

**25.10.2021 – DAY 1****Workshop I****SCAR -Tropic Antarctic Teleconnections (TATE) workshop: Linking Poles to the Tropics****25<sup>th</sup> October 2021****List of speaker :**

**Prof Ryan Fogt (Ohio University), Prof Francisco Eliseu Aquino( Universidade Federal do Rio Grande do Sul)  
Dr Seong-Joong Kim (Korean Polar Research Institute), Dr. Ing. Sebastián Marinsek (Instituto Antártico Argentino,  
Departamento de Glaciología, Gral. San Martín, Argentina), Dr Jonathan Willie (Institut des Géosciences de l'Environnement,  
CNRS/UGA, Saint, France)**

In conjunction with the 9th Malaysia International Seminar on Antarctica (MISA9), October 2021, workshop on Tropical Antarctic Teleconnections (TATE) with the theme : Teleconnection: Linking polar to the tropical region will be held on the 25 October 2021.

Teleconnections refer to the statistically significant climate variability links between non-contiguous geographic areas. Understanding these teleconnections have become extremely important to climate science in the face of a rapidly warming world.

The workshop aims to enhance understanding of advances in research on tropical–polar teleconnections and review our current understanding of the processes linking the tropics to Antarctica, which are not well understood yet critical to the future trajectory of the Antarctic climate.

This workshop is co-sponsored by Tropical Antarctic Teleconnections (TATE), the action group under Scientific Committee on Antarctic Research (SCAR).

Time (MYT, UTC+8)	Title of Presentation	Presenter	Mode of presentation
09:00 am - 09:20 am	Welcome Remarks and opening	Prof. Dato Azizan Abu Samah	Virtual
09:20 am - 09:40 am	Synoptic and isotopic influence of tropical Antarctic teleconnections in two consecutive explosive cyclones in Southern Brazil	Prof. Francisco Aquino	Virtual
09:40 am - 10:00am	Recent weakening of the southern stratospheric polar vortex and its impact on the surface climate over Antarctica	Prof. Seong-Joong Kim	Virtual
10:00 am - 10:20 am	Interannual linkage between the Antarctic Oscillation and tropical cyclone activity in the Southern Indian Ocean	Prof. Rui Mao	Virtual
10:20 am - 10:40 am	Extratropical Southern Hemisphere Synchronous Pressure Variability in the Early 20th Century	Prof Ryan Fogt	Recorded
10:40 am - 11:00 am	Ongoing negative mass balance a low precipitation in Bahía de Diablo Glacier, Antarctic Peninsula	Dr. Ing. Sebastián Marinsek	Virtual
11:00 am - 11:20 am	Antarctic Atmospheric River Life Cycles	Dr. Jonathan Willie	Virtual
11:20 am - 12:00 noon	Panel discussion on the plans and way forward for TATE		
12:00 noon	Closing of the workshop by Prof Dato Azizan Abu Samah		

25.10.2021 – DAY 1

## Workshop II

Transcriptomic Analysis of Polar Fungi : Applications of NGS and Methods  
of RNA-Seq Analytics for Climate Change Studies25<sup>th</sup> October 2021

Facilitator : Assoc. Prof. Dr. Teoh Teow Chong and Dr. Mohammed Rizman Idd

## Introduction

This 1 Day Online workshop on Next Generation Sequencing (NGS) and RNA Sequencing Data Analysis will focus on de novo and reference genome analysis pipelines. For both the pipelines, we will demonstrate how to analyse step by step the raw data, conduct data filtering, check for Quality Control (QC), assemble the transcripts, annotate the identified unigene and to analyse differential gene expression.

The online demonstration will use command lines via a virtual Linux that runs on Windows apps. Participants will be able to view the demonstration on-screen and provided with a pdf manual containing basic command lines used in the workshop.

Introductory lectures will include the experimental design of transcriptomics in polar fungi and climate change studies, and the application of Next Generation Sequencing (NGS) on fungi. This workshop is designed for bioinformaticians, biologists, biomedical researchers and postgraduate students.

## Objectives

- Learn to design a transcriptomic experiment on climate change.
- Learn the methods of de novo and reference genome analysis.
- Provide key points and tips for getting the best results.
- Interpretation of the results.

Time (MYT, UTC+8)	Presentation / Demonstration (Facilitator)
9:00 am - 9:40 am	Transcriptomic Insights on Polar Fungi Response to Climate Change Dr. Mohammed Rizman Idd - (30mins) + Q&A (10mins)
9:40 am - 10:20 am	The Effect of Warming on the Transcriptomic Activity of <i>Pseudogymnoascus</i> sp. from the Arctic Assoc. Prof. Dr. Teoh Teow Chong- (30 mins + 10 mins Q&A)
10.30 am - 12.30 noon	Workshop II - PART 1: Methods in RNA-Seq analytics: reference genome and de novo approaches. A case study on heat stress responses in <i>Pseudogymnoascus</i> sp. -(2 hrs)
2.00 pm - 5.00 pm	Workshop II - PART 2: Methods in RNA-Seq analytics: reference genome and de novo approach. A case study on heat stress responses in <i>Pseudogymnoascus</i> sp. -(3 hrs)

**25.10.2021 – DAY 1**

## AFoPS Webinar : Opportunities and Capacity Building



In conjunction with the 9th Malaysian International Seminar on Antarctica (MISA9), followed by the Annual General Meeting of the Asian Forum for Polar Sciences (AFoPS), which will be held on the week of 25th to 29th October 2021, the secretariat is planning to host a webinar on opportunities and capacity building especially for the advancement of the early career scientist. This webinar, planned as the online sharing session is to introduce the available opportunities and capacity building, i.e., fellowship, scholarship, training, visiting scientist program and any collaboration.

Time	Programme
0900 - 0905 UTC (1700 - 1705 MYT)	Opening and Welcome Remarks <b>Prof. Dato' Dr Azizan Abu Samah</b> Chair, Asian Forum for Polar Sciences
0905 - 0920 UTC (1705 - 1720 MYT)	<b>Ms. Chaerin Jung</b> Korea Polar Research Institute (KOPRI)
0920 - 0935 UTC (1720 - 1735 MYT)	<b>Prof. Satoshi Imura</b> National Institute of Polar Research (NIPR)
0935 - 0950 UTC (1735 - 1750 MYT)	<b>Dr. Rahul Mohan</b> National Centre for Polar and Ocean Research (NCPOR), India
0950 - 1005 UTC (1750 - 1805 MYT)	<b>Dr. Jiang Peng</b> Polar Research Institute of China (PRIC)
1005 - 1020 UTC (1805 - 1820 MYT)	<b>Mr. Nasaruddin Abdul Rahman</b> Sultan Mizan Antarctic Research Foundation, Malaysia
1020 - 1035 UTC (1820 - 1835 MYT)	<b>Dr. Eoghan Griffin</b> Scientific Committee on Antarctic Research (SCAR)
1035 - 1050 UTC (1835 - 1850 MYT)	<b>Dr. Gerlis Fugmann</b> International Arctic Science Committee (IASC)
1050 - 1100 UTC (1850 - 1900 MYT)	<b>Q &amp; A</b>

**Come and join us! Register your seat now at the link below**

**Register here:**

**[AFoPS Webinar Registration](#)**

**See you soon!**

## 26.10.2021 – DAY 2

### Opening Ceremony | Online Platform

Time (MYT, UTC+8)	Programme
10.30 am	Registration
	Doa Recitation
10.40 am	Welcoming Remarks by YBhg. Prof Dr Roziah Mohd Janor Vice Chancellor of Universiti Teknologi MARA (UiTM), Malaysia
10.45 am	Speech by YB Dato' Sri Tuan Ibrahim Tuan Man Minister of Environment and Water, Malaysia
10.55 am	Opening Declaration by His Royal Highness Al-Wathiqu Billah Sultan Mizan Zainal Abidin ibni Almarhum Sultan Mahmud Al-Muktafi Billah Shah, Sultan of Terengganu and Patron of Sultan Mizan Antarctic Research Foundation (YPASM)
11.00 am	Launching Montage
11.05 am	Announcement of Winners for Diorama Creation Competition based on Recycled Materials
11.10 am	Announcement of YPASM Research Grant Award 2021
11.15 am	Keynote speech by Professor Dato' Dr Azizan Abu Samah, Director of National Antarctic Research Centre (NARC) "Polar Regions Matter to the Tropics; A Case of Continuity of the Global System"
11.45 am	Signing of MOU: • Sultan Mizan Antarctic Research Foundation and National Scientific Antarctic Centre of Ukraine • National Antarctic Research Centre and Instituto Antartico Chileno
11.50 am	Speech by His Excellency Olexander Nechytaylo, Ambassador of Ukraine to Malaysia
11:55 am	Speech by His Excellency Diego Velasco, Ambassador of Chile to Malaysia
12.00 pm	End of the Programme

## 26.10.2021 – DAY 2

Time (MYT, UTC+8)	Programme	
2:00 pm - 2:30 pm	<b>PLENARY LECTURE</b> <b>Satoshi Imura</b> <b>(National Institute of Polar Research, Japan)</b> Transition of Antarctic terrestrial ecosystem after the last glacial maximum – a view from lake bottom Chairperson: Wan Maznah Wan Omar and Jamal Hussaini	
	<b>Biology</b> Chairperson: Clemente Michael Vui Ling Wong and Rohana Ahmad	<b>Physical Sciences</b> Chairperson: Mohamad Huzaimy Jusoh UiTM and Justin Sentian
2:45 pm - 3:05 pm	Yih Yih Kok, Min Hui Ong, Chiew Yen Wong and Boon Keat Tan Toxicity of Triclosan in Antarctic Isolate of Chlorella: Non-Monotonic Response	Vijaykumar Pattathil, Justin Sentian, Abhilash and Abhiram Nirmal C S. Seasonal Variability of Surface Temperatures and Sea Ice Concentrations over the Peninsular Antarctica
3:05 pm - 3:25 pm	Wan Hussin, W.M.R. and Mohd Nasir, N. Biological Traits Diversity of Macrobenthic Communities in the West Antarctic Peninsula	Siti Syairah Atiqah Azhar, Sheeba Chenoli, Azizan Abu Samah and Seong-Joong Kim Teleconnection Between the Variability of Sea Ice Extent and Indian Summer Monsoon Rainfall Under the Influence of the Mascarene High
3:25 pm - 3:45 pm	Eisyah Naili Mohd Marizan, Ahmad Razi Othman, Siti Aisyah Alias, Jerzy Smykla Polar <i>Pseudogymnoascus</i> sp.: Potential Plastic Degrading Soil Fungi	S A Mohammad, M R Ahmad, M Abdullah, S A S Baharin, S J Park and V Cooray Characteristics of Lightning Initiation Event from Antarctica Thunderstorms
3:45 pm – 4:05 pm	Yasid, N.A., Syahir, H., Anastasia, I., Shukor, M.Y., Alias, S.A., and Smykla, J. Biodegradation Potential of Polypropylene Microplastic by Antarctic Bacteria	Hasifullah Ibrahim, Sheeba Chenoli, Azizan Abu Samah. The Climate of Antarctic Peninsula Region as Represented by the Forecasts from the Antarctic Mesoscale Prediction System
4:05 pm - 4:25 pm	Rasol R., Faradina Merican, S.M. and Farida Zuraina M.Y. Detection of Mycosporine-Like Amino Acids in Antarctic Cyanobacterial Isolates	Muhammad Akmal Amani Ahnuar, Azizan Abu Samah and Sheeba Chenoli Effects of Variability in Arctic on the Maritime Continent Weather and Climate via the Interactions with Siberian High
4:25 pm - 4:45 pm	Clemente Michael Vui Ling Wong, Sylvbryanie Salister and Dorathy Anak Jampi Antimicrobial Compound Producing Bacteria from King George Island, Antarctica	Anastasiia Chyhareva and Krakovska S First Results of MRR-Pro in the Clouds and Precipitation Study over Vernadsky Station
5:00 pm - 5:30 pm	<b>PLENARY LECTURE</b> <b>Thomas Bracegirdle</b> <b>(British Antarctic Survey, United Kingdom)</b> Winds of change: the past and future of winds over the Southern Ocean and Antarctica Chairperson: Sheeba Chenoli	

## 27.10.2021 – DAY 3

Time (MYT, UTC+8)	Programme	
9:00 am - 9:30 am	<b>PLENARY LECTURE: POLICY &amp; GOVERNANCE</b> <b>Daniela Liggett</b> <b>(University of Canterbury in Christchurch, New Zealand)</b> Unprecedented, unexpected and unbidden: The COVID-19 pandemic and its consequences for Antarctic governance and research Chairperson: Sheela Jayabalan	
	<b>Biology</b> <b>Chairperson:</b> Heo Chong Chin & Wan Mohd Rauhan Wan Hussin	<b>Policy &amp; Governance</b> <b>Chairperson:</b> Anida Mahmood
9:40 am - 10:00 am	Nur Adilla Zaini, Van Lun Low, Jamal Houssaini, Siti Sofo Ismail, Chong Chin Heo A Preliminary Study on the Necrobiome Community Structure of Penguin Carcasses in Antarctica	Deepa Mogan, Mohd Nasaruddin Abd. Rahman and Hafiz Ambar Malaysian Antarctic Bill: A Journey Towards Becoming Consultative Party to the Antarctic Treaty & A Nationally Regulated Involvement in Antarctica
10:00 am - 10:20 am	Fayhearina Yusoff; Wee Cheah; Mario Hoppema; Elizabeth Jones, Astrid Bracher; Azizan Abu Samah Relationship Between Phytoplankton Groups and Carbon Parameters in the Southern Ocean	<b>Daniela Liggett</b> Challenges in Antarctic Governance
10:20 am - 10:40 am	Wee Cheah, Andrew McMinn, Simon W Wright, F. Brian Griffiths and Peter Strutton Phytoplankton Composition and Hydrological Parameters in the Pacific Sector of the Southern Ocean	<b>César A. Cárdenas</b> Protecting the Western Antarctic Peninsula and South Scotia Arc: The Proposal Establish a Marine Protected Area in the Domain 1 (D1MPA)
10.40 am - 11:00 am	Ainnur Najihah Abdul Razak, Nuraina Balqis Abdul Karim, Nur Adnin Mat Ripa, Latiffah Zakaria, Masratul Hawa Mohd, Nik Mohd Izham Mohamed Nor Microfungi Isolated from Soils and Mosses of Signy Island, Antarctica	<b>Collins Chong Yew Kea</b> Return of Traditional Threats and State Rivalry and Impact on Resources and Climate Impact

## 27.10.2021 – DAY 3

Time (MYT, UTC+8)	Programme	
	<b>Biology</b> <b>Chairperson:</b> Fadzilah Mohd Nor @ Ghazali & Chiew Yen Wong	<b>Policy &amp; Governance</b> <b>Chairperson:</b> Anida Mahmood
11.00 am - 11:20	Abu Bakar, N., Lau, B.Y.C. , Smykla, J. , Karsani, S.A., and Alias, S.A. The Diversity of Cold Stress Response Mechanism in Pseudogymnoascus spp. Involved Various Translation-Related Processes and Metabolic Pathways	Cheberkus D.V., Fedchuk A.P and Zherebchuk S.V. Marine spatial planning and protection in the international and national politics: from Antarctica through Malaysian tropic to the Black Sea
11.20 am - 11:40 am	Yong-Hao Tan, Sze-Wan Poong, Cing-Han Yang, Phaik-Eem Lim, John Beardall, Tun-Wen Pai, Siew-Moi Phang A Transcriptomic Effort to Investigate Mechanisms of Adaptation in Chlorella sp. Under the Effects of Ocean Acidification	
11.40 am - 12:00 am	Fabian Davamani Amalraj, Catherine Chong and Stephen Ambu, Cheah Yoke Kqueen, Kok Keong Chan, Peter Convey Resilience of Antarctic Bacteria Arthrobacter alpinus Strain BP31 evidence Based on WGS and Phenotypic Microarray	
		<b>Physical Sciences</b> <b>Chairperson:</b> Muhammad Hafeez Jeofry and Sheeba Chenoli
12.00 am - 12:20 pm	Mardani Abdul Halim, Cleo-Nicole Chai, Hok-Chai Yam, Nurlina Rosli, Azali Azlan, Ghows Azzam, Clemente Michael Wong Vui Ling and Nazalan Najimudin Transcriptomic Response of an Antarctic Yeast Rhodotorula sp. USM-PSY62 to Temperature Changes	Matthew Lazzara The Antarctic Automatic Weather Station Program: Capturing the Surface Meteorology and Climate of Antarctica
12.20 am - 12:40 pm	Zoya Khan, Wan Maznah Wan Omar, Faradina Merican and Nazalan Najimudin Genome Wide Analysis of a Psychrotolerant Pseudanabaena Strain Isolated from High Arctic: A NGS Approach Revealing Complex Association of Genes and Adaptation	Muhammad Yunus Ahmad Mazuki, Sheeba Chenoli and Azizan Abu Samah A Case Study of Strong Wind Event over Terra Nova Bay, Antarctica During May 2016

## 27.10.2021 – DAY 3

Time (MYT, UTC+8)	Programme	
12:40 pm - 1:00 pm	Nur Athirah Athirah Yusof, Jennifer Charles and Wan Nur Shuhaida Wan Mahadi, Abdul Munir Abdul Murad, Nor Muhammad Mahadi Characterisation of Inducible HSP70 Genes in an Antarctic Yeast, <i>Glaciozyma antarctica</i> PI12 in Response to Thermal Stress	Oleksandr Koloskov, Yuri Yampolski, Oleg Budanov and Oleksandr Shvets Long-Term Investigations of Global Lightning Activity at the Ukrainian Antarctic Station
1:00 pm - 2:00 pm	Lunch	
	<b>Biology Chairperson:</b> Jamal Hussaini & Geok Yuan Annie Tan	<b>Physical Sciences Chairperson:</b> Muhammad Hafeez Jeofry and Sheeba Chenoli
2.00 pm - 2.20 pm	Mohd Nasir, N., Barnes, D.K.A. and Wan Hussin, W.M.R. Functional Group Diversity and Composition in Relation to Environmental Differences in Marguerite Trough, West Antarctic Peninsula	Yulia Andrienko, Gennadi Milinevsky, Vassyl Danylevsky and Oleksandr Evtushevsky. Umkehr Ozone Profile Variations at the Akademik Vernadsky Station, Antarctica
2.20 pm - 2.40 pm	Aminu, S.U., Merican, F., Wan Maznah, W.O., Lalung, J., Broady, P., Convey, P. Investigating Salinity Tolerance and Accumulation of Compatible Solutes in Antarctic Cyanobacteria	Satheesan K, Johnson Zachariah and M Nuncio Impact of Southern Annular Mode on the sea ice-concentration variability over Antarctica
2.40 pm - 3.00 pm	Mariia Pavlovska, Ievgeniia Prekrasna, Andrii Zotov, Artem Dzhulai and Evgen Dykyi Microbial Community Dynamics During Summer-Autumn Transition in Argentine Islands Archipelago Region (Western Antarctic Peninsula)	Dykyi, E.O, Pnyovska O.M. and Fedchuk A.P. New capacity building initiatives of Ukrainian Antarctic Program
3.00 pm - 3.20 pm	Zotov A., Dzhulai A., Pavlovska M. and Prekrasna Ie. Phytoplankton Community Dynamics in Argentine Islands Region in the Summer-Autumn Period 2019-2020	<b>Biology Poster Session (3:00 pm - 3:40 pm)</b> <b>MISA9 DAY 3 : POSTER PRESENTATION</b> <b>Chairperson:</b> Fadzilah Mohd Nor & Heo Chong Chin / Rohana Ahmad
3.20 pm - 3.40 pm	Ivan Parnikoza and Natalia Miryuta <i>Deschampsia antarctica</i> É. Desv. Adaptation Under Changeable Antarctic Conditions	
3.40 pm - 4.00 pm	Hanna Yevchun, Andrii Fedchuk, Iryna Kozeretska and Evgen, Ivan Parnikoza The Uniqueness of the Wilhelm Archipelago, Antarctic Peninsula, for Establishing Antarctic Specially Protected Area	
4:00 pm - 4:30 pm	Break	
4:30 pm - 5:30 pm	Award Presentation and Closing Ceremony	

## 27.10.2021 – DAY 3

## POSTER PRESENTATION

Time (MYT, UTC+8)	Programme
3:00 pm - 3:45 pm	<b>Biology Poster Session</b> Chairperson: Fadzilah Mohd Nor & Heo Chong Chin/ Rohana Ahmad
3:00 pm - 3:05 pm	Hong, W.S., Wong, C.Y., Chong, C.W., Chu, W.L. and Convey, P. Distribution of heavy metals in soils across ecologically distinct habitats on Signy Island, maritime Antarctic and its association with bacterial community composition and metabolic profiles
3:05 pm - 3:10 pm	Satriawan, H., Teoh T.C., Rizman-Idid, M., and Alias, S.A. Bioactive Secondary Metabolites from Polar Fungi <i>Pseudogymnoascus</i> spp.
3:10 pm - 3:15 pm	Nur Nadhirah Zakaria, Siti Aqlima Ahmad, Noor Azmi Shaharuddin, Claudio Gomez-Fuentes, Peter Convey, Azham Zulkarnain, Suriana Sabri and Khalilah Abdul Khalil Diesel as a carbon source: a glimpse into harnessing Antarctic marine microbes from non-contaminated seawater
3:15 pm - 3:20 pm	Sazlina Salleh, Nur Ain Amani Abdul Mubin, Nur Aqilah Muhamad Darif, Mahadi Mohammad & Andrew McMinn Effects of elevated pCO <sub>2</sub> on the photosynthetic performance of the sea ice diatoms <i>Navicula directa</i> and <i>Navicula glaciei</i>
3:20 pm - 3:25 pm	Teoh, T.C., Mohamad-Fauzi, N., Rizman-Idid, M., and Alias, S.A. The Effect of Warming on the transcriptomic activity of <i>Pseudogymnoascus</i> sp. from the Arctic
3:25 pm - 3:30 pm	Wan Johari, W.L., Yasid, N.A. and Shukor, M.Y. Analysis of nitrogenase genes from Antarctic microorganisms
3:30 pm - 3:35 pm	Chernyshenko, M. S. Native Antarctic soil fungi as a questionable cog in the mechanism of climate change
3:35 pm - 3:40 pm	Siti Aqlima Ahmad, Khadijah Nabilah Mohd Zahri, Claudio Gomez-Fuentes, Azham Zulkarnain, Suriana Sabri, Khalilah Abdul Khalil and Peter Convey Optimisation of Antarctic bacteria community on waste canola oil bioremediation process