
SARAWAK
BIODIVERSITY CENTRE
SBC R&D Laboratories
Pehin Sri Haji Abdul Taib Mahmud
Chief Minister of Sarawak
Sarawak
LAILA TAIB
ETHNOBOTANIC GARDEN
YABhg Datuk Amar Puan Sri Dr Hajjah Laila Taib
CELEBRATING DISCOVERY
AND INNOVATION IN BIODIVERSITY

25TH ANNIVERSARY
SARAWAK BIODIVERSITY CENTRE
CELEBRATING DISCOVERY AND INNOVATION IN BIODIVERSITY

Sarawak Biodiversity Council

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Member

Mdm Anne Kung Soo Ching
Member

YBrs Dr Mary Jane Cardosa
Member

Top to bottom - left to right

Chapter 1

How SBC Started

SBC Logo Transition

then

SBC

SBC

now

Sarawak
Biodiversity Centre

Seminar Room and Zoology Building

then & now

Administration Building **then & now**

Before 1998

1999 - 2010

2010 - Current

then

Multi Purpose Hall

now

Ganoderma Cultivation Facility

now

Propagation Plot

then

Football Field

2014

TK Headhouse and Propagation

Propagation Room

Mist Room

then

Surau and Eating Hall

now

Lecture Theatre

now

Traditional Knowledge Building

then

Botany Building

Extraction Lab **then & now**

Bus Shed

Before 2003

Extraction and Bioassay Lab

2003

Extraction Lab

2006 - Current

then

Old Staff Quarters

Before 2016

now

Integrated Biodiversity Research Building

2016

Integrated Biodiversity Research Building is outfitted with cutting-edge research facilities dedicated to the exploration of novel compound discoveries.

then Education and Communication Division

Before 2006

Laila Taib Ethno Botanical Garden

now

Research and Development Building

2006

2006 Chalets for Researchers/Experts

now

Pond & Walkway:
Meeting nature's beauty, utility and learning space.

now

Algae Cultivation Facility

Chapter 2

Unveiling Sarawak’s Richness

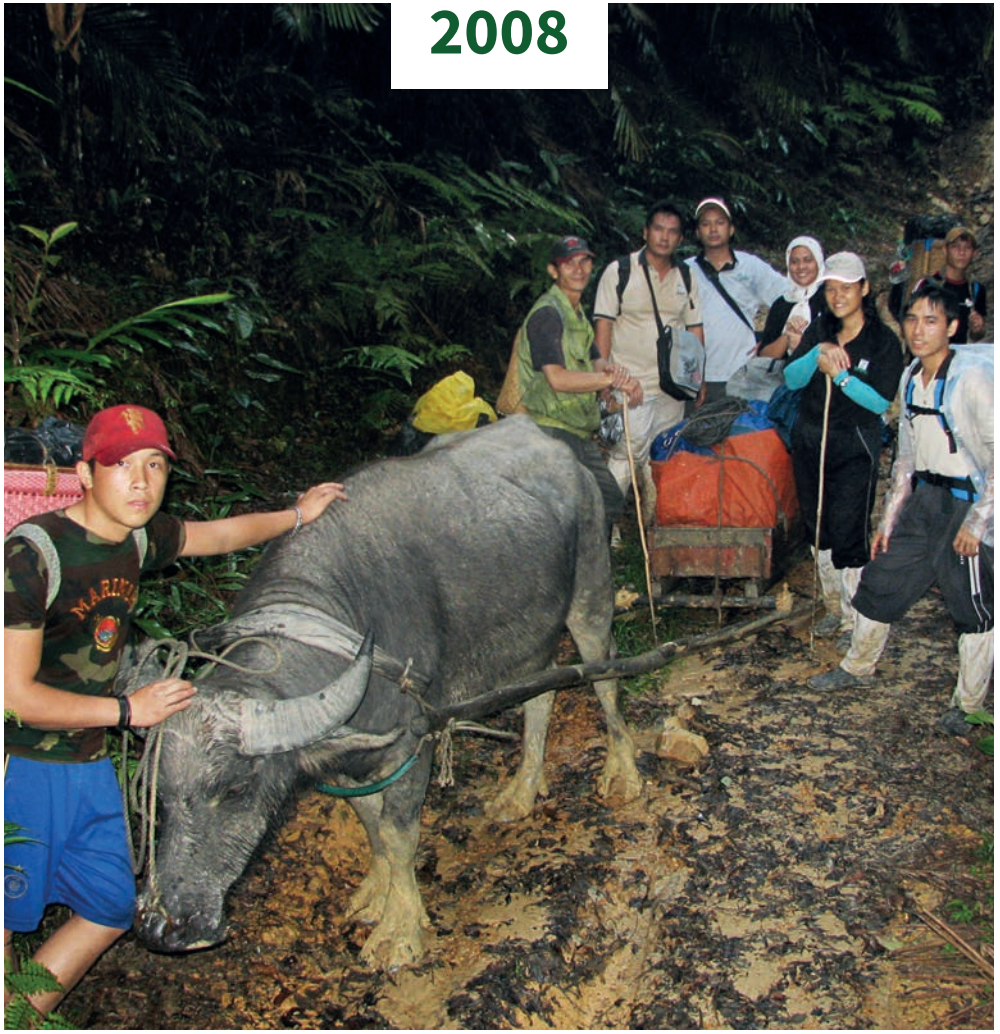
> **“There Is More Money In The Borneo Rainforest’s Biodiversity Than In Its Deforestation”**

John Cumbers
(Forbes, September 12, 2019)

2004

Water transportation using long boat through the river streams.

2008

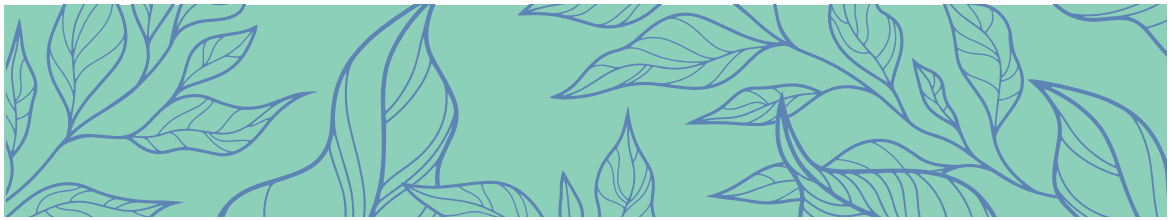


Conventional land transportation using buffalo through the jungle.

Bario Highlands, located in the Kelabit Highlands of Sarawak, Malaysia, is known for its stunning natural beauty. This remote and picturesque region is the home of *Litsea cubeba*, also known as tenem.

Litsea cubeba

The first Benefit Sharing Agreement was signed on 20th March 2019 between SBC and five communities, including the Bidayuh of Kampung Kiding in Padawan, the Lun Bawang of Long Kerebangan and Long Telingan in Lawas and the Kelabit of Pa' Ukat and Pa' Lungan in Bario.



A journey that is more than a project.

The LitSara® project signed its second agreement on 21st May 2022 between SBC and six communities, including the Bidayuh of Kampung Kiding in Padawan, the Lun Bawang of Long Rusu, Ba'kelalan, Long Kerebangan and Long Telingan in Lawas and the Kelabit of Pa' Ukat and Pa' Lungan in Bario.

“I bought a motorcycle with income from selling LitSara® oil.”

Mr Petrus Muda
(Pa' Lungan, 2021)

“I used the monetary benefit to make a paddy storage hut.”

Madam Dari Serun
(Pa' Lungan, 2021)

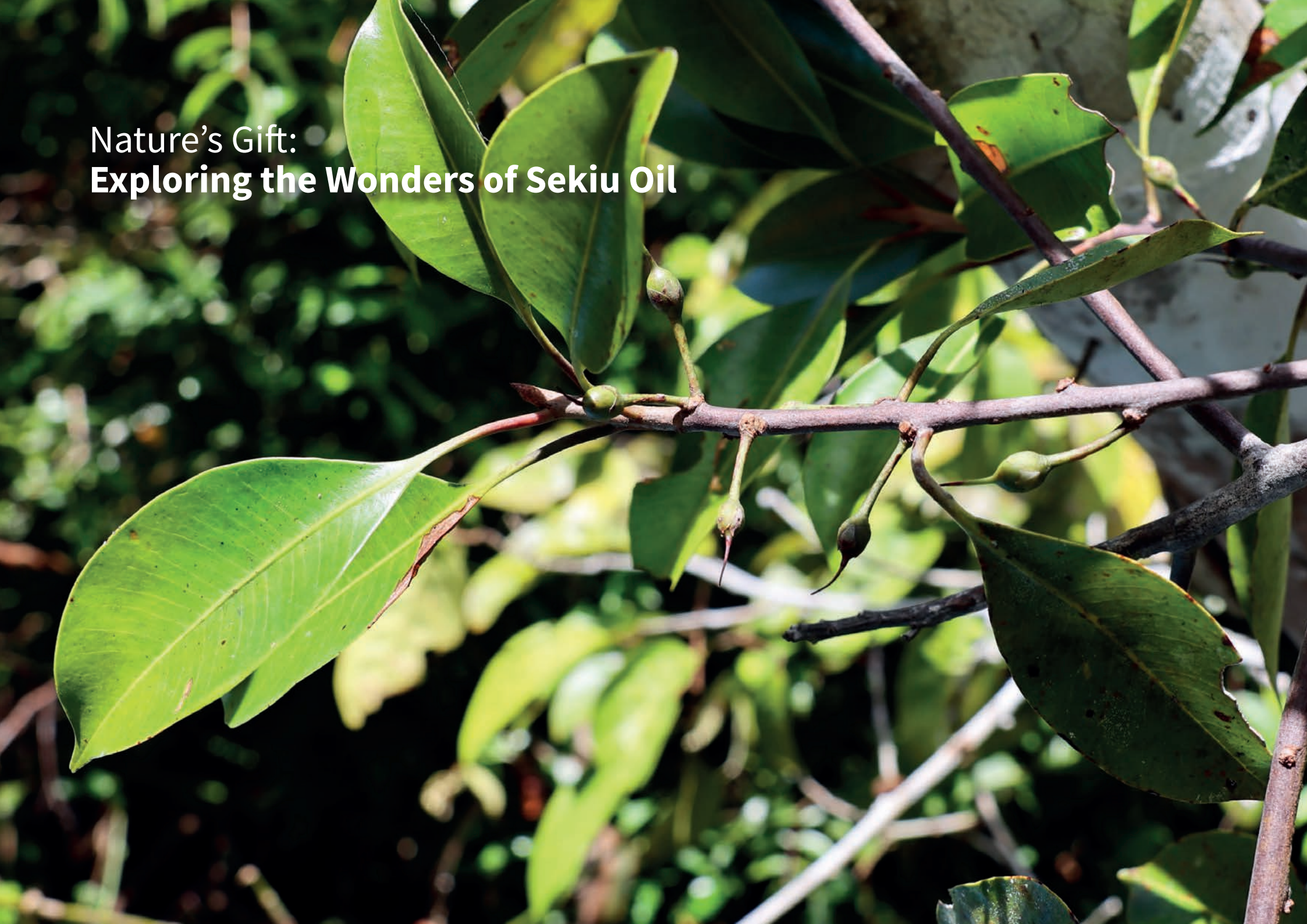
Communities receive royalties via Indigenous Knowledge Benefit Sharing based on total sales of LitSara® products.

Home of AdenoSara® inaugural project:
Rumah Simon, Iban Long House at
Lubok Antu, Sri Aman.

Adenosma nelsonioides

Capacity building: Community folks in Kampung Semadang learnt the distillation process to extract essential oil from the wild herb. A distillation shed was built in every participating village.

The Benefit Sharing Agreement for AdenoSara® was signed on 17th October 2020 between Bidayuh community from Kampung Semadang, Penrissen, Kuching and Iban community from Rumah Simon, Lubok Antu, Sri Aman.



Nature’s Gift:
Exploring the Wonders of Sekiu Oil

Madhuca motleyana tree can be found in this tranquil and scenic village of Kampung Jemoreng.

The journey to collect Sekiu seeds along the river.

Traditional way of extracting Sekiu oil.

A contraption called *'Ales'* is used in the making of Sekiu oil.

Benefit Sharing Agreement exchange ceremony for Sekiu Project during the launching of SBC Biodiversity Day 2023.

Chapter 3

The Research Breakthrough

Aglaia stellatopilosa

Unravelling the world of *Aglaia stellatopilosa*, where every step in the journey leads to a new adventure.

YB Dato Sri Roland Sagah Wee Inn showcased the Silvestrol compound.

scientific reports

OPEN

Broad anti-pathogen potential of DEAD box RNA helicase eIF4A-targeting rocaglates

Wiebke Obermann[1,8], Mohammad Farhan Darin Azri[2,8], Leonie Konopka[1], Nina Schmidt[1], Francesca Magari[1], Julian Sherman[3], Liliana M. R. Silva[4], Carlos Hermosilla[4], Andreas H. Ludewig[5], Hicham Houhou[4], Simone Haeberlein[4], Mona Yiting Luo[6], Irina Häcker[6], Marc F. Schetelig[6], Christoph G. Grevelding[4], Frank C. Schroeder[5], Gilbert Sei Kung Lau[2], Anja Taubert[4], Ana Rodriguez[3], Andreas Heine[1], Tiong Chia Yeo[2]✉, Arnold Grünweller[1]✉ & Gaspar Taroncher-Oldenburg[2,7]✉

Inhibition of eukaryotic initiation factor 4A has been proposed as a strategy to fight pathogens. Rocaglates exhibit the highest specificities among eIF4A inhibitors, but their anti-pathogenic potential has not been comprehensively assessed across eukaryotes. In silico analysis of the substitution patterns of six eIF4A1 aa residues critical to rocaglate binding, uncovered 35 variants. Molecular docking of eIF4A:RNA:rocaglate complexes, and in vitro thermal shift assays with select recombinantly expressed eIF4A variants, revealed that sensitivity correlated with low inferred binding energies and high melting temperature shifts. In vitro testing with silvestrol validated predicted resistance in *Caenorhabditis elegans* and *Leishmania amazonensis* and predicted sensitivity in *Aedes* sp., *Schistosoma mansoni*, *Trypanosoma brucei*, *Plasmodium falciparum*, and *Toxoplasma gondii*. Our analysis further revealed the possibility of targeting important insect, plant, animal, and human pathogens with rocaglates. Finally, our findings might help design novel synthetic rocaglate derivatives or alternative eIF4A inhibitors to fight pathogens.

https://www.nature.com/articles/s41598-023-35765-6


NatureSara®
ESCORT
LOW
FLOW
RUN

Power of Flower

Scent Trapping & Reconstruction of Nature Identical

Phalaenopsis bellina

Sweet, jasmine fragrance
when in full bloom

Aglaia odorata

Subtle, sweet floral fragrance

Magnolia champaca

Strong, floral, sweet
fragrance in the morning

Hedychium coronarium

Heavily scented, fresh, sweet,
lily, floral fragrance

Coelogyne asperata

Sweet smelling note with
a hint of liquorice

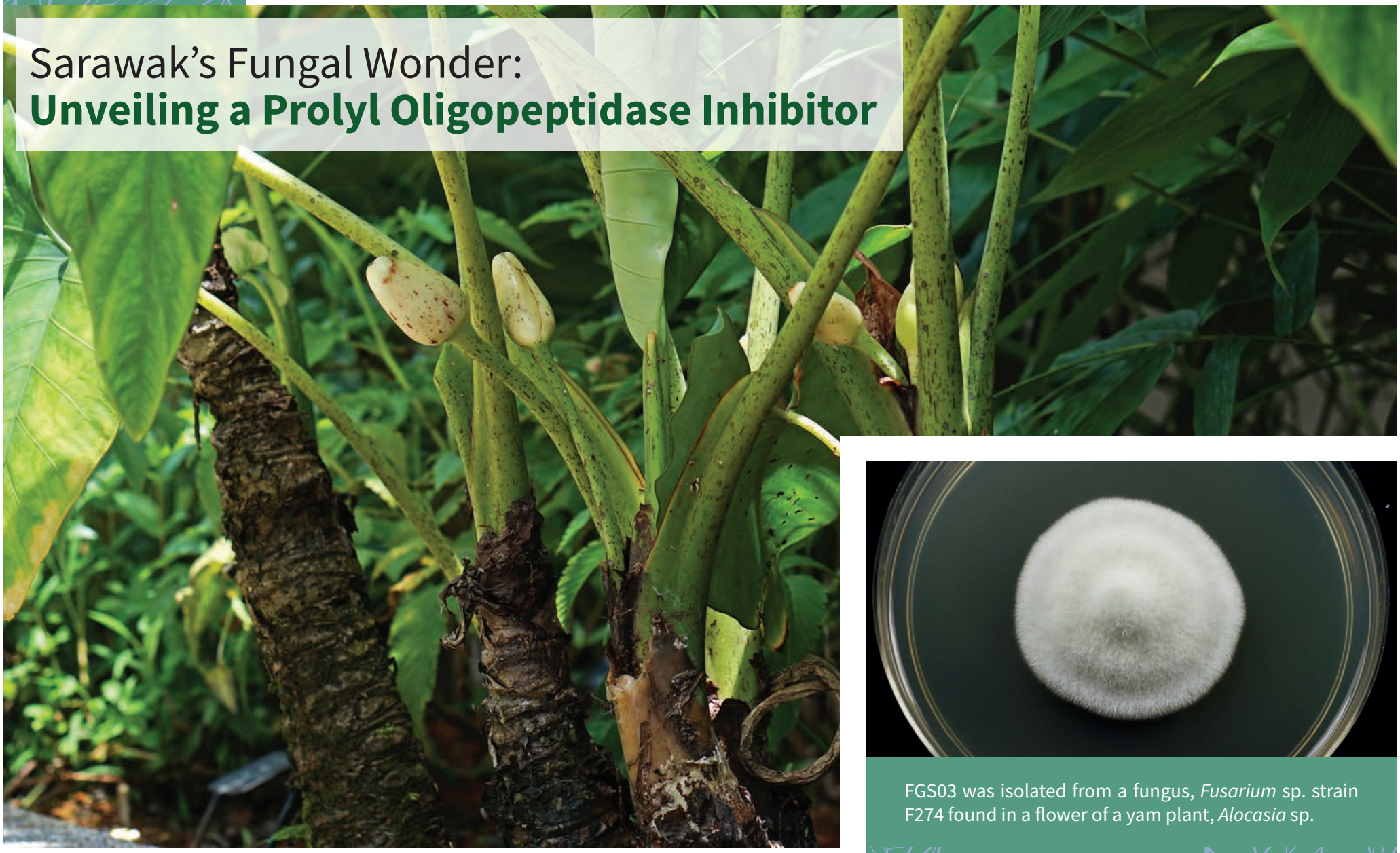
Cananga odorata

Strong, floral with a hint
of citrus fragrance

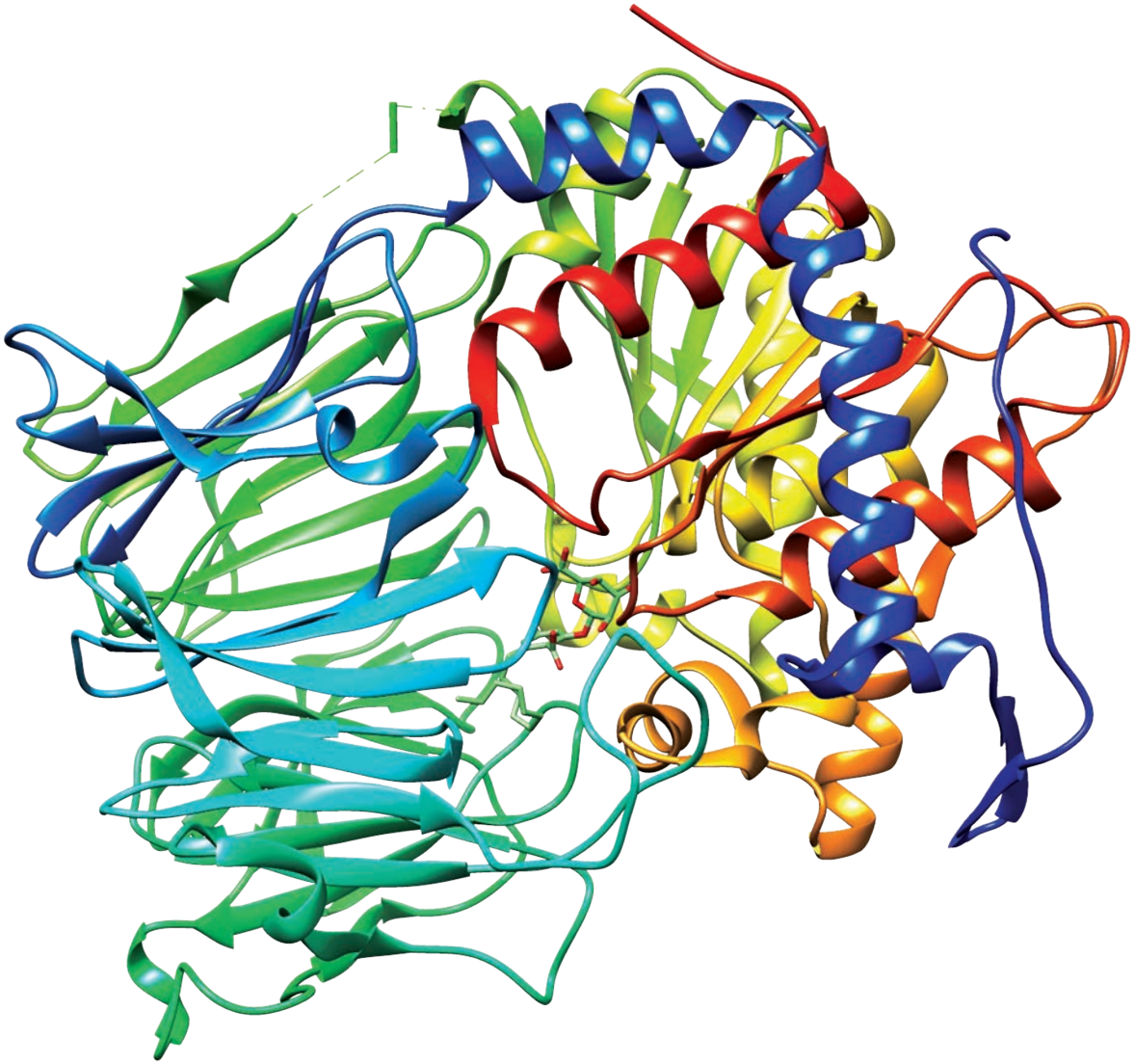
Nature’s Grand Reveals:

Uncovering the Secrets of Scientific Exploration of Paya Maga

Sarawak's Fungal Wonder:
Unveiling a Prolyl Oligopeptidase Inhibitor



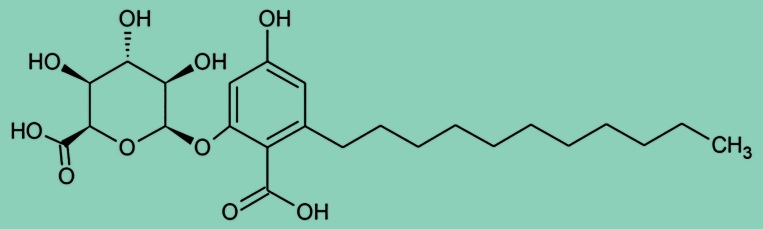
FGS03 was isolated from a fungus, *Fusarium* sp. strain F274 found in a flower of a yam plant, *Alocasia* sp.



FGS03, in conjunction with the human prolyl oligopeptidase enzyme, serves as a potential remedy for individuals afflicted by neurodegenerative disorders like Alzheimer's disease or Parkinson's disease, offering a prospect to enhance their quality of life. As a prolyl oligopeptidase inhibitor, FGS03 exhibits promise in the treatment and improvement of the well-being of such individuals.

Patent:
"Compound for Treating Neurodegenerative Diseases and Its Isolation Method Thereof"

• Malaysia Patent	(No. P12020007106)
• PCT International	(No. PCT/MY2021/050126)
• US Patent	(No. 18/259,761)
• EU Patent	(No. 21915916.7)
• China Patent	(No. 202180092716.)



(2R,3S,4S,5R,6R)-6-(2-carboxyl-5-hydroxyl-3-undecylphenoxy)-3,4,5-trihydroxytetrahydro-2H-pyran-2-carboxylic acid

Nature’s Expedition:

Exploring the Wonders of Lanjak Entimau

The beauty of *Ganoderma* sp.: unique growth pattern, which resembles a large flat, semicircular or kidney-shaped bracket.

Nature's art: whimsical and poetic mushroom colonies observed during Lanjak Entimau expedition.

Navigating through the untamed rivers of Sarawak for new discoveries.

The research journey: from the field to the lab.

Exploring Sarawak's Microalgae:
In Pursuit of Green Gold and Sustainability


28
27
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Premier of Sarawak, Datuk Patinggi Tan Sri (Dr) Abang Haji Abdul Rahman Zohari Bin Tun Datuk Abang Haji Openg launched Algae Cultivation Facility on 27th August 2019. This facility serves to model the next scale up phase to reach the production levels needed to meet the global demand for algal biomass, creates more job opportunities and spur the development of a new bioindustry in Sarawak.

On 10th May 2023, Datuk Patinggi Tan Sri (Dr) Abang Haji Abdul Rahman Zohari Bin Tun Datuk Abang Haji Openg, the Premier of Sarawak, inaugurated the CHITOSE Carbon Capture Central, which is Sarawak's First Industrial Microalgae Production Facility. This event represents a noteworthy step towards realising a sustainable green economy in Sarawak.

Chapter 4

SBC’s Achievements

Intellectual Property Rights

2002 — PATENT

Therapeutic Compounds & Methods
(Patent Number US 6,710,075 B2)

2010 — PATENT

Method for Identification of
Aglaia stellatopilosa
(Patent Number WO2012030206a1)

2011 — GEOGRAPHICAL INDICATION

Sarawak Litsea
(GI2011-00001),
registered under Class 3

2011 — TRADEMARK

LitSara®, registered under
Class 3, 5, 16 and 21

2015 — GEOGRAPHICAL INDICATION

Sarawak Adenosma
(GI2015-00018),
registered under Class 3

2015 — TRADEMARK

AdenoSara®, registered under
Class 3, 5, 16 and 35

2017

TRADEMARK

NatureSara®, registered under Class 3, 5, 16 and 35

2018

PATENT

LitSara®, related - Oral Care (Patent Application No. PI2011002843)

2020

PATENT

Compound for Treating Neurodegenerative Diseases and its Isolation Method Thereof (Patent Application No. PI2020007106)

PATENT

Composition for the Treatment of Autoimmune Diseases (Patent Application No. PI2020004121)

2022

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Method for Screening PLT 50 in a Cellular Parkinson's Disease Model

Chapter 5

Biodiversity For A Better Tomorrow

2010

First SBC Biodiversity Day in conjunction with the International Day for Biological Diversity 2010.

Theme:
Biodiversity, Development and Poverty Alleviation

2012

SBC Biodiversity Day in conjunction with the International Day for Biological Diversity 2012.

Theme:
Marine Biodiversity

2013

SBC Biodiversity Day in conjunction with the International Day for Biological Diversity 2013.

Theme:
Water and Biodiversity

2014

SBC Biodiversity Day in conjunction with the International Day for Biological Diversity 2014.

Theme:
Island and Biodiversity

2015

SBC Biodiversity Day in conjunction with the International Day for Biological Diversity 2015.

Theme:
Biodiversity for Sustainable Development

2016

SBC Biodiversity Day in conjunction with the International Day for Biological Diversity 2016.

Theme:
Mainstreaming Biodiversity, Sustaining People and Their Livelihoods

2017

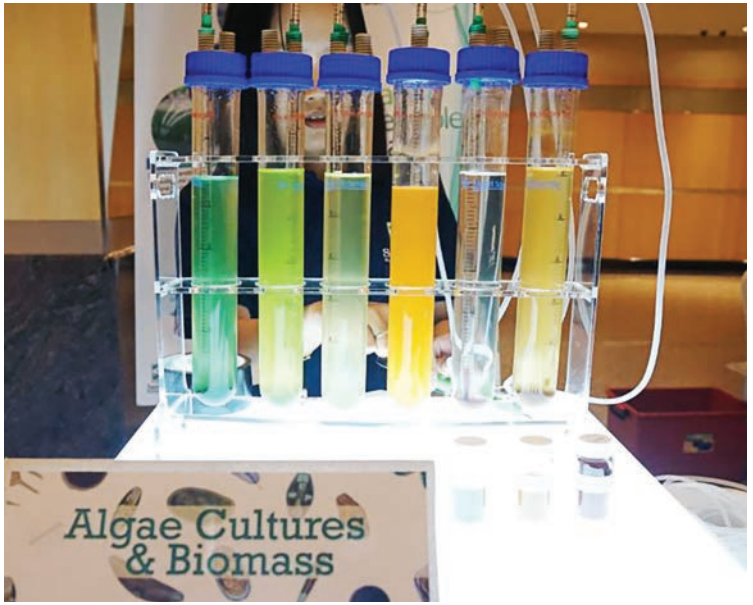
SBC Biodiversity Day in conjunction with the International Day for Biological Diversity 2017.

Theme:
Biodiversity and Sustainable Tourism

2018

SBC Biodiversity Day in conjunction with the International Day for Biological Diversity 2018.

Theme:
Celebrating 25 Years of Action in Biodiversity



2019

SBC Biodiversity Day in conjunction with the International Day for Biological Diversity 2019.

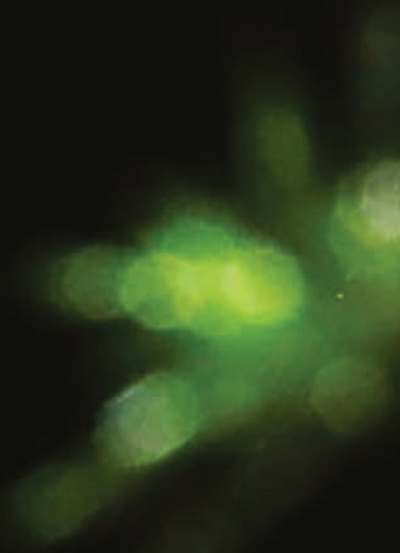
Theme:
Our Biodiversity, Our Food, Our Health

OUR SOLUTIONS ARE IN NATURE

CELEBRATE BIODIVERSITY DAY
WITH US (ONLINE)
IN CONJUNCTION WITH THE
INTERNATIONAL DAY FOR
BIOLOGICAL DIVERSITY

Sarawak
Biodiversity Centre

22 MAY 2020
INTERNATIONAL DAY FOR
BIOLOGICAL DIVERSITY



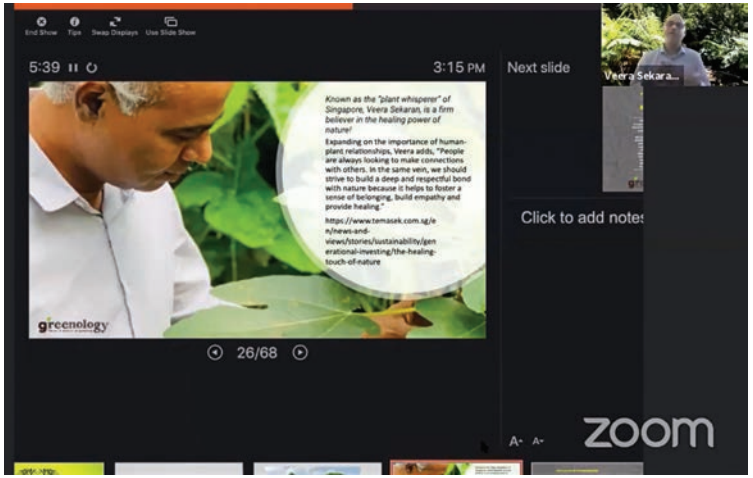
2021

SBC Biodiversity Day in conjunction with the International Day for Biological Diversity 2021.

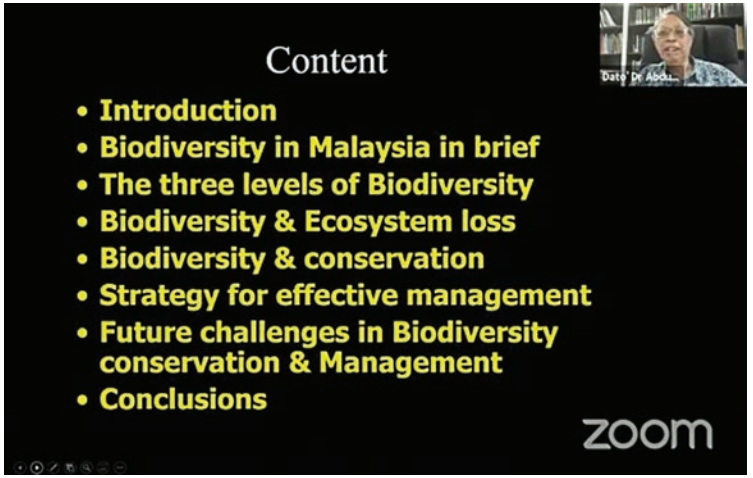
Theme:
We're Part of The Solution

Discoveries and Extinctions in the Borneo Rainforest - The Race to find New Species Before they are Lost Forever by Mr Chien C. Lee

Philatelic Biodiversity: Frogs on Stamps by Prof Dr Indraneil Das



Seeing the Green During COVID and Getting Closer to Nature by Mr Veera Sekaran



Biodiversity Conservation and Its Management in Malaysia by Emeritus Professor Dato' Dr Abdul Latiff Bin Mohamad

2022

SBC Biodiversity Day in conjunction with the International Day for Biological Diversity 2022.

Theme:
Building A Shared Future for All Life

2023

SBC Biodiversity Day in conjunction with the International Day for Biological Diversity 2023.

Theme:
From Agreement to Action: Build Back Biodiversity


We planted
2,500 trees!
Sarawak
Planting Trees Together
in Conjunction with
25th Anniversary

We have contributed to the planting of 2,500 trees as part of the 'Greening Malaysia Agenda Through 100 million Tree Planting' campaign in celebration of SBC's 25th Anniversary.


Planting Trees Together
in Conjunction with
Sarawak Biodiversity Centre's
25th Anniversary

Spreading joy and sharing the happiness to everyone at Rumah Seri Kenangan.

Sarawak
Biodiversity Centre

www.sbc.org.my

sarawak.biodiversity.centre

www.youtube.com/@SbcOrgMy

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