Celebrate World Oceans Day to remind everyone of the major role the oceans have in everyday life. They are the lungs of our planet, providing most of the oxygen we breathe. The purpose of the Day is to inform the public of the impact of human actions on the ocean, develop a worldwide movement of citizens for the ocean, and mobilize and unite the world’s population on a project for the sustainable management of the world’s oceans. They are a major source of food and medicine and a critical part of the biosphere. In the end, it is a day to celebrate together the beauty, the wealth and the promise of the ocean. #SaveOurOcean

EVERY EGG MATTERS

“Every egg counts. Everyone’s choice makes a difference” Female turtles lay hundreds of eggs in a nesting season. However, not all the eggs will successfully hatch into hatchlings and become mature turtles to contribute back to the population. As sea turtles do not nurture their young, their eggs and hatchlings are susceptible to predation from the sky, on land and in water. Additionally, their survival is also challenged by human activities, such as sea turtle egg consumption.

In the past, most of the coastal communities in Malaysia lived in remote, isolated villages and depended mainly on locally available natural resources. As an alternative source of protein, they consumed seasonally abundant sea turtle eggs. It must also be acknowledged that since the pre-colonial era, some extent of sea turtle egg trade had already existed though it was limited to a privileged few. However, according to our elders, egg collectors had always, by tradition, respectfully left half of the nest undisturbed to ensure the continuity of the sea turtle population, which they knew had a role to play in the universe too.

This scenario has now changed, thanks to rapid modernisation. Once remote and isolated, coastal communities became connected to towns and cities that allowed for the movement of more goods and services to and fro. As a result, the increasingly growing local population has been provided with more diverse and affordable food sources - they no longer needed...
to rely on natural resources such as sea turtle eggs for subsistence.

However, increased rural-urban interconnectivity has created an opportunity to supply the sea turtle eggs to markets nationwide. In fact, sea turtles eggs even appear in online marketplaces and social media, making them no more than just another commodity. Thus, sea turtle eggs are now accessible to all of us, a commercially traded good, a choice, a delicacy.

Nevertheless, no matter whether we once consumed sea turtle eggs for subsistence, or as a delicacy today, we are only adding pressure on an already endangered species. Their reported decline in population raises concern in our hearts. As Malaysians, we all share a responsibility towards the sea turtle. These charismatic, ancient marine reptiles are indisputably our natural heritage and part of our local culture - an inspiration to the imagination, beliefs; a historically essential protein source, an icon of our tourism industry; a symbolic national pride.

Sea turtles are worth more alive than on our plates. You and I can individually make a choice to contribute to the sustainability of the Malaysian sea turtle population. They are our natural heritage, which we hope that our children, grandchildren and great grandchildren will also inherit. So let’s do what we know in our hearts to be the right thing to do and be a part of the solution, albeit one person at a time.

Let’s take this pledge to say no to sea turtle egg consumption. Take this pledge to protect our sea turtles, our natural heritage. When the demand stops, the supply stops too.

Share your pledge to encourage others to join the bandwagon. Just as every egg matters, every choice matters too.

Follow us on Instagram and Twitter for more information and updates throughout the virtual event of World Sea Turtle Day 2020: MYSeaturtle, MYHeritage.

#MYSeaturtleMYHeritage #MySeaTurtles2020

Society for Conservation Biology - Malaysia Chapter is counting on you


Sign this petition

https://rb.gy/gzdlms
SMOKING AND COVID-19
PRONENESS TO LUNG INFECTION:
THE CULPRIT BEHIND IT

When a smoker takes a puff of a cigarette, the smoke inhaled enters the smoker oral airways and gas/chemicals are exchanged in the lung (Fig. 1). When the smoker exhales, the cigarette smoke will enter the oral airways of any person nearby or passes by. When a person infected with COVID-19 sneezes, coughs, speaks or does not practice social distancing, one is bound to be infected through the airborne small droplet expelled by the infected person. The virus will then enter the oral airways through the trachea into the lungs and that maybe the beginning of a horrible experience (Fig. 2). It is best in both cases, to keep a safe distance from each other and whenever possible to wear face mask.

Fig.1. Smoking (https://www.cnbc.com/2018/11/08/)
A preliminary study done by the Ministry of Health Malaysia regarding the number of deaths due to COVID-19 in Malaysia was recently undertaken. It was found that the numbers were higher among smokers compared to non-smokers. The health director-general Datuk Dr Noor Hisham Abdullah said the study conducted on 86 of the 115 COVID-19 deaths in Malaysia has found that 19.8 per cent (17 deaths) were among smokers. In China, the first outbreak of COVID-19, the impact of smoking habits on COVID-19 patients was also reported in New England Journal of Medicine. The numbers of those badly affected by the disease and those who were put on ventilators or died were higher for smokers at 16 and 25.8 per cent, respectively. The director-general also said the 2019 National Health and Morbidity Survey (NHMS 2019) found that an estimated 21.3 per cent of Malaysians were smokers. Therefore, they were at higher risk of complications due to COVID-19 compared to non-smokers. It is quite a staggering number. It has been proven that smoking reduces lung capacity and compliance due to the exchange of toxic chemicals in every puff. Of late, many reports are starting to emerge indicating that COVID-19 is a disease that impairs the lung function to the extent of acquiring lung infection such as Respiratory Distress Syndrome (RDS). So an obvious question is what is the correlation between smoking, COVID-19 and RDS?
Fig.3. Pulmonary surfactants: Synthesis, storage, secretion and recycled. (Olga et al.2020, DOI: 10.3390/ijms21103708)
Available research has long shown that smoking causes an increase in the angiotensin-converting enzyme 2 (ACE2) receptors in the lungs. The lungs contain air sacs acting like sponges called alveoli. There are two types of cells in the alveoli namely Type 1 and Type 2 pneumocytes (T1P and T2P). T1P is where the gas exchanges namely oxygen (inhale) and carbon dioxide (exhale) occurs. While, T2P is responsible for producing surfactant namely pulmonary surfactants (PS) such as SP-A, SP-B, SP-C and SP-D (Fig. 3). It has also been reported that more than 80% of ACE2 were T2P cells meaning most of the PS is synthesised here. Interestingly, recent research has also shown that COVID-19 uses these ACE2 receptors as the entry point to replicate and infect the human cells. Hence, the increase in number of ACE2 receptors due to smoking facilitates the entry of COVID-19. This opens a floodgate for the virus to flush into the lung and led to the destruction and impairment of the ACE2 cells which contain the T2P cells. This hinders the production of the PS. This surfactant like any other types of surfactants, they all share one common property. They help to reduce the surface tension. Thus, PS is not only to lubricate the lungs and facilitate the respiration process but also to reduce the surface tension at the air/liquid interface. This can be explained using the Laplace equation of spheres. As the pressure in the alveoli is also increased. This pressure is the collapsing pressure. When the pressure is increased, it pushes out the air from the alveoli and causes the alveoli to contract or collapse. In order to prevent the alveoli from collapsing, PS comes into the picture and is secreted from the T2P to form a cohesive layer of PS water molecules at the water-air interface. The hydrophilic group of PS will interact with the water molecules and its hydrophobic group interacting with the air molecules. This PS-water molecular interaction pushes the water surface upwards and reduces the $\gamma$. Doing so, by applying the same principle of Laplace equation, it reduces the collapsing pressure of the alveoli. Therefore the presence of PS is essential to the livelihood of the alveoli because without it the $\gamma$ will not only increase causing atelectasis (Fig. 2) but it will also create uneven alveoli and withdraw water into it which can lead to respiratory distress. Again, without or lacking of the surfactants, the lungs will be badly damaged. The destructive effect is further compounded when the immune systems triggering cytokines to counter attack and defend the body, may act against the body by attacking healthy tissues in a phenomenon called cytokine storm (Fig. 2). Hence, this innate immune response damaging both good and bad tissues, the patients may then develop into RDS and will be subjected to ventilators. At this stage, other organs will start to deteriorate such as the heart, intestine and kidney. The chances of survival are now becoming slim.

With that, many questions arise and open up a wide array of research such as to re-exam present understanding about the lung function and why the presence of surfactants is crucial in the lung. The function of T2P and why it has a high affinity towards COVID-19 instead of T1P need to be studied. How to protect ACE2 receptors from smoke and COVID-19 attack should be an interesting area of investigation. Finally, proposing a non-invasive delivery method to replace the existing harsh invasive ventilators. Given time, it is hoped all of the findings will help improve the lung function and be able reduce lung infection. This in turn can lead to the avoidance or reduced time on ventilators. Last but not least, taking the advice from the director general, Dato Dr Noor Hisham who said “...if we can quit smoking, then our health will be better, for sure. If smokers contracted the COVID-19 virus, the complications could result in death”.

Source: Prof. Dr Hamdan Suhaimi, hamdans@umt.edu.my; & Assoc. Prof. Dr Laili Che Rose, laili@umt.edu.my; FACULTY OF SCIENCE AND MARINE ENVIRONMENT
EMERGENCE OF UMT IN BIODIVERSITY RESEARCH PUBLICATIONS

In 2013, the Malaysian research universities and some foreign institution of higher learnings were leading on the publications in the subfield of Biodiversity in Malaysia. UMT was hardly visible on the biodiversity research radar then.

Between 2014 to 2018, many younger researchers started to return to campus from their PhD studies and few experienced experts joined UMT either on secondment or as contracted staffers. With better trained researchers and mentoring by experienced experts, there was an increased in the numbers of successful research grants as well as the UMT indexed manuscript publications.
Fortunately, the resources for research are just a stone throw away. UMT is blessed with the expansive ocean about 30 meters away from the Institute of Tropical Biodiversity and Sustainable Development. About 45 minutes’ drive from UMT campus we immerse into the 200 million years old tropical rainforest around Kenyir Lake in Hulu Terengganu. UMT is surrounded by over 200,000 species of fauna, flora, fungi, protozoa, bacteria and viruses as natural resources for research and innovation.

There are research facilities in Setiu Wetlands, Pulau Bidong and Kenyir Research Station that are readily available to accommodate researchers and students. Even with limited funding, access is very easy for day trip sampling or over the weekends. The potential is enormous for UMT researchers compared to many other universities that have to travel a farther distances to reach the sampling sites. The hardworking next generation of researchers (NGR) and good mentoring is bearing fruit. By 2020, UMT is in the top 5 universities in the field of Biodiversity while the top author is from ITBSD UMT. There are cases that the NGR can be mentored and assisted to conduct FYPs for publication in the Web of Science indexed journals. By 2025, UMT should have groomed NGS to publish in WoS and to compete heads on with those researchers in research universities.

Sources: Prof. Dato’ Dr Mohd Tajuddin Abdullah, abdullahmt@gmail.com; INSTITUTE OF TROPICAL BIODIVERSITY AND SUSTAINABLE DEVELOPMENT (BIO-D TROPIKA)
FIRST VIRTUAL SAILING LEAGUE TO BE ORGANISED SOON

KUALA NERUS, June 9 -- Malaysia’s sailing sport is now moving a step ahead with the launch of ‘UMT Terengganu e-Sailing League 2020’ which will run from June to December on the official virtual sailing platform, ‘Virtual Regatta’.

Universiti Malaysia Terengganu (UMT) Sailing Training Centre director Mohd Hafizi Said said Malaysia’s first virtual sailing league has six series and will be joined by 170 participants including those from Indonesia and Brunei.

He said most of the participants were national athletes who will participate at the Tokyo Olympics next year including Khairulnizam Mohd Affendy, Malaysian Games (Sukma) participants and Institute of Higher Education (IPT) students in the maritime courses.

“Since 2017 we (UMT) have organised the Terengganu Monsoon Challenge regatta (sailing race) but this year following the COVID-19 pandemic and the new normal, we are trying another platform online. It is a great opportunity for athletes to keep practicing because in the virtual world it is as though they are actually sailing as there is speed and wind direction simulated in the game.

“Athletes miss participating in competitions so this virtual tournament will motivate them to regain their competitive edge as they will compete against the same competitors,” he told Bernama when met at UMT, here today.

The first series of tournaments organised by UMT in collaboration with the Terengganu State Sports Council and the Terengganu Windsurfing Sailing Association will run from Friday to Sunday, June 12-14.

"In the final stages of the tournament in December we plan to bring participants together in one location so that they have the same advantages such as the same level of internet speed. It will still be virtual but they will be gathered in one area," he said.

e-sailing is still considered new in Malaysia but countries like Germany and Switzerland have been active in e-sailing competitions for the past few years.

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- Please include any other relevant documents e.g Curriculum vitae, supporting letter(s) and professional certificates (if any).
- Intake: September
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