



KNOW BEL

# KNOW BEL

ENLIGHTENING THE NOBLES !

THE SNOW IS MELTING, THE EARTH IS CRYING!

## THERE IS NO PLANET B !

LET US STOP DESTROYING  
OUR HOME  
#EARTH DAY 2020



ISSUE NO. 4

APRIL 2020



Visit us at :  
<http://knowbel.wordpress.com>





*Enlightening the nobles !*



# WELCOME !

To the fourth issue of KNOWBEL.

We are back with the fourth issue of Knowbel magazine to quench your yearning brains with loads of fun and knowledge. In the wake of worldwide lockdown we seek to revitalize your minds with entrancing games in this issue to boost up your ardour. Let's fight off Coronavirus and break through the shackles of boredom.

*Stay home & Stay safe !*

## SPECIAL THANKS TO

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# WONDERELLA

NEVER STOP QUESTIONING

Image by PublicDomainPictures from Pixabay

## UPRISING OF 'HANTAVIRUS' IN CHINA

Just when we thought things couldn't become any more worse, a new virus surfaced in China.

A man died in the Yunnan province of China after testing positive for Hantavirus, as it is called. People have started panicking on the news about another virus amidst the already alarming coronavirus pandemic. However, what sets you apart from the herd is your ability to sieve reality from baseless untruth. It has been found that humans who usually come into contact with rodents – rats and mice, are more likely to contract the Hantavirus. Hantavirus can be contracted if someone touches their eyes, nose or mouth after touching rodent droppings, urine, or nesting materials. Early symptoms of Hantavirus include fever, headache, muscle ache, abdominal pain, dizziness, chills and abdominal problems which may eventually escalate to more life-threatening conditions like shortness of breath due to the filling of lungs with fluid. This sends out one message loud and clear - 'Stay clean to ensure good health'.

### RIVETING READS IN THIS ISSUE:

02 - WHEN MERELY OPENING A PLASTIC BOTTLE IS A SOURCE OF POLLUTION!

03 - I AM AN ANIMAL AND I DON'T NEED OXYGEN TO SURVIVE

04 - ARE PLASTIC ALTERNATIVES REALLY ECO-FRIENDLY?

05 - COVID-19: A CRAFTY COMBINATION OF TWO VIRUSES?

#### MORE INFORMATION:

<https://nenow.in/health/after-corona-pandemic-new-hantavirus-appears-in-china.html>

OR SCAN THE FOLLOWING QR CODE -



## 02 - WHEN MERELY OPENING A PLASTIC BOTTLE IS A SOURCE OF POLLUTION!

You read it right! Just when you thought that recycling the plastic bottle after gulping down your favourite drink was the best thing you could ever do, we are sorry to tell you that you contributed to environmental pollution when you simply spun the lid to open it. According to a recent finding, unscrewing the lid unleashes a dusting of tiny plastic particles with quantities depending on a variety of factors. Through the application of highly precise instruments such as a quartz crystal micro-balance and scanning electron microscopy, the researchers measured the effects various dissecting techniques had on common plastic items. These included tearing open the packaging around chocolates, snipping tape and plastic bags with scissors and other blades, and twisting off the plastic cap from a bottle. For the most part, it seems we're releasing anywhere around 10 to 30 nanograms of plastic fragments just a few nanometres across for every 3 metres (about 10 feet) of plastic we break apart. Putting it into perspective, assuming a plastic straw weighs just under half a gram, you'd need to cut around 150,000 kilometres of plastic to generate the equivalent mass of the microplastic waste. Then why is this even an issue? Though these numbers may seem extremely insignificant, combined with the microplastics embedded in cosmetics, shed from clothing, and generated during industrial production, it is all eventually going to add up. This microscopic waste has attracted attention in recent years as 'invisible' pollution stretching across our oceans and atmosphere, finding their way into just about every corner of the globe. Adding to the concern, unlike the fragments of old buckets and torn plastic bags we find choking up our wildlife, it's harder to picture the potential harm these plastic flakes might cause. By 2060, we might expect as much as 265 million tonnes of plastic waste to have accumulated in the natural environment. Just over 13% of this will be pieces smaller than 5 millimetres (1/5 of an inch) in size. Meanwhile, what we can do is try to reduce the generation of microplastic waste. For all practical purposes, the research doesn't provide us with a solid solution for eliminating the invisible fog of microplastic we release as we snip and tear our way through the day. This will surely make us think twice while opening plastic bottles or ripping apart plastic covers. However, the best solution still remains that we avoid the use of plastic altogether whenever possible.



IMAGE BY PUBLICDOMAINPICTURES FROM PIXABAY

MORE INFORMATION:

<https://www.sciencealert.com>

OR SCAN THE FOLLOWING QR CODE -



## 03 - I AM AN ANIMAL AND I DON'T NEED OXYGEN TO SURVIVE

Scientists have just discovered that a jellyfish-like parasite doesn't have a mitochondrial genome - the first multicellular organism known to have this absence. You might already be aware of the mitochondrion, a cell organelle, responsible for the production of energy under aerobic conditions and with the unique feature of having its own mitochondrial DNA. That means that the newly discovered organism doesn't breathe! In fact, it lives its life completely free of oxygen dependency. We know there are adaptations that allow some organisms to thrive in low-oxygen, or hypoxic, conditions. Some single-celled organisms have evolved mitochondria-related organelles for anaerobic metabolism but the possibility of exclusively anaerobic multicellular organisms has been the subject of some scientific debate. This amazing find came to light when a team of researchers led by Dayana Yahalomi of Tel Aviv University in Israel decided to take another look at a common salmon parasite called *Henneguya salminicola*. It could be leeching adenosine triphosphate (recall that ATP, produced by the mitochondria, is the energy currency of the cell) from its host, but that's yet to be determined. "Our discovery confirms that adaptation to an anaerobic environment is not unique to single-celled eukaryotes, but has also evolved in a multicellular, parasitic animal," the researchers wrote in their paper.

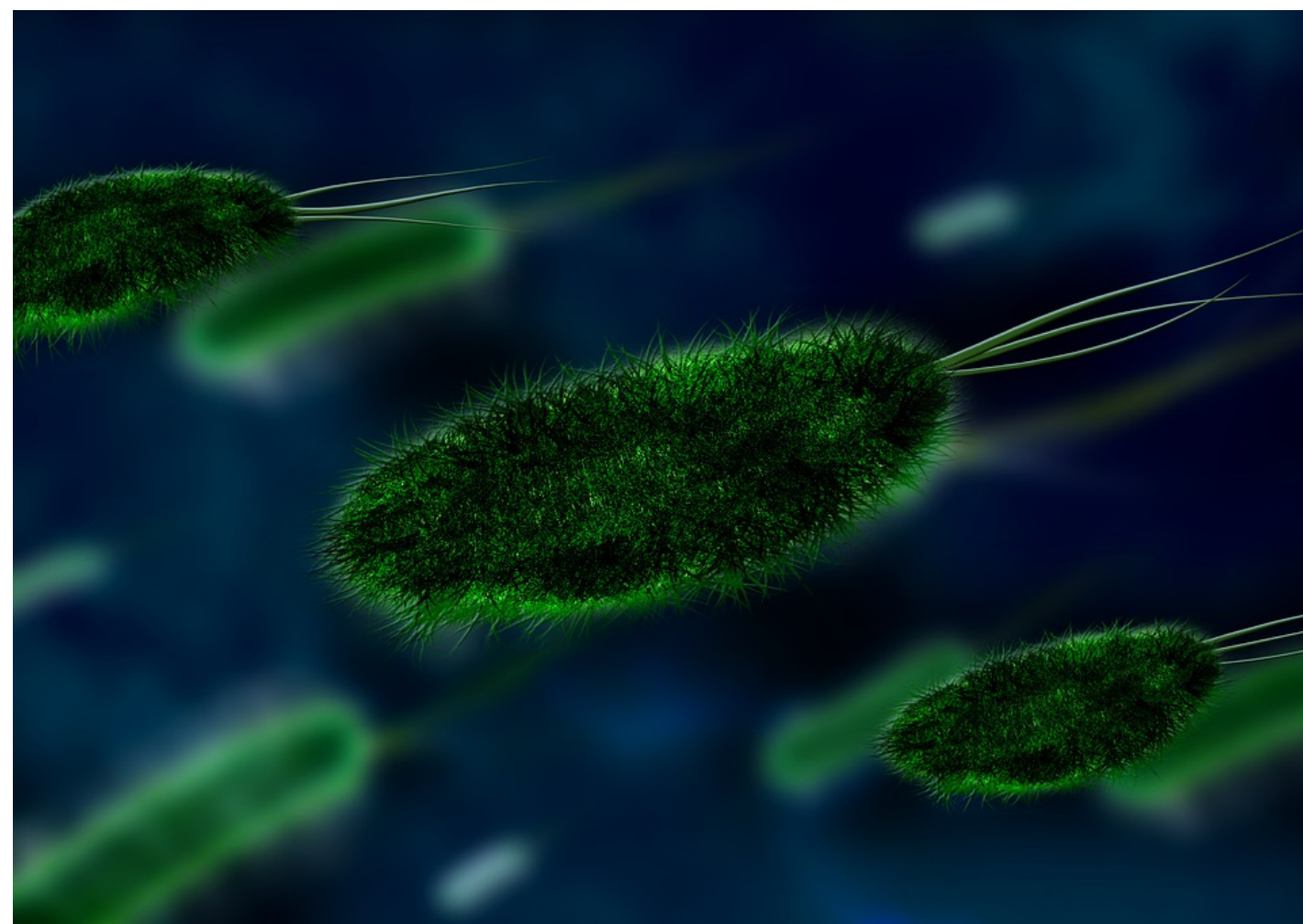


IMAGE BY GERD ALTMANN FROM PIXABAY

### MORE INFORMATION:

<https://www.sciencealert.com/this-is-the-first-known-animal-that-doesn-t-need-oxygen-to-survive>

OR SCAN THE FOLLOWING QR CODE -



## 04 - ARE PLASTIC ALTERNATIVES REALLY ECO-FRIENDLY?

The battle against the pollution caused by non biodegradable plastic has built up all over the globe. We surely want to believe that replacing plastic is one of the best solutions to this emerging global issue. However, we do need to ensure that the new substitute is indeed a non-polluting one and does not end up sabotaging our drive to protect our planet. For instance, consider the case of biodegradable single-use water bottles. According to Levey, who has extensively studied and experimented with plastic bottle substitutes, these bottles can often only degrade in highly controlled environments. What is the point if your product is degrading only under laboratory conditions and not in the natural environment. Besides, these bottles often contain plastic linings or chemicals that are unable to naturally degrade. “The most sustainable option is almost never going to be a single-use product,” Levey said. “It's dangerous if people equate ‘biodegradable’ – without knowing the time and conditions involved – with the idea that it's therefore OK to avoid changing habits. The most sustainable option is a reusable option and ideally we move towards that as much as possible” he added. In another example, several options to replace plastic straws with more environment-friendly ones have come up. One such substitute is bamboo straws. If you think nothing can go wrong with this one, you are in for a surprise. It turns out that this alternative is not really sustainable as it places a stress on the bamboo production. Levey said straws and other items made of bamboo often feature a lot of other materials. “There’s some bamboo materials that are marketed as naturally organic bamboo, but it’s not the whole story,” he said. “We had bamboo samples we were excited about, only to learn that this bamboo stuff looks and feels like plastic, and it’s actually 15% bamboo powder, maybe 20% cornstarch and then 60% resin, which is actually a chemically formed plastic that also contains formaldehyde. Although bamboo, reusable straws are more sustainable than single-use plastics, and many brands sell 100% bamboo products, reusable steel straws generally make more sense for the environment because they last longer and can be sourced locally. Paper straws are also a better alternative for coffee shops and restaurants. Most of you may be aware of the usage of plastic in the construction of roads. Taking the plastic waste that’s contaminating the environment and turning it into an asphalt that, in turn, conserves natural resources indeed sounds like a compelling idea. But environmental activists have raised red flags, saying that as these roads wear down, they release fine plastic dust into the atmosphere that can cause harm to animals and even humans. This, in fact, is an addition to the already existing pollutants, such as concrete and petroleum, released during the construction of roads. Construction advocates suggest recycling degraded roads to conserve natural resources, and some environmentalists encourage the adoption of solar panels on roads to at least cultivate clean energy. Small steps can lead to revolutionary changes. It is never too late to start. Hence, let’s join hands and make the earth the planet of our dreams!



PHOTO BY ECOPANDA ON UNSPLASH

### MORE INFORMATION :

<https://www.globalcitizen.org/en/content/plastic-alternatives-doing-harm/>

OR SCAN THE FOLLOWING QR CODE -



## 05 - COVID-19: A CRAFTY COMBINATION OF TWO VIRUSES?

In the short span of a few months, it took over the entire world - from hitting the economy to taking the lives of people. A lot of information is being tossed around on social media and while the number of scientific articles on the novel coronavirus have significantly increased, there still remains a lot to be discovered about its origin. In which animal species did it occur? A bat, a pangolin or another wild species? Where does it come from? A molecular dating estimate based on the SARS-CoV-2 genomic sequences indicates an origin in November. This raises questions about the link between this COVID-19 epidemic and wildlife. Chinese researchers have rapidly sequenced the SARS-CoV-2 genome. The Ribo-Nucleic Acid (RNA) is a molecule with a single strand-like structure and chemicals called 'nitrogenous bases' arranged along its length whose sequence forms a 'gene'. The genetic material present in the cell of an organism is cumulatively termed as its 'genome'. Now, SARS-CoV-2 is an RNA molecule of about 30,000 bases containing 15 genes, including the S gene which codes for a protein located on the surface of the viral envelope. Comparative genomic analyses have shown that SARS-CoV-2 belongs to the group of Beta-Coronaviruses and that it is very close to SARS-CoV, responsible for an epidemic of acute pneumonia which appeared in November 2002 in the Chinese province of Guangdong. Since then, many Beta-Coronaviruses have been discovered, mainly in bats but a few in humans as well. A 'reservoir' is one or several animal species that are not or not very sensitive to the virus, which will naturally host one or several viruses. The absence of symptoms of the disease is explained by the effectiveness of their immune system, which allows them to fight against viral proliferation. Some studies suggest otherwise, the sequence isolated from pangolin is similar to COVID-19 at 99% in a specific region of the S protein. In addition, these genomic comparisons suggest that the SARS-Cov-2 virus is the result of a recombination between two different viruses, one close to RaTG13 (isolated from bats) and the other closer to the pangolin virus. In other words, it is a chimera between two pre-existing viruses. It is important to know that recombination results in a new virus potentially capable of infecting a new host species. For recombination to occur, the two divergent viruses must have infected the same organism simultaneously. Two questions remain unanswered: in which organism did this recombination occur? And above all, under what conditions did this recombination take place?

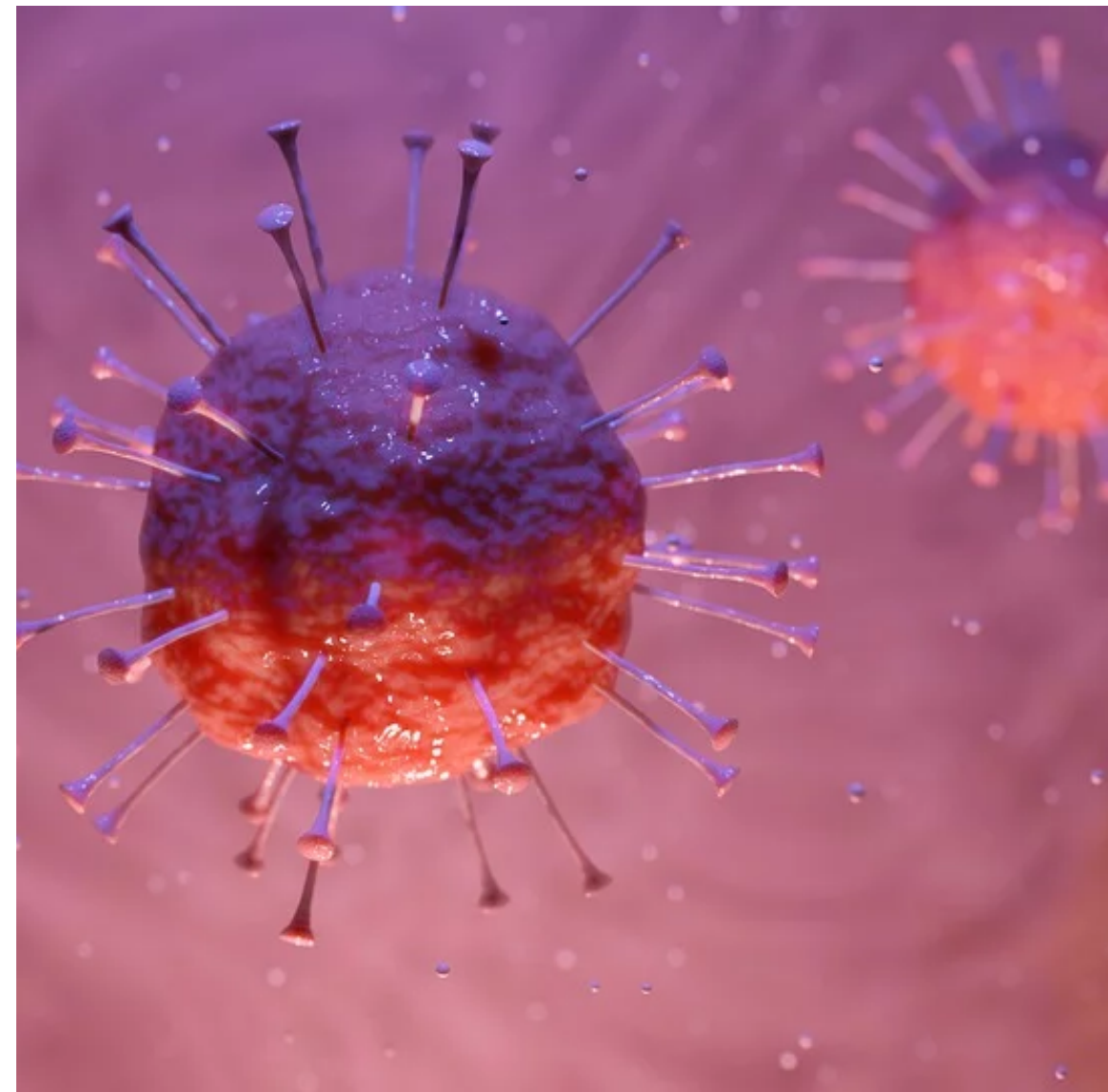


IMAGE BY THOR DEICHMANN FROM PIXABAY

### MORE INFORMATION :

<https://consortiumnews.com/2020/03/20/covid-19-genomic-analysis-suggests-2-viruses-may-have-combined/>  
OR SCAN THE FOLLOWING QR CODE -





# GOBBLE THE FACTS!

*Get ready to guzzle down these interesting facts...*



Ryan Quick from Greenbelt, MD, USA / CC BY  
(<https://creativecommons.org/licenses/by/2.0>)

## LARGEST SNAKE EVER!

*The Titanoboa lived 60 million years ago and is the largest, longest, and heaviest snake ever discovered.*

## ARE THERE WHITE HOLES ?

*A white hole is a prediction of Einstein's theory of general relativity according to which a white hole is essentially a black hole in reverse: if nothing can escape from a black hole's event horizon, then nothing can enter a white hole's event horizon.*



Photo by NASA on Unsplash



Image by Sylvia Anders from Pixabay

## THAT STINGS !

*Sometimes, guard bees sting other bees to protect their hives from outsiders.*

## THE SMALLEST SATELLITE !

*An 18 - year old Indian student developed the world's smallest satellite (64-grams), called KALAMSAT.*



Image by Wikilimages from Pixabay

## MARS' MARVEL !

*Mars' ice-filled Korolev crater, which measures 81.4 kilometres in diameter and contains water ice comparable in volume to Great Bear Lake in Northern Canada.*



ESA/DLR/FU Berlin / CC BY-SA (<https://creativecommons.org/licenses/by-sa/3.0>)

## INCREDIBLE VISION !

*Reindeer are the only mammals that can see Ultraviolet light. This helps them discover predators early in snowy landscape as they can easily tell the difference between white fur and snow.*

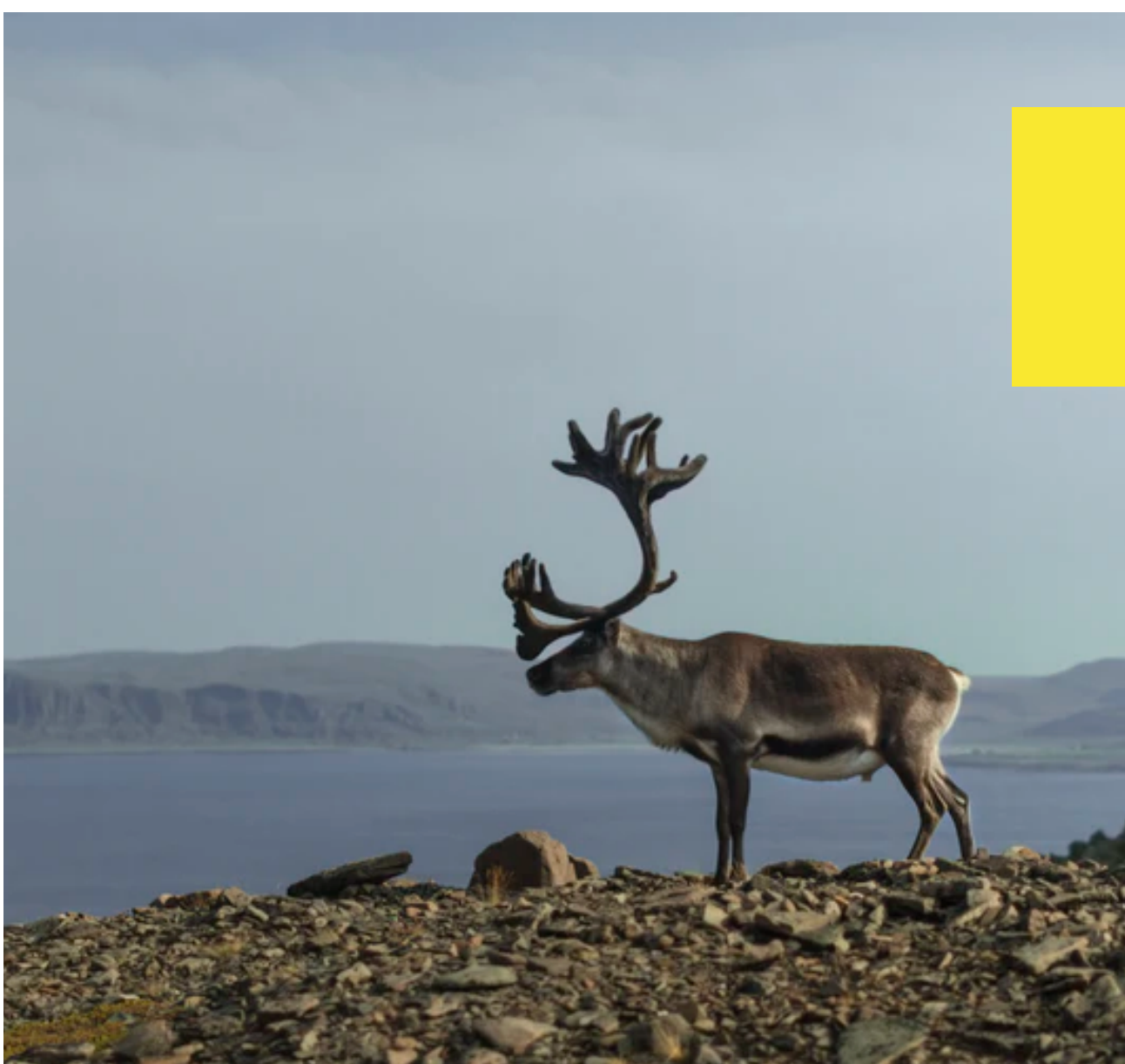


Photo by Jørgen Håland on Unsplash

# THE QUIZOPEDIA

*Are you ready to get your brain busted !*

## Quizopedia Reloaded

*A brain-storming contest and a chance for you to become famous.*

But hold your horses right there! Check out the instructions below before you begin :

The QR code below will take you to a Google form which is a quiz consisting of 15 questions. You must answer all the questions and try to get as many of them correct. There is no negative marking. The names of the winners would be published in the upcoming issue and the winner of the contest will get exciting prizes . Answers would be officially released via mail on 25/04/2020.

***(Competition begins on 01/04/2020 at 6 pm)***

The winners would be chosen based upon

1. No. of correct answers
2. Time of submission

Deadline : 20/4/2020

So let's begin....

Scan below or click on the QR code.



### **Quizopedia winners:**

1. Paalavi Mahendra Dalvi
2. Chinmay Kale
3. Amogh Bhosekar

**Answers to the previous quiz have been mailed to the participants.**

# < D / CODE >

THERE IS ONLY ONE TRUTH !  
BRING OUT THE SHERLOCK IN YOU.

## D-CODE

Here is a chance to set the detective within you into motion! Rack your brains to decipher the code and arrive at the right answer. Your answer can be a single word or a phrase containing 2-3 words. Scan the QR code below to send us your findings. The top early-bird answers get a chance to be featured in our next issue and who knows, you might be one of them! **Competition starts on 01/04/2020, 6pm.**

### Here comes the question:

1.) Friends?

1.)



2.) Classmate? Checked

2.)



### D-code Winner:

Winners of Dcode cannot be declared due to technical issues. Apologies.

Deadline: 20/4/2020

- QR code for hints : (Remember hints would be released 48 hours after the start of the contest)



- To submit your answer scan the following QR code :





APRIL 2020 | ISSUE 4

# KNOWBEL

ENLIGHTENING THE NOBLES!

HEALTH DAY SPECIAL (APRIL 7 2020)  
EXPLORING THE SCIENCE BEHIND  
COVID-19

The Coronavirus is a family of viruses that infects both humans as well as animals. Surprisingly, most members of this highly contagious family are not fatal. However, the SARS-CoV (which caused the SARS epidemic in 2002) and SARS-CoV-2 (cause of the current COVID-19 epidemic) strains can be deadly. The COVID-19 virus has an incredibly high rate of proliferation compared to SARS.

## HOW DOES COVID-19 AFFECT THE HUMAN BODY

- The virus attacks the protective layer of the lungs' epithelial lining. It then begins to rapidly multiply and affect other cells.
- As a response to the incoming infection, the immune system activates the killer T-cells and neutrophils. The killer T-cells and neutrophils are two of the many types of White Blood Cells which play a pivotal role in the immune response of the human body against a foreign contagion.

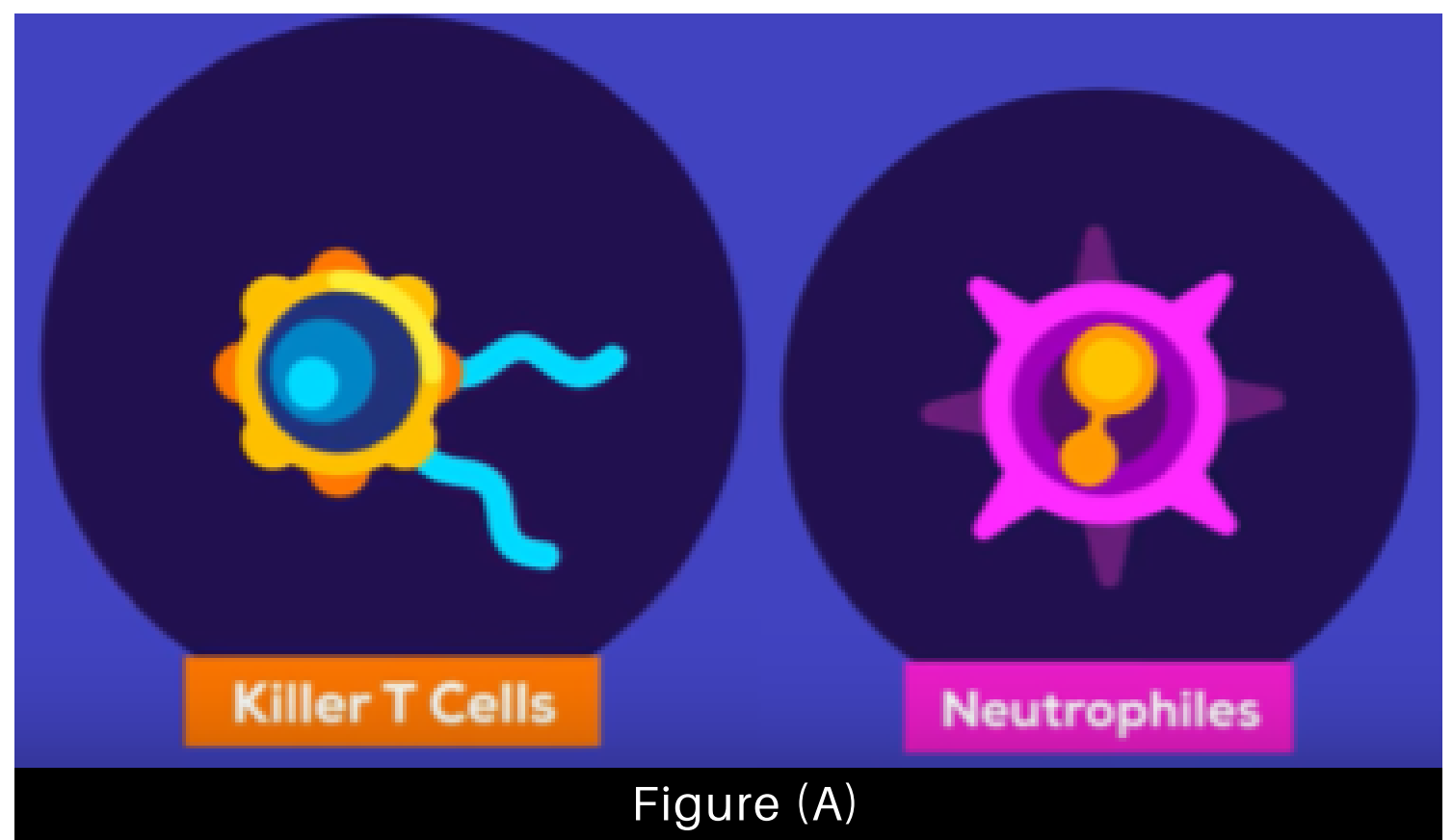


Figure (A)

- However, the virus targets and manages to infect some of these neutrophils and killer T-cells. This disconcerts the body's immune system as it can no longer distinguish the infected cells from the healthy cells of the lungs' epithelial layer.
- As a result of this, the lungs become more vulnerable to attacks by pathogens. In most cases, this may even lead to bacterial infections, such as Pneumonia.
- With an already enervated immune system, the body of the infected individual is rendered powerless when it is faced with an additional infection. This further worsens the patient's health.
- A majority of times, the cells of the immune system manage to recover and regain the ability to differentiate infected cells from healthy ones. In such situations, there is a chance for the patient to recover, provided any secondary bacterial infections or severe lung damages are prevented.

## UNDERSTANDING THE ATTACK AT THE MOLECULAR LEVEL

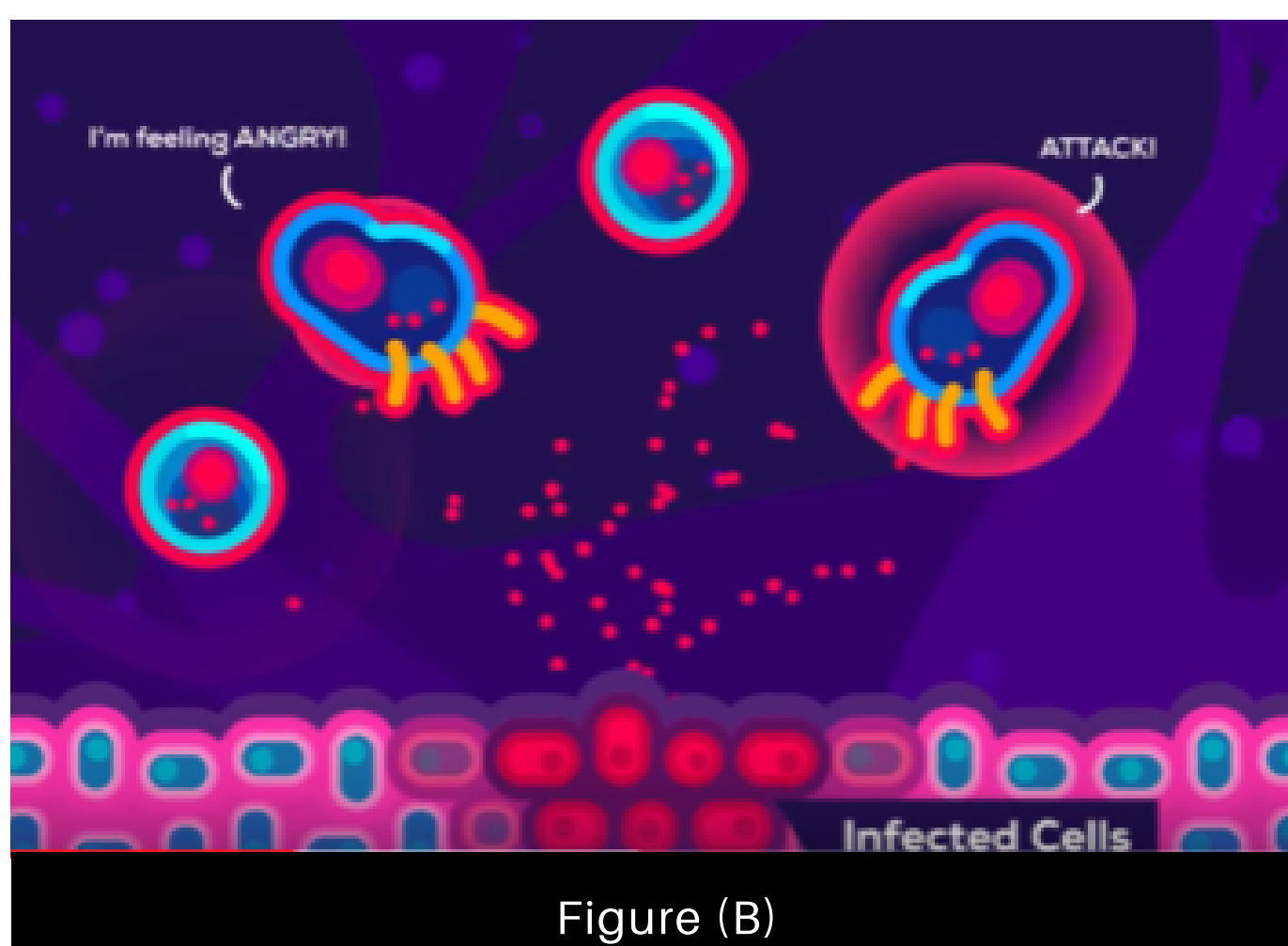


Figure (B)

When the virus attacks a cell, it releases its RNA into the cell. Using the cell's machinery, it synthesizes a protein called RdRP (also known as replicase) using which it duplicates the viral RNA content. This newly formed viral RNA reassembles to form another copy of the virus and continues affecting other cells. It has been found that  $Zn_{+2}$  has the potential to stop the duplication of the viral RNA by blocking the RdRP transcriptional mechanism<sub>[1]</sub>

However, it is difficult for the zinc ion to cross the cell membrane and enter the cell. This is exactly where the chemical chloroquine comes into play. It acts as a Pyrrhione or, more simply put, an ionophore that allows the entry of Zn into the cell.[2] Once the Zn<sup>+2</sup> ion enters the cell, it puts an end to the replication of viral RNA, thereby preventing the virus from multiplying.

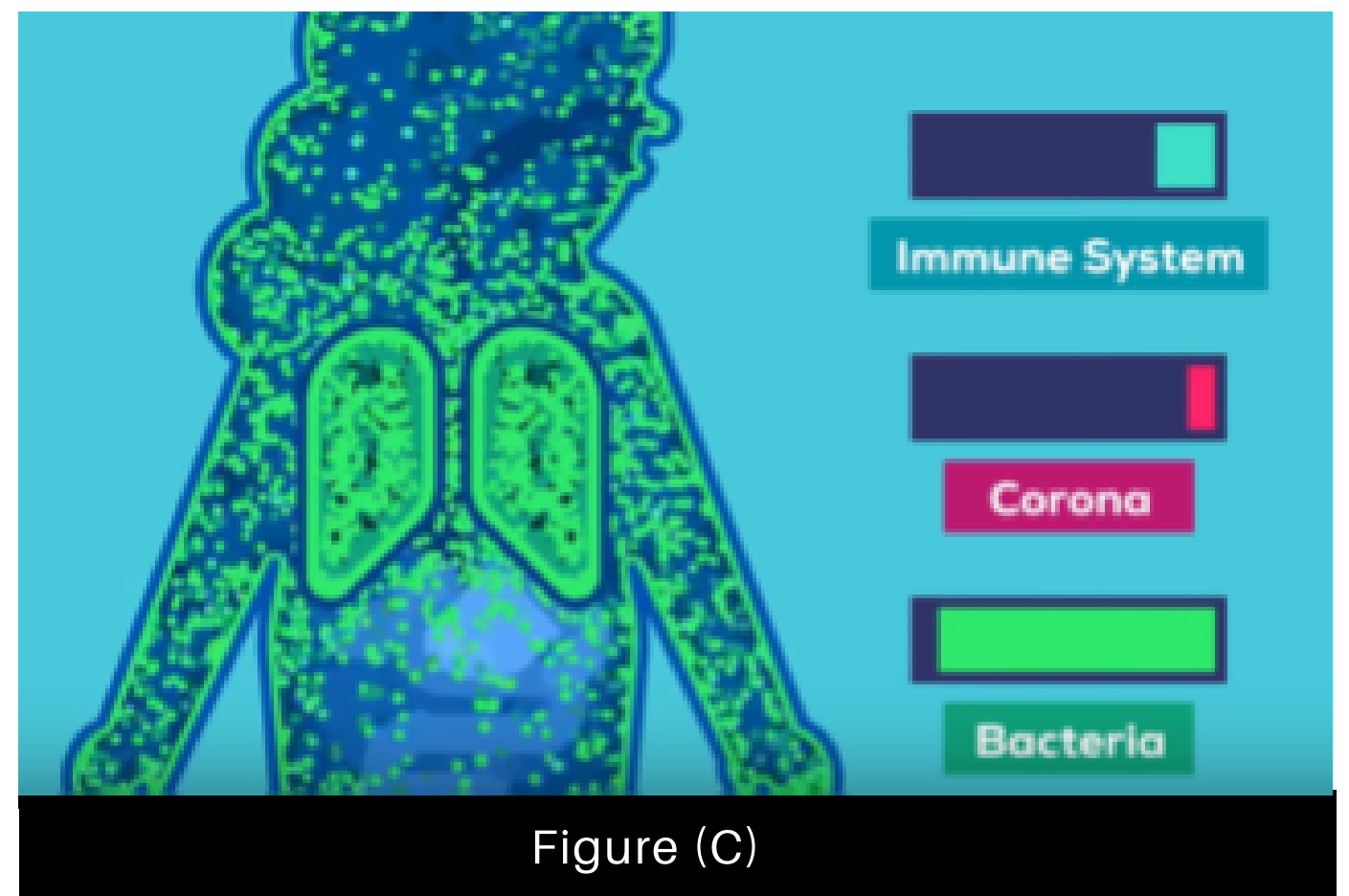


Figure (C)

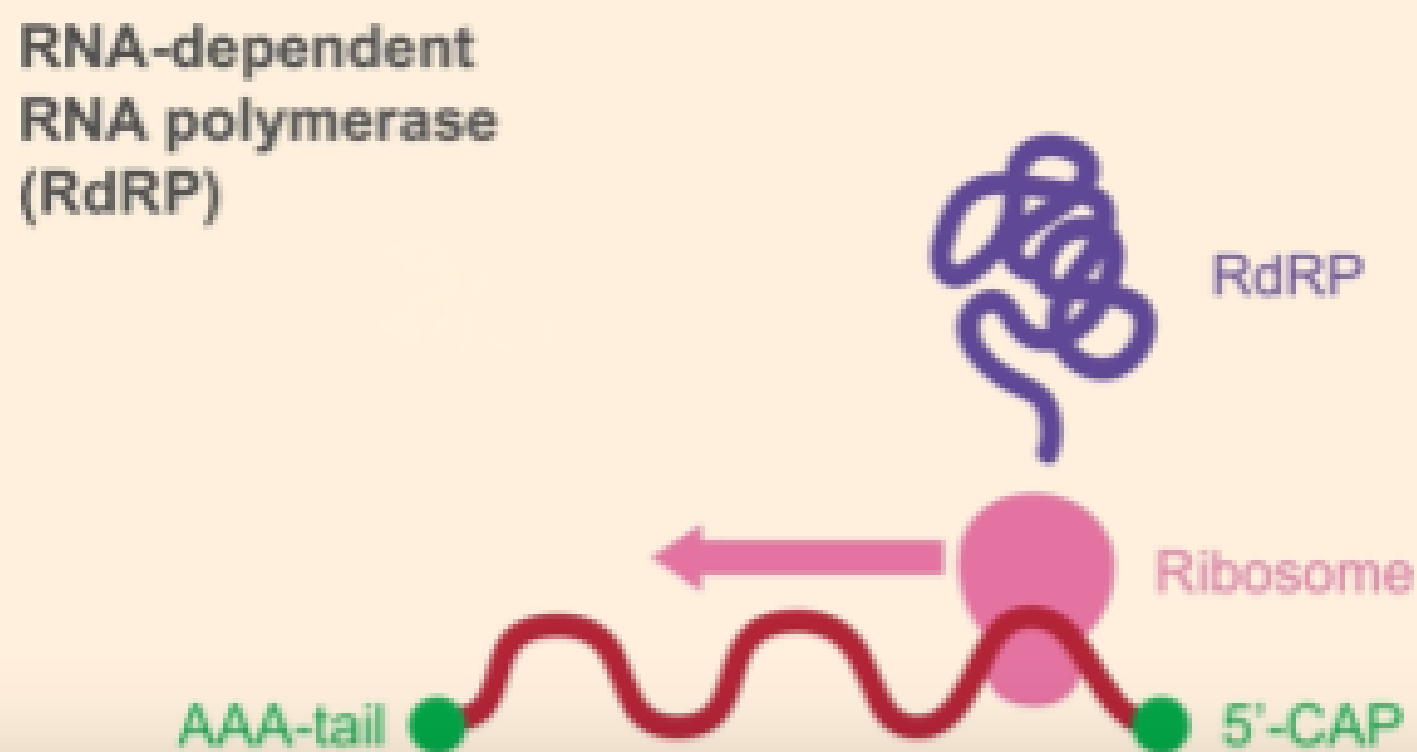


Figure (D)

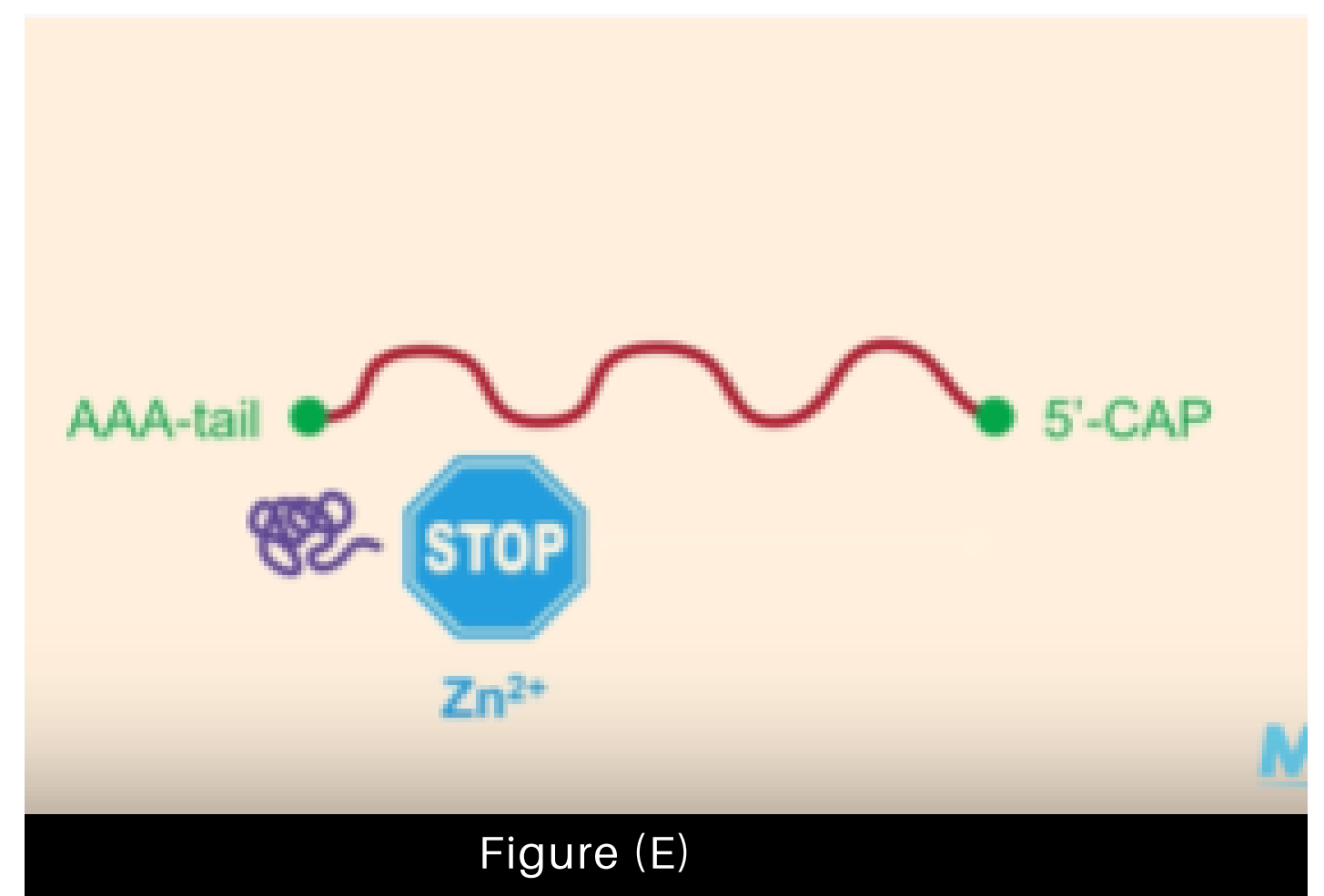


Figure (E)

But a major concern in this regard is that the concentration of Zn<sup>+2</sup> ions inside the lung cells needs to be carefully regulated. Concentrations beyond an optimum level lead to toxicity in the cells of the human body.[3]

## REFERENCES

[1] Zn<sup>+2</sup> inhibits Coronavirus and Arterivirus RNA Polymerase Activity In Vitro and Zinc Ionophores Block the Replication of These Viruses in Cell Culture

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[2] Chloroquine Is a Zinc Ionophore

Jing Xue, Amanda Moyer, Bing Peng, Jinchang Wu, Bethany N. Hannafon, Wei-Qun Ding

[3] Toxicity of nano- and micro-sized ZnO particles in human lung epithelial cells

Weisheng Lin, Yi Xu, Chuan-Chin Huang, Yinfa Ma, Katie B. Shannon, Da-Ren Chen, Yue-Wern Huang

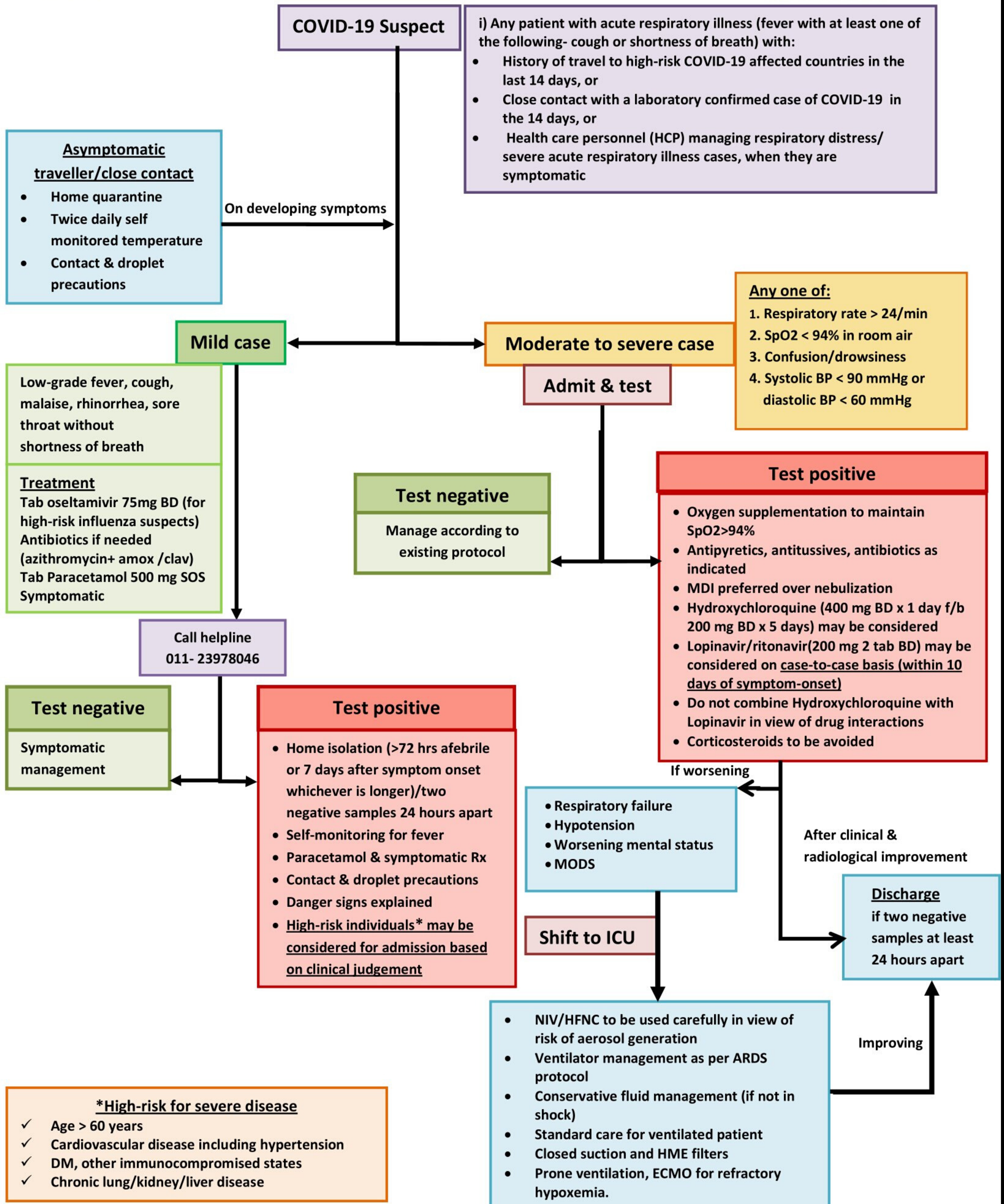
Figures (A), (B) and (C) are from <https://youtu.be/BtN-goy9VOY>

Figures (D) and (E) are from <https://youtu.be/BlymfznD7YA>



# COVID-19 Management Protocol AIIMS , New Delhi

20<sup>th</sup> March 2020

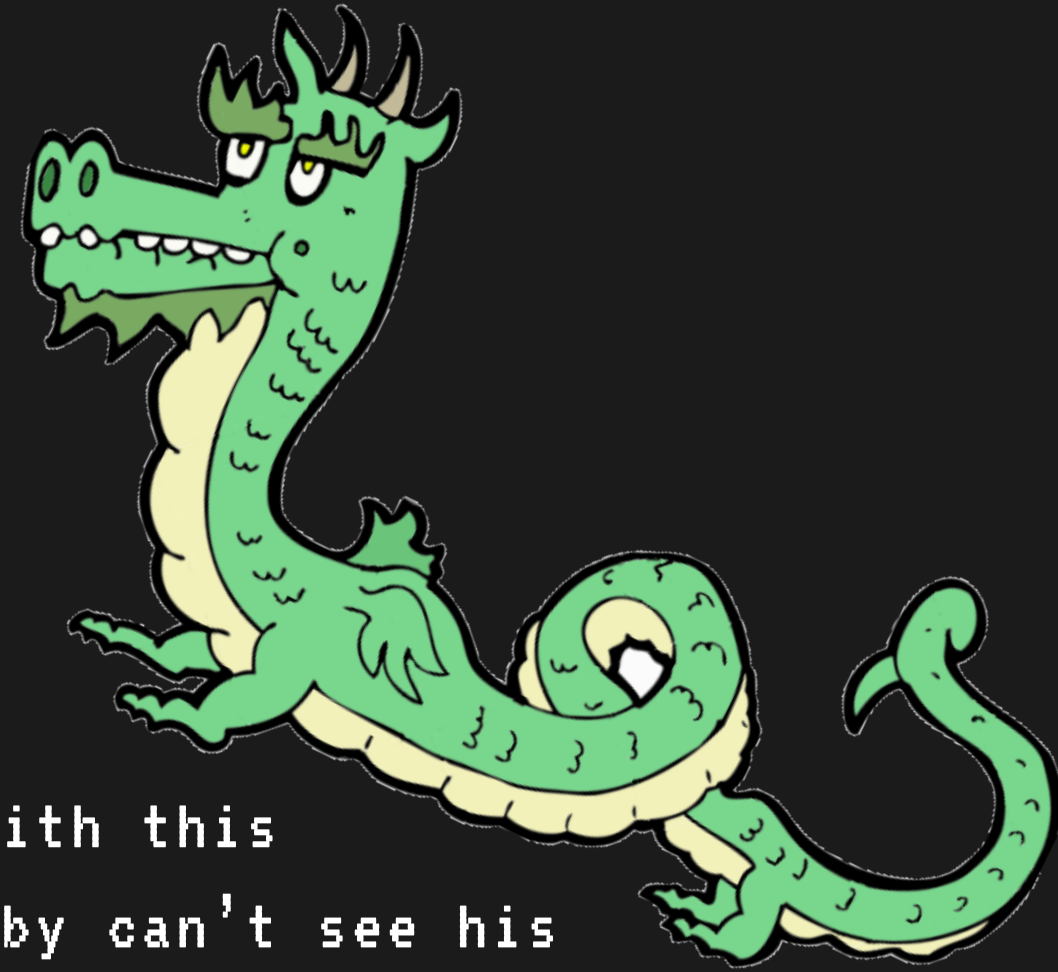






Knowbel Presents

# KNOBBY'S WORLD



We know you must have gotten bored with this unexpected quarantine vacation. Knobby can't see his friends get bored either and hence, he is inviting all of you to his world. Yes, Knobby's World!

Knobby's World is an abode of fun-filled activities and challenges where you can make the best use of this holiday out of the blue.

So register now to secure your place in Knobby's World. You can also register in groups of 6. Hurry up and claim your position before all the seats fill up!



# The Game

1. All the registered members would be divided into families of 6. Each family will have a family head who will be in contact with Knobby, the king (moderator) of the world.
2. Every Monday, a task will be assigned to the players by Knobby. The task could be a group or an individual activity that would have to be completed before Friday 11:59 pm of the same week. You certainly don't want to miss the chance of being part of an exciting world filled with activities that give you a chance to display the best of your talents! The allocated tasks include painting, drawing, dancing, singing, acting, writing and many more creative skills.
3. All the updates would be e-mailed to the family heads and also be updated on KNOWBEL's website.
4. The results would be declared over the weekend on the website.
5. Any player who fails to complete the submission before the deadline would be fed to the dragon as dinner, i.e. will be eliminated and will have to quit the world.
6. Tasks will be graded and points will be given. Grading method and criteria will be soon uploaded on the website. The total points of each family will be evaluated at the end of each week.
7. After 4 weeks, i.e. the end of April month, the final scores of each family will be calculated and the winning family will be rewarded by the king with prestige and fame!

Brace yourself, be a sport to make your teams, plan your strategies and gear-up for the adventure that awaits you!

For all the new updates:  
Checkout our website.

Scan or click on QR code Below to Register:



Hurry up!  
Registration closes on 5th April





Image by Photo Mix from Pixabay

Issue No. 4 | April 2020

# INSPIRON

A pioneer in the pursuit for progress

The story of  
Anandibai Gopalrao Joshi

## INSPIRON



Illustration by Ritu

*(Excerpts taken from "The Life of Dr. Anandibai Joshee" by Mrs. Caroline Dall)*

*In 1886, the world watched as a young doctor stepped off a ship from America, eager to take up the role of the physician in charge of the female ward at Kolhapur's Albert Edward Hospital. Not only was she India's first female doctor, but she was only 19 years old at the time. Her name was Anandibai Gopalrao Joshi, and her story is one of utmost hard work, determination and perseverance.*

## 01. THE MYSTIC OCCURRENCE

Anandibai was born on 31st March 1865 and her parents named her Yamuna, after the sacred river. The little that we know of her childhood only piques our desire to know more. She was from the first a great pet of her father, and her happiest hours were passed upon his knee, in the Kalyan garden, where he went to rest every day after dinner. From her earliest childhood, she was a unique child. There was, in her home, an immense genealogical record of the Joshees. It stretched over two thousand years, had been kept by the head of the family in each generation, and was illustrated by painted pictures of the costumes worn by its heroes, and the events briefly described on it.

It was written on a sacred paper kept especially for such uses, from which no word could ever be effaced.

As it was always kept under lock and key, Anandibai thought that she had never seen it, and knew nothing about it, when she had the following dream.

### WITHIN THESE PAGES:

- 01 THE MYSTIC OCCURRENCE
- 02 THE THIRST FOR KNOWLEDGE
- 03 MARRIAGE - THE TURNING POINT
- 04 THE INCIDENT THAT CHANGED YAMUNAFOR EVER
- 05 TENACITY DESPITE STRONG OPPOSITION
- 06 AN EXTRAORDINARY ACHIEVEMENT IN A BRIEF SPAN OF TIME



She had gone to bed as usual, at some time before she was five years old, when the figure of a young and handsome man, dressed as a warrior, appeared before her.

"Who are you?" she said, like any frightened child, when he fixed his eyes upon her.

"Don't you not know who I am?" he said gravely.

"No."

"Go then to your father," resumed the soldier, "and tell him to make you acquainted with my life; for it is you who are to tread in my footsteps."

At this, she woke up trembling. She went to her father in the morning and earnestly entreated him to tell her about the "god " whom she had seen.

Gunputrao was unable to identify the figure from Yamuna's description, but in the midst of many words, the soldier had said, "It is ungrateful to be ignorant of him whose blood flows in your veins."

From these words, Gunputrao felt certain that it was one of his own ancestors who had appeared to his daughter, and he reverently opened his family roll. At last, they came to a figure that Yamuna recognized at once as that of the man who had appeared to her. It was that of the young general who had founded the fortunes of her family, and in whose palace she had been born. From that time, Gunputrao was even more tender toward his daughter; he not only gave her whatever she desired, but he paid special attention to her education.

## 02. THE THIRST FOR KNOWLEDGE

Gopal Vinayak Joshee was appointed a clerk in the Postal Department of Bombay in 1870, when Yamuna was only five years old. As he was a stranger in those parts, he eagerly sought the acquaintance of the head of his own family in that neighbourhood. Gunputrao was an educated man.



Unknown author / Public domain

He had organized a school in one of the large rooms of the house in which he lived and saw at once that Gopal's knowledge of Sanskrit would be of great advantage to Yamuna. She remained under his care for nearly three years, when Gopal was promoted to be postmaster at Alibag and prepared to leave the neighbourhood. Yamuna's grief could not be repressed. Forgetting her love for her parents, indifferent to her siblings, she begged permission to go away with Gopal. Her father was sorely puzzled. Although only eight years of age, Yamuna was now marriageable. In this emergency, her grandmother from Poonah, the mother's mother, came to Yamuna's aid. "I will go with her," she said, "and I will shield her as if she were my own." She did go, and as long as she lived her grandchild was reverently grateful for the service.

### 03. MARRIAGE - THE TURNING POINT

Yamuna was now older than most Hindu girls are when they marry, but she had never thought of marriage. Pursuing her studies with eagerness, all that she cared for was to remain with her teacher and continue her work. When marriage was proposed, no objection was made to it. Gopal was a widower, and he would have been scarcely human if he had not been touched by the devotion of his young pupil. He was an educated man, respected by his own people, and twenty years older than Yamuna. She was married on the 31st of March, 1874, the day on which she completed her ninth year.

“

*Be grateful for challenges because... had there been no difficulties and no thorns in the way, then [each woman and] man would have been in his primitive state and no progress made in civilisation and mental culture.*

”



Illustration by Ritu

“

*... no man or woman should depend upon another for maintenance and necessities. Family discord and social degradation will never end till each depends upon herself.*

”

Four days after her marriage, in conformity to the custom of the Mahrattas, Yamuna dropped the name by which her father's loving lips had called her and assumed that of Anandibai, or "Joy of my Heart," by which she was afterwards known.

## 04. THE INCIDENT THAT CHANGED YAMUNA FOREVER

Anandibai's only child was born in her fourteenth year, probably at Kolhapur, sometime early in 1878. The couple was elated. However, their happiness did not last long as destiny had other plans for them. Gopal had always emphasized the importance of being educated irrespective of whether you were a man or a woman which led him to constantly chide his wife for not taking efforts to become literate. On one such occasion, their newborn was suffering from frequent bouts of high fever and Gopal advised Anandabai to visit the doctor for treatment.

"You must inform a doctor. It is extremely necessary at this stage", he urged.

"That won't be required. The divine power will definitely take care of us. Besides, all the doctors are men and I feel wary of taking treatment from them.", an ignorant Anandibai replied as she applied sacred ash on the infant's forehead.

Gopal's attempts to dissuade her failed and when she realized her folly, it was too late. She lost her only son when the poor infant succumbed to high fever. This left an extremely deep impact on Anandibai. She spent months in anguish and depression as she mourned the loss. Gradually, her agony transformed into determination - a firm resolve to not let any other woman lose her beloved child due to her lack of knowledge.

**INSPIRON**



Illustration by Ritu

## 05. TENACITY DESPITE STRONG OPPOSITION

The thought of educating a woman was not perceived well by the Hindus who censured Anandibai immensely. The Christians supported her and wanted her to convert to Christianity. But, in her community address at the Serampore College Hall, she spoke about the persecution she and her husband had endured. She stressed the need for Hindu female doctors in India and also pledged that she would not convert. Her speech was well received and financial contributions started pouring in from all over India. It is amazing how, in an era where the society perceived women to take up the role of housewives to serve their husbands, Anandabai was eternally supported by her husband on all the endeavours she embarked upon. While the Joshi couple was in Calcutta, Anandabai's health was declining. She suffered from weakness, constant headaches, occasional fever, and sometimes breathlessness. In 1883, Gopalrao was transferred to Serampore, and he decided to send Anandabai by herself to America for her medical studies despite her poor health. Though apprehensive, Gopalrao convinced her to set an example for other women by pursuing higher education.

Once in America, Anandibai wrote to the Women's Medical College of Pennsylvania (now known as Drexel University College of Medicine), asking for admission to their medical program, the second women's medical program in the world. Rachel Bodley, the dean of the college, enrolled her. She began her medical studies at the age of 19 and graduated with an MD on 11 March 1886. The topic of her thesis was "Obstetrics among the Aryan Hindus". Queen Victoria congratulated her on her graduation. Anandabai returned to India, amid the grand celebration, in late 1886. She was appointed as the physician-in-charge of the female ward of the local Albert Edward Hospital by the princely state of Kolhapur.

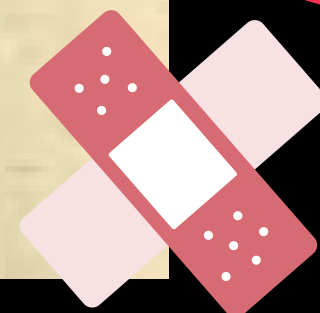
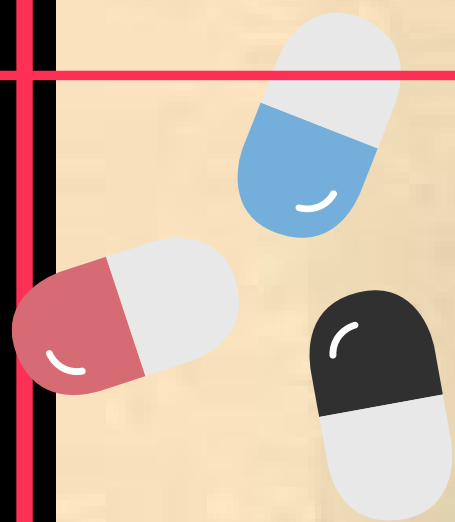
“

*I regard irreligious people as pioneers. If there had been no priesthood the world would have advanced ten thousand times better than it has now.*

”



INSPIRON



पूर्णमा वर्मन at hi.wikipedia / Public domain

## 06. AN EXTRAORDINARY ACHIEVEMENT IN A BRIEF SPAN OF TIME

“

*I have nothing to despise. The whole universe is a lesson to me,*

”

It is rightly said that “Nothing is more permanent than the temporary.” It is heart-breaking to know that this sparkling jewel in the crown of history did not live long to see her wonderful influence on the generations to come. While in America, she had contracted tuberculosis because of the cold weather and unfamiliar diet. She died on 26 February 1887, just before turning 22. Her death was truly a great loss in many ways and was mourned throughout India. Even today, the name of Anandibai resonates in the pages of history as an epitome of brilliance and steadfastness. The Marathi film 'Anandi Gopal' was made in her memory in 2019.

# “ALL THE WORLD’S A STAGE”

By William Shakespeare

## Poetica

All the world’s a stage,  
 And all the men and women merely players;  
 They have their exits and their entrances;  
 And one man in his time plays many parts,  
 His acts being seven ages. At first the infant,  
 Mewling and puking in the nurse’s arms;  
 And then the whining school-boy, with his satchel  
 And shining morning face, creeping like snail  
 Unwillingly to school. And then the lover,  
 Sighing like furnace, with a woeful ballad  
 Made to his mistress’ eyebrow. Then a soldier,  
 Full of strange oaths, and bearded like the pard,  
 Jealous in honour, sudden and quick in quarrel,  
 Seeking the bubble reputation  
 Even in the cannon’s mouth. And then the justice,  
 In fair round belly with good capon lin’d,  
 With eyes severe and beard of formal cut,  
 Full of wise saws and modern instances;  
 And so he plays his part. The sixth age shifts  
 Into the lean and slipper’d pantaloon,  
 With spectacles on nose and pouch on side;  
 His youthful hose, well sav’d, a world too wide  
 For his shrunk shank; and his big manly voice,  
 Turning again toward childish treble, pipes  
 And whistles in his sound. Last scene of all,  
 That ends this strange eventful history,  
 Is second childishness and mere oblivion;  
 Sans teeth, sans eyes, sans taste, sans everything.

### ABOUT THE POET

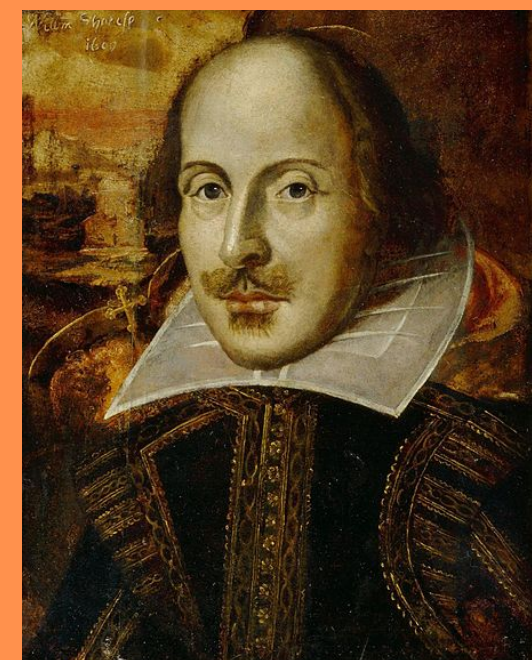


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*William Shakespeare (26 April 1564– 23 April 1616) was an English poet, playwright, and actor, regarded as the greatest writer in English language and world’s greatest dramatist. Shakespeare was born and raised in Stratford-Avon, Warwickshire. He is often called the ‘National poet’ of England and the “Bard of Avon”. Adding 39 plays, 154 sonnets, and two narrative poem to the golden collection of fancy and deep english literature, he has also not just written tragedies but also lived through a few of them.*

#### More Info:

<https://www.poetryfoundation.org/poems/56966/speech-all-the-worlds-a-stage>

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