which are specific to Asiatic lions.

CCMB Director, Dr. Rakesh Mishra savs candidate genes which are specific to Asiatic lion can be identified by comparing with other big cats. The final objective is to understand the species at DNA level and study if there are any specific problems with regard to adaptability to environment or behaviour vis-àvis other big cats.

Obesity rising faster in rural areas

PTI

Obesity is increasing more rapidly in the world's rural areas than in cities, according to a study of global trends in BMI.

The study, published in the Nature, analysed the height and weight data of over 112 million adults across urban and rural areas of 200 countries.

The study found that from 1985 to 2017, BMI rose by an average of 2 kg/m2 in women and 2.2 kg/m2 in men globally, equivalent to each person becoming five to six kg heavier.

"The results of this study overturn commonly held perceptions that more people living in cities is the main cause of the global rise in obesity," said Professor Majid Ezzati of Imperial's School of Public Health. "This means that we need to rethink how we tackle this global health problem."



The oscillation is proportional to the density of neutrinos and not their masses

SHUBASHREE DESIKAN

Neutrinos could be the driving force behind supernova explosions, a new theoretical study from Tata Institute of Fundamental Research finds. The study which makes a fundamental advance in modelling neutrinos inside stars puts forth the idea that "fast neutrino oscillations" could hold the key to why some stars explode forming supernovae at the end of their lives.

Neutrinos come in three flavours: electron neutrino, muon neutrino and tau neutrino, so named because of the corresponding leptons they are associated with (electron, muon and tau). There are several puzzles they have posed, including how they are ordered according to mass and this puzzle still remains to be solved.

Earlier when measuring the number of neutrinos coming from the sun, experimentalists found that only a third of the number of solar neutrinos that was expected was being intercepted on earth. This was later explained by the understanding that they have a small mass and they can change from one flavour to another - a phenomenon named neutrino oscillations. Fast neutrino oscillations

are another phenomenon -When the same neutrinos are in the presence of many other neutrinos and when the different flavours are emitted slightly differently in various directions (anisotropy) the oscillations from one flavour to another happen at a higher frequency. This is called fast oscillation and is proportional to the density of neutrinos in the medium, and not the



Massive explosion: A NASA Hubble Space Telescope composite image shows star cluster NGC 2060 ■ REUTERS

masses of the neutrinos.

"Any star that collapses under its own gravity after having run out of its fusion fuel is called a supernova. Usually stars more massive than eight times the Sun's mass enter this phase of explosive death," explains Basudeb Das-

gupta of Tata Institute of Fundamental Research, Mumbai, one of the authors of the paper published in Physical Review Letters, in an email to The Hindu. He further explains that

this has not been observed as it requires a large neutrino density and anisotropy, conditions that can be met only in the hearts of massive stars, neutron star collisions etc.

"Our key advance is to treat neutrino collisions and oscillations self-consistently in a single calculation," says Dr Dasgupta. In earlier work, it was assumed that high density and anisotropy conditions were put in by hand, while the neutrinos were assumed to travel in straight lines without colliding. In the present work the authors include collisions that lead to the high anisotropy conditions. They show how in the presence of collisions the fast oscillations take place. "This was technically very challenging and the first calculation of its kind. Our computer-based calculation took several days on a cluster of high performance computers," he adds.

age losses!

A hen as grandmother

On a predecessor's fowl deed

SIMRAN SIDHU

There may be many reasons why some people don't have chicken. In my family, we don't have it because as a matter of fact, we consider hens relatives. It was my great grandfather, who first started a relationship with a beautiful hen.

My great grandfather was happily married to his wife, my great grandmother, when she fell ill and passed away. He married again, but his second wife too suffered the same tragic fate. He had children from his previous two weddings to look after and he wanted to marry



again. But he was scared his next wife too would die after their wedding. So, before nervously proceeding with the third wedding, the astrologer asked my anxious great grandfather to first marry a hen, to ward off any threat to life to his would-be wife. He dutifully married a beautiful, healthy hen and made her his third religiously wedded wife, my third great grandmother.

Then his fourth wedding was solemnised with a woman, who thankfully survived and recently even marked her eightieth birthday with her smiling centenarian husband, all courte-

sy that beautiful hen. And the members of our family can't have chicken all their lives, thanks to that hen.

While sitting on the mantap with the hen for the wedding, my great grandfather didn't even think of how his future generations will never be able to feast on chicken all their lives.

He didn't consider how his great grandchildren will have to think of different excuses at different parties to refuse chicken, while inhaling the irresistible, yummy non-vegetarian aromas. And he didn't even think of how his progeny will have to look at all the hens with respect, because once upon a time, a beautiful, healthy hen was their relative.

I often wonder that if instead of marrying a hen and thereby making all hens our relatives, my great grandfather would have pityingly spared a thought for the gut pleasures of his lineage, and would have married some non-edible bird, namely a sparrow, or maybe a pigeon.

Then, just like the rest of the world, his family too, would be savouring delicacies such as chicken tikka, kebab rolls and butter chicken, instead of wondering how they taste. Cheers to healthy hens that we can dine with, but can never dine upon! The only non-vegetarian thing his family can relish, thinking and hoping it tastes almost like chicken,

And I hope no one in the family ever has to marry a beautiful fish.

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Hair colour gets you the right of way, but not always perhaps

SUDHANSU MOHANTY

ost people hesitate to let the world know their true age while their thinning white head of hair is fluffing about at the slightest whoosh of air. Possibly they aren't aware of the unasked blessings conferred on senior citizens. Artificially coloured hair can make them look younger and more radiant, but they're missing the blessings that their mop of white hair could confer on them.

My first dalliance with this benediction was at the Kuala Lumpur airport. We were tired and deadbeat after a long flight from Auckland. The transit time was short and we walked straight to board the connecting flight back home. The queue was long - the securitymen rummaged through the handbaggage and frisked passengers. A middle-aged lady sat on a solitary chair placed alongside the queue.

My wife pulled ahead. The lady saw her but sat unmoved. Then her eyes fell on me as I inched closer. She got up instantly and offered me her chair. I thanked her profusely for her gracious concern. "I'm absolutely fine standing. Please be seated." But she wouldn't. My shock

of white hair and beard was too much of an affront to let her

But

wasn't a oneoff. On numerous occasions while checkingin, the girls at the counter would softly ask my wife edgeways if I needed a wheelchair! Sometimes when our checked baggage weighed a tad more, they would ask to lighten it and put the items in our cabin baggage. Once when I was unzipping the suitcase, the girl looked at my sciatic back as I crookedly bent on my knees, and said not to bother any more, and just

checked me in!

this

Recently I dropped a book on my way. Before I could bend, a youngster had picked it up and handed it over to me with a smile. My experiences are well-rounded. In our building society office the man offered his lone chair to wait: How can I sit when you're standing, you're so much the elder! While pushing my nonagenarian mother around in a hospital wheel-chair, the chowkidar stopped me. "You'd be in your eighties,

could I help?" In shops, gracious souls often make way for me amid the crowded rows of merchandise. White has the right of way!

The ECI too couldn't play deaf, and offered old souls a way forward amid the mill-

How can I sit when you're standing, you're so much the

ing crowd. To avoid the long queues we had decided to go early and reached the booth around 8 a.m. From a distance the cacophony of voices, the cars corralled on empty grounds beside the road, conveyed we'll have to wait under the hot sun, getting hotter by the minute. In front of the polling centre serpentine queues snaked; voters sought shelter under tree canopies to escape the

Exasperatingly we sought our polling room. "You can go straightaway and vote, uncle," a young voice chimed. "You're senior citizens!" He would've espied me up close - the ruffle of white hair and my white beard magnifying my seniority was unmistakable! As we edged closer, the policemen too waved us in without a whimper. Within minutes we're in and out of the booth. I was chuffed. How good and easy life is on

But I was over-living my senior moments: it was exhilarating! Within days I was down on Mother Earth with

this heaven on earth!

The niggling pain in my knees and elbow had refused to ebb. Priyanka, my daughter, too had an issue with her back. I requested a friend in the hospital to fix appointments with the physiothera-

went in first. It was my turn next. The physio looked at me and said, "I was told only of one patient. I can't see you!" His words were sharp. My mental breeze still eddying his surreal words, I entreated, "Could I wait till you're through with your patients?"

pist. On arrival, Priyanka

"You can, but I can't guarantee I can see you!" His words were brisk, his face wore no pity.

The physio had taken a good look at me during Priyanka's consultation, even

asked my age to emphasise a point he was making. He couldn't have missed my pate's offerings: a shock of

bristly white hair. I bit down my white-headed pride. The Mickey's taken out of me! A new experience in the hospital that was a second home for me for the last dozen years to repair my sundry body parts!

Glacially slow now, my knees emitting elevated psychosomatic pains, I hobbled back home, medical and Xray reports in hand. I knew I was (sinisterly) living in my self-constructed utopia. Little wonder the fuzzy whiteness on my fluffy hair-beard combo hadn't worked its magic this time around!

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The probability of not being what you are today

Just consider the whole panoply of career options that you could have exercised in life — what you could have been

PRIYA KEDIA

That is it that I am headed for? What is the meaning of my life, or is there any meaning at all? Am I here to do a breakthrough scientific discovery or bring about a social upheaval or live the life of a common man stuck betspending it? What really am I supposed to do to make my life meaningful? Meaningful to me, my family, my country, my planet, I have no idea. These questions populate my mind each fortnight.

If I do a bit of introspection, I realise that I have never asked myself if I can be a paragliding coach or a naval doctor or a musician.

I believe it's not just me; many of us do not know the potential that we have. We don't bother to calculate the probability of not being what we are today. Why don't we do that right now?

The question we need to pose is, "What is it that we should or could have been?"

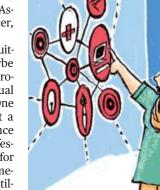
Let's consider some professions: Teacher, Adminis-

trator, Doctor, Engineer, Chef, Journalist, Pilot, Sportsperson, Painter, Writer, Astronaut, Musician, Dancer, Director, Politician.

A person can be most suited for any one (or maybe more than one) of these professions. There is an equal chance for all of them. One can definitely argue that a of excelling in some professions and a lower chance for others. For example, someone who can efficiently utilise resources and is good with money management might have a better future as a businessman than as a politician. But who will confidently deny that the same person cannot be an excellent singer? Or if he/she had gone to a private school in the city, he/she would have been a top-class swimmer.

Or maybe if his/her mother were a politician, he/she could have become the leader of a ruling party.

What we can or cannot become is governed by our childhood, parenting, education, opportunities, and so on, purely based on luck.



There are so many intricate factors at play that we can't say for sure that 'X' profession will fully exploit the po-

tential of a person. It is said that people are born with certain capabilities. It might so happen that they never come to know about those. Apart from inherited talent, we acquire some skills at home, school,

college, and so on. We develop habits, host

a good deed, why not me, he

must have said to himself. It

just needed some hammer-

ILLUSTRATION: SATWIK GADE

emotions, frame ideologies and in a way create a personality which becomes our identifier. Now, if we randomly pick a profession and do a profiling of some top people in that profession, we will be able to generate a basic set of attributes that a person requires to excel at it.

There is a high probability that two or three professions might have certain overlapping attributes. This implies that no set is unique and that one "personality" can be mapped to more than one profession. You see, there is no one answer to the question, "What is it that we should or could have been?"

So why not assume that a person has an equal probability of excelling at all the above-mentioned profesing and training. Still, if you are not convinced with this opinion, you can do what researchers do whenever something seems too unbelievable. Assume that as

so-called "ideal conditions". I will make a wild assumption that I knew the basic concepts of probability when I was one year old and that only 15 professions existed. That one-year-old innocent kid must have thought she can become anything in future if she meets a good teacher. Back then, if I had calculated the probability of my becoming an engineer, I would have got in 15, or 6.67%, as my answer. That's not a very a big number. But I did end up becoming an engineer. I went to a govern-

ment college in my State. I met a lot of people there, made friends, enjoyed life. We were 10 people in my friends' group. They came from varied backgrounds, with their fathers being a businessman, air force officer, farmer, lawyer, management consultant, doctor, teacher, engineer, and so on. But we an ended up being engi neers. Some of us better forget about engineering and go and explore life.

To rise above the crowd There are doors waiting to be opened, opportunities waiting to be grabbed. What's stopping us from becoming a Stephen Hawkins or a Lionel Messi or an A.R. Rahman? Hold on, are we even aspiring to be like them or someone who rises above the crowd? Clearly, these people walked the extra mile, challenged their abilities a bit more, got stuck in the usual course of life a bit less and strayed away from what they were told to do, and did something more profound.

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Leave the child alone

SUBHA DILIP

emember certain encounters at functions? "Beta, you aren't yet married? Why are you giving your parents a hard time? Find a guy soon, beta."

The encounters continue. No matter if you have graduated, married and has a kid, it doesn't stop. I have a four-year-old and recently I took her to a family function.

One relative came to us and started talking to my kid. "Hi baby, how are you? (no response from my daughter) What's your name? (no reaction) You like your mom the most or your dad? (no sound) The aunty looked at me as if I'm a failure. "She has to be more social, she knows English na?" I said, "No aunty, we speak the mother tongue at home."

By this time aunty had finished writing the unaskedfor progress report for my kid in her mind. Of course my mind too had completed the counter-argument and questions. Why should my kid speak so sociably to a person whom she doesn't recognise? English is a language that is anyway taught, familiarised and improved



upon in schools. Then why should I miss out on the joy of speaking freely to my kid in my mother tongue?

The most frightful words today for parents are "summer camps". Before the schools release the final exam timetable, camp schedules are released. I saw an advertisement for summer classes, for age 1-14. It's good to start early, but isn't it better to understand the definition of starting early? Martial arts, swimming, tailoring, handwriting, pot-drawing, cooking, machine-making, rolling, compressing...

Next time before vou enroll your kid in a competition or an extra-curricular activity, ask yourself if you're doing this because you truly believe it helps your kid, or is it just to answer questions from an aunty or uncle? If it's the former, go ahead.

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There is positivity everywhere, we only have to touch it

How goodness can bring forth goodness in return, and spread the smell of humanity all around

R.D. SINGH

am returning home on my bicycle after visiting a school in Ambala Cantonment for a heritage event. As I reach Top Khana bazaar, I stop near a familiar rehriwala for a glass of sugarcane juice. He knows my requirement - a big glass of chilled 'ganne ka juice' with lemon

and some salt. As he is preparing it, I see a small shop behind him which appeared to me like a cycle repair shop. As my cycle pedal was a bit loose, I ask the shop man if he could attend to it. He replied in the negative and another shop in the bazaar. I decided to leave it for later as it was a minor problem.

Then I looked in front on the road. There were two to three Cantonment Board boys collecting garbage. I also noticed a rag-picker who was sitting quietly by their side with his gunny bag. He looked tired and desolate. maybe due to the heat, and hunger. I decided to offer him a glass of juice, similar to what I was having. So I told Om Prakash, the rehriwala, to first give me a glass of juice for him. I took the glass of 'ganne ka juice' to the ragpicker and said 'please have it'. He looked up as if something extraordinary had happened. He gave me a sweet smile and took it.

Change of heart

As I returned to the juice rehri, what do I see? The shopkeeper who a short while to my cycle, was busy fixing the pedal. I wondered what made him change his heart all of a sudden. Perhaps he

back had declined to attend



saw me offering that glass of juice to that poor boy, and it touched him. If saheb can do was done.

ing on the pedal and tightening of a screw, and the job

want the trust to be lost.

I knew he would not take money for this. So with a bit of persuasion I gave him two

chocolates for his children. There was another expe-

rience awaiting me. I paid Om Prakash for the juice and started cycling back to our

house in Defence Colony. I suddenly realised that I had paid only for my glass of juice, and forgotten to pay for the juice I gave the ragpicker. I felt bad. Though it was hot and at 65, I was tired after cycling for over 15 km, I decided to turn back and pay him the money. I did not

I reached back, apologised to Om Prakash, and gave him the remaining money. He was touched, and others around noticed a sweet bonhomie. The atmosphere in that small area had turned positive. One sensed a smell of humanity

Something similar had

happened the previous evening as I was watering flowerbeds in front of the house. I called the small children playing cricket outside, mostly of domestic help in the neighbourhood. I gave them cold water to drink, and then offered toffees, which they loved. As they returned to play, I saw that they had thrown the toffee wrappers on the road. I picked up the wrappers, and showing these to them, put them in a refuse bin nearby. The children felt sheepish, and called out from a distance, 'sorry uncle'!

As I share all this with you, one is feeling nice. There is goodness in all. We have to just touch it, without any selfish interest. Good begets good, indeed.

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