

**REPORT OF THE VIRTUAL 9TH MALAYSIAN INTERNATIONAL SEMINAR ON
ANTARCTICA AND ITS ASSOCIATED EVENTS
25th – 27th OCTOBER 2021, HOSTED BY UNIVERSITI TEKNOLOGI MARA.**

INTRODUCTION

Malaysian International Seminar on Antarctica (MISA) is a series of biennial event which gathers researchers from Malaysia and other countries to share findings and experiences in polar research and provide the platform for our scientists to strengthen existing and forge new collaborations. MISA also provides opportunities for local scientists and students who are interested in pursuing their career in polar sciences especially global sciences. The 9th Malaysian International Seminar on Antarctica (MISA9) was organised by Yayasan Penyelidikan Antartika Sultan Mizan (YPASM), National Antarctic Research Centre (NARC), hosted by Universiti Teknologi MARA (UiTM) and supported by Ministry of Environment and Water. The seminar carried the theme of “Polar Regions in Our Climate Crisis” and was held from 25th to 27th October 2021 virtually through Webex Conference Platform

Two workshops and one webinar were also conducted as the associated event of MISA9 on 25th October 2021 as follows:

- 1) Workshop on the SCAR-Tropic Antarctic Teleconnections (TATE);
- 2) Workshop on Transcriptomic Analysis of Polar Fungi: Applications of NGS and Methods of RNA-Seq Analytics for Climate Change Studies; and
- 3) AFoPS Webinar: Opportunities and Capacity and Building

The details of the workshops and webinar are attached as Appendix I, II, and III.

A total number of 221 participants from Australia, Argentina, Brazil, Chile, China, France, India, Japan, Malaysia, South Korea, Turkey, United States, Ukraine, and United Kingdom attended the seminar. The full list of participants is attached as Appendix IV.

OPENING CEREMONY OF MISA9

The Opening ceremony started with welcome remarks by Vice Chancellor of UiTM YBhg. Prof. Ts. Dr. Hjh Roziah Mohd Janor followed by speech of Minister of Environment and Water, YB Dato' Sri Tuan Ibrahim bin Tuan Man. Then, His Royal Highness Al-Wathiqu Billah Sultan Mizan Zainal Abidin Ibni Almarhum Sultan Mahmud Al-Muktafi Billah Shah, Sultan of Terengganu and the Patron of YPASM officiated the seminar virtually. All remarks and speeches of the above said individual was delivered through recorded video.

The Director of National Antarctic Research Centre (NARC), YBhg. Prof Dato' Dr. Azizan Abu Samah, delivered a keynote speech entitled "Polar Regions Matter to the Tropics; A Case of Continuity of the Global System"

The announcement of YPASM Grant Award 2021 was made after the keynote speech. For year 2021, six (6) Research Grants, one (1) Fellowship and two (2) Berth Support to Antarctica were approved by the Board of Trustees YPASM amounting RM 1,087,000.00. The YPASM Research Grant Award 2021 recipients for each category are as follow:

YPASM Polar Research Grant 2021

Num.	Recipients	Project Title	Amount (RM)
1	Prof. Dr. Clemente Wong Michael Wong Vui Ling, Universiti Malaysia Sabah.	Elucidating the Antarctic Streptomyces sp. INACH3013 Antimicrobial Compound Mechanisms-of- Action Through Global Transcriptome Profiling	RM 150,000.00
2	Dr. Kok Yih Yih, International Medical University	Influence of polyethylene micro- and nano plastic on the combined toxicity of copper and lead in Antarctic microalgae based on a suite of biomarkers and transcriptomic profiles	RM 135,000.00

3	Assoc. Prof. Dr. Mohd Shahrul Mohd Nadzir, Universiti Kebangsaan Malaysia	Making sense of sensor: A new way to conduct real-time monitoring, evaluating model and source estimation for isoprene and surface ozone in remote area of Peninsula Antarctic	RM 113,000.00.
4	Assoc. Prof. Dr. Sharifah Aminah Syed Mohamad, Universiti Teknologi MARA	Neuroprotection properties of lactic acid bacteria isolated from penguin guano in Antarctic Region	RM 150,000.00.
5	Dr. Japareng Lalung, Universiti Sains Malaysia	Phosphorus scavenging mechanisms from plastic as an untapped Phosphorus source for Antarctic cyanobacteria: a molecular, biochemical and isotope labelling approach	RM 150,000.00.
6	Dr. Mohammed Rizman bin Idid, Universiti Malaya	Unlocking the antimicrobial potential and ecological adaptive roles of metabolites from <i>Pseudogymnoascus</i> spp grown under increased temperatures	RM 140,000.00

For YPASM Fellowship Scheme 2021

Num.	Recipients	Project Title	Amount (RM)
1	Mr. Sulaiman Ali bin Mohammad, Universiti Kebangsaan Malaysia	Characteristic of Lightning Flashes over Antarctica and it's Respond to the Upper Atmosphere	RM 44,000.00.

For YPASM Berth Support to BAS Research Station in Antarctica 2021.

Num.	Recipients	Project Title	Amount (RM)
1	Dr. Wan Lutfi Wan Johari, Universiti Putra Malaysia	Multi-omics analysis of the impacts of climate change and pollution on nitrogen-fixing microbial communities	RM 150,000.00.

For YPASM Berth Support to Antarctica through SCAR Members Countries 2021.

Num.	Recipients	Project Title	Amount (RM)
1	Ms. Nur Nadhirah Zakaria, Universiti Putra Malaysia	A System Approach for Diesel Clean-up Using Filtration and Antarctic Marine Bacteria	RM 55,000.00.

The Opening Ceremony also witnessed the Signing of Memorandums of Understanding between Yayasan Penyelidikan Antartika Sultan Mizan (YPASM) and National Antarctic Scientific Centre of Ukraine (NASC), and also National Antarctic Research Centre (NARC) and Instituto Antartico Chileno. After the signing of MOUs, the Ambassador of Ukraine to Malaysia, His Excellency Olexander Nechytaylo and the Ambassador of Chile to Kuala Lumpur, His Excellency Diego Velasco delivered their brief speeches.

SPEAKERS AND PAPER PRESENTATIONS

Beside the Keynote Speech, three speakers were invited to deliver plenary address as follows:

- 1) Assoc. Prof. Dr. Daniela Liggett, Antarctic social scientist at the University of Canterbury, New Zealand with title of presentation “Unprecedented, unexpected and unbidden: The COVID-19 pandemic and its consequences for Antarctic governance and research”.
- 2) Prof. Dr. Satoshi Imura, Vice Director-General of National Institute of Polar Research (NIPR), Tachikawa, Tokyo, Japan with title of presentation “Transition of Antarctic terrestrial ecosystem after the last glacial maximum: a view from lake bottom”; and
- 3) Dr. Thomas Bracegirdle, Research Scientist at British Antarctic Survey, United Kingdom with title of presentation “Winds of change: the past and future of winds over the Southern Ocean and Antarctica”.

A total number of 60 papers were presented at the seminar and workshops , 52 papers were presented in oral while 8 papers were presented through poster. YPASM

represented by Ms Deepa Mogan presented a paper entitled “Malaysian Antarctic Bill: A Journey Towards Becoming Consultative Party to the Antarctic Treaty & A Nationally Regulated Involvement in Antarctica” under Policy and Governance session. The paper was co-authored by Mr. Mohd Nasaruddin Abd Rahman and Mr. Hafiz Ambar.

The distribution of papers presented are as follow:

Num	Session	Total number of papers	Oral presentation	Poster presentation
1.	Keynote and Plenary session	4	4	0
2	Biological Sciences	31	23	8
3	Physical Sciences	11	11	0
4	Policy and Governance	6	6	0
5	Workshops	8	8	0

The selected papers will be published in special edition journal of Polar Sciences to be published by National Institute of Polar Research, Japan in 2022.

During the Closing Ceremony of MISA9 on 27 October 2021, a prize giving ceremony to the best oral and poster presenters was held, the winners are as follow:

BEST ORAL PRESENTATION AWARD FOR PHYSICAL SCIENCES

Num.	Recipients	Title Presentation	Category
1	Siti Syairah Atiqah Azhar, Universiti Malaya	Teleconnection Between the Variability of Sea Ice Extent and Indian Summer Monsoon Rainfall Under the Influence of the Mascarene High	1 st Place
2	Sulaiman Ali Mohammad, Universiti Kebangsaan Malaysia	Characteristics of Lightning Initiation Event From Antarctica Thunderstorms	2 nd Place

3	Hasifullah Ibrahim, Universiti Malaya	The Climate of Antarctic Peninsula Region as Represented by the Forecasts from the Antarctic Mesoscale Prediction System	2 nd Place
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BEST ORAL PRESENTATION AWARD FOR BIOLOGY

Num.	Recipients	Title Presentation	Category
1	Rafidah Rasol, Universiti Teknologi MARA	Detection of Mycosporine-like Amino Acids in Antarctic Cyanobacterial Isolates	1 st Place
2	Najib Mohd Nasir, Universiti Malaysia Terengganu	Functional Group Diversity and Composition in Relation to Environmental Differences in Marguerite Trough, West Antarctic Peninsula	1 st Place
3	Suraj Aminu Usman, Universiti Sains Malaysia	Investigating Salinity Tolerance and Accumulation of Compatible Solutes in Antarctic Cyanobacteria	2 nd Place
4	Nurlizah Abu Bakar.	The Diversity of Cold Stress Response Mechanism in Pseudogymnoascus Spp. Involved Various Translation-related Processes and Metabolic Pathways	3 rd Place

BEST POSTER AWARD FOR BIOLOGY

Num.	Recipients	Title Presentation	Category
1	Nur Nadhirah Zakaria, Universiti Putra Malaysia	Diesel as a Carbon Source: A Glimpse Into Harnessing Antarctic Marine Microbes From Non-contaminated Seawater	1 st Place
2	Herland Satriawan, Universiti Malaya	Bioactive Secondary Metabolites from Polar Fungi Pseudogymnoascus spp.	2 nd Place

Prof Ts. Dr Mohd Nazip Suratman, Deputy Vice Chancellor (Research and Innovation) of UiTM delivered closing speech and officially closed MISA9.

INCOME AND EXPENDITURE.

The UiTM as the host of MISA9 will provide the full details of income and expenditure two weeks after the seminar end. (To be Confirmed)

On our side, YPASM has managed to secure sponsorship from seven universities namely University Malaya, Universiti Malaysia Terengganu, Universiti Kebangsaan Malaysia, Universiti Putra Malaysia, Universiti Sains Malaysia, Universiti Malaysia Sabah, International Medical Universiti and Universiti Malaya amounting RM 17,500.00 which was mainly used to cover the registration fee of the participants from participating universities.

APPENDIX I

Workshop on the SCAR-Tropic Antarctic Teleconnections (TATE), 25 October 2021.

The workshop was organised by the Action Group for Tropic Antarctic Teleconnections (TATE) under the auspices Scientific Committee on Antarctic Research (SCAR) in conjunction with MISA9 on 25 October 2021. The workshop aims to review current understanding on the processes linking the tropics to Antarctica which were not well understood yet were the key to the future trajectory of Antarctic climate. New ideas on tropical-polar teleconnection, role of tropical variability such as El Niño - Southern Oscillations (ENSO) in influencing the Antarctic climate and sea ice conditions, interaction of tropical forcing with the high latitude variability such as Southern Annular Mode (SAM) and the processes and mechanisms that linked the tropics to the Antarctic were presented at the workshop. The programme and list of presenters are as follow:

PROGRAMME

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

12:00 noon	Closing of the workshop by Prof Dato Dr Azizan Abu Samah
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APPENDIX II

Transcriptomic Analysis of Polar Fungi: Applications of NGS and Methods of RNA-Seq Analytics for Climate Change Studies Workshop, 25 October 2021.

The workshop organised by Institute of Ocean and Earth Sciences, University Malaya on Next Generation Sequencing (NGS) and RNA Sequencing Data Analysis focused on de novo and reference genome analysis pipelines. This workshop designed for bioinformaticians, biologists, biomedical researchers, and postgraduate students.

For both the pipelines, the facilitators demonstrated 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 analyse differential gene expression.

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

Introductory lectures included the experimental design of transcriptomics in polar fungi and climate change studies, and the application of Next Generation Sequencing (NGS) on fungi. The programme and presenters are as follow:

PROGRAMME

WORKSHOP II TRANSCRIPTOMIC ANALYSIS OF POLAR FUNGI: APPLICATIONS OF NGS AND METHODS OF RNA-SEQ ANALYTICS FOR CLIMATE CHANGE STUDIES		
Time (MYT, UTC+8)	Title of Presentation	Presenter
09:00- 09:40 am	Transcriptomic Insights on Polar Fungi Response to Climate Change	Dr. Mohammed Rizman Idid
09:40- 10:20 am	The Effect of Warming on the Transcriptomic Activity of Pseudogymnoascus sp. from the Arctic	Assoc. Prof. Dr. Teoh Teow Chong
10.30 – 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 Pseudogymnoascus sp.	Assoc. Prof. Dr. Teoh Teow Chong
12.30 noon - 2.00 pm	Break	

2.00 pm - 5.00 pm	Workshop II - PART 2: Methods in RNA-Seq analytics: reference genome and de novo approaches. A case study on heat stress responses in <i>Pseudogymnoascus</i> sp.	Assoc. Prof. Dr. Teoh Teow Chong
5.00 pm	End of Day 1	

APPENDIX III

AFoPS Webinar: Opportunities and Capacity and Building

AFoPS Webinar: Opportunities and Capacity Building was held in conjunction with the 9th Malaysian International Seminar on Antarctica (MISA9 and Annual General Meeting of the Asian Forum for Polar Sciences (AFoPS), which was held back to back with MISA9 (28th to 29th October 2021) ,

The online webinar which was targeted for the advancement of the early career scientist, planned to introduce the available opportunities and capacity building, i.e., fellowship, scholarship, training, visiting scientist program and any collaboration available by invited organisations. Mr Mohd Nasaruddin Abd Rahman, The Chief Executive Officer of YPASM, Malaysia presented a paper entitled “YPASM Research Grant and Logistic Support”.

The full list of presenters are as follow:

- i. Ms. Chaerin Jung, Korea Polar Research Institute (KOPRI)
- ii. Prof. Satoshi Imura, National Institute of Polar Research (NIPR)
- iii. Dr. Rahul Mohan, National Centre for Polar and Ocean Research (NCPOR)
- iv. Dr. Jiang Peng, Polar Research Institute of China (PRIC)
- v. Mr. Nasaruddin Abdul Rahman, Sultan Mizan Antarctic Research Foundation (YPASM)
- vi. Dr. Eoghan Griffin, Scientific Committee on Antarctic Research (SCAR)
- vii. Dr. Gerlis Fugmann, International Arctic Science Committee (IASC)

APPENDIX IV**LIST OF PARTICIPANTS 9TH MALAYSIAN INTERNATIONAL SEMINAR ON ANTARCTICA, 25-27 OCTOBER 2021**

NO.	NAME	INSTITUTION
1	Tan Sri Dato' Seri Dr. Salleh Bin Mohd Nor	Yayasan Penyelidikan Antartika Sultan Mizan
2	Mohd Nasaruddin Abd Rahman	Yayasan Penyelidikan Antartika Sultan Mizan
3	Muhammad Fardy Md Ibrahim	Yayasan Penyelidikan Antartika Sultan Mizan
4	Hafiz Bin Ambar	Yayasan Penyelidikan Antartika Sultan Mizan
5	Intan Fazlin Binti Ab. Razak	Yayasan Penyelidikan Antartika Sultan Mizan
6	Mohamad Faiz Bin Mahmood	Yayasan Penyelidikan Antartika Sultan Mizan
7	Norfadilah Binti Zoolkhapli	Yayasan Penyelidikan Antartika Sultan Mizan
8	Deepa Mogan	Yayasan Penyelidikan Antartika Sultan Mizan
9	Emirul Redzuan Bin Mohd Khalid	Yayasan Penyelidikan Antartika Sultan Mizan
10	Azizan Abu Samah	National Antarctic Research Centre & Universiti Malaya, Malaysia
11	Anna Tutsilawati Md Komaruddin	National Antarctic Research Centre & Universiti Malaya, Malaysia
12	Jamalulail Abu Bakar	Kementerian Alam Sekitar dan Air
13	Mohd Nazip Suratman	Universiti Teknologi MARA, Malaysia
14	Nooritawati Md Tahir	Universiti Teknologi MARA, Malaysia
15	Heo Chong Chin	Universiti Teknologi MARA, Malaysia
16	Nurulakma Hairoman	Universiti Teknologi MARA, Malaysia

17	Noor Nadia Mohd Nasir	Universiti Teknologi MARA, Malaysia
18	Norol Hamiza Zamzuri	Universiti Teknologi MARA, Malaysia
19	Soleha Romallani	Universiti Teknologi MARA, Malaysia
20	Shahriman Zainal Abidin	Universiti Teknologi MARA, Malaysia
21	Norazlin Othman	Universiti Teknologi MARA, Malaysia
22	Mohd Muzamir Mahat	Universiti Teknologi MARA, Malaysia
23	Nur Adilla Zaini	Universiti Teknologi MARA, Malaysia
24	Mohd Yusrizal Yaacob	Universiti Teknologi MARA, Malaysia
25	Siti Noor Hajjar Md Latip	Universiti Teknologi MARA, Malaysia
26	Rafeah Legino	Universiti Teknologi MARA, Malaysia
27	Syed Abdul Mutalib	Universiti Teknologi MARA, Malaysia
28	Abdul Hadi Abdul Razak	Universiti Teknologi MARA, Malaysia
29	Nurdiana Samsulrizal	Universiti Teknologi MARA, Malaysia
30	Nur Afiqah Abd Hamid	Universiti Teknologi MARA, Malaysia
31	Noor Syaffinaz Noor Mohamad Zin	Universiti Teknologi MARA, Malaysia
32	Azuin Shahida Mohamed Zakaria	Universiti Teknologi MARA, Malaysia
33	Natasha Ahmad Nawawi	Universiti Teknologi MARA, Malaysia
34	Khairunnisa Musa	Universiti Teknologi MARA, Malaysia
35	Kamarulazwa	Universiti Teknologi MARA, Malaysia
36	Nur Shahirah Nor Azman	Universiti Teknologi MARA, Malaysia
37	Nurul Hani Shaharuddin	Universiti Teknologi MARA, Malaysia
38	Nor Faralyana Kamaruddin	Universiti Teknologi MARA, Malaysia
39	Noor Azliyana Azizan	Universiti Teknologi MARA, Malaysia
40	Wardah Tahir	Universiti Teknologi MARA, Malaysia
41	Rohana Ahmad	Universiti Teknologi MARA, Malaysia
42	Rina Norlina	Universiti Teknologi MARA, Malaysia

43	Noorzata Amni	Universiti Teknologi MARA, Malaysia
44	Noor Nabilah Harun	Universiti Teknologi MARA, Malaysia
45	Siti Sofreina Syasha	Universiti Teknologi MARA, Malaysia
46	Fasihah Abdul Wahab	Universiti Teknologi MARA, Malaysia
47	Jamal Houssaini	Universiti Teknologi MARA, Malaysia
48	Mohamad Huzaimy Jusoh	Universiti Teknologi MARA, Malaysia
49	Sheela a/p Jayabala Krishnan@Jayabalan	Universiti Teknologi MARA, Malaysia
50	Fadzilah Mohd nor	Universiti Teknologi MARA, Malaysia
51	Hajah Farida Zuraina Hj Mohd Yusof	Universiti Teknologi MARA, Malaysia
52	Aidah Jumahat	Universiti Teknologi MARA, Malaysia
53	Anida Mahmood	Universiti Teknologi MARA, Malaysia
54	Nur Adilla Zaini	Universiti Teknologi MARA
55	Rafidah Rasol	Universiti Teknologi MARA
56	Muhammad Zamir Biin Mohyedin	Universiti Teknologi MARA
57	Nurul Azmiera Binti Zamri	Universiti Teknologi MARA
58	Noor Syaffinaz Noor Mohamad Zin	Universiti Teknologi MARA
59	Nor Atiqah Jusril	Universiti Teknologi MARA
60	Nur Anati Binti Jamalluddin	Universiti Teknologi MARA
61	Nikfarhana Binti Zuhir	Universiti Teknologi MARA
62	Nur Ain Nabilah Binti Mohamad Nor	Universiti Teknologi MARA
63	Nur Intan Hasbullah	Universiti Teknologi MARA
64	Noramira Binti Nozmi	Universiti Teknologi MARA
65	Nurfarah Ain Binti Limin	Universiti Teknologi MARA
66	Nur Zulaikha Syakirah Binti Mohammad Nor'Ashikin	Universiti Teknologi MARA
67	Nurain Binti Mohamad Ansor	Universiti Teknologi MARA

68	Nur Batrisyia Razman Shah	Universiti Teknologi MARA
69	Nor Asmira Binti Amaran	Universiti Teknologi MARA
70	Sayidah Nafisah Hashim	Universiti Teknologi MARA
71	Sarabjit Singh	Universiti Teknologi MARA
72	Puteri Najihah Binti Megat Zakaria	Universiti Teknologi MARA
73	Sharifah Aminah Syed Mohamad	Universiti Teknologi MARA
74	Siti Nur Umairah Bt Sabri	Universiti Teknologi MARA
75	Tania Ivorra	Universiti Teknologi MARA
76	Mohammed Rizman Iddid	Universiti Malaya
77	Teow Chong Teoh	Universiti Malaya
78	Cheng Poh Guat	Universiti Malaya
79	Geok Yuan Annie Tan	Universiti Malaya
80	Tan Mei Sze	Universiti Malaya
81	Collins Chong Yew Keat	Universiti Malaya
82	Hasifullah Ibrahim	Universiti Malaya
83	Muhammad Yunus Ahmad Mazuki	Universiti Malaya
84	Muhammad Akmal Amani Ahnuar	Universiti Malaya
85	Siti Syairah Atiqah Azhar	Universiti Malaya
86	Fayhearina Yusoff	Universiti Malaya
87	Herland Satriawan	Universiti Malaya
88	Nurlizah Abu Bakar	Universiti Malaya
89	Teow Chong Teoh	Universiti Malaya
90	Wee Cheah	Universiti Malaya
91	Yong Hao Tan	Universiti Malaya
92	Siti Aisah Alias	Universiti Malaya, Malaysia
93	Sheeba Nettukandy Chenoli	Universiti Malaya, Malaysia

94	Goh Hong Ching	Universiti Malaya, Malaysia
95	Wee Cheah	Universiti Malaya, Malaysia
96	Yuan Annie Tan	Universiti Malaya, Malaysia
97	Mohd Fadzil Firdzaus Mohd Nor	Universiti Malaya, Malaysia
98	Teoh Teow Chong	Universiti Malaya, Malaysia
99	Mohammed Rizman Iddid	Universiti Malaya, Malaysia
100	Sulaiman Ali Mohammad	Universiti Kebangsaan Malaysia
101	Ahmad Razi Othman	Universiti Kebangsaan Malaysia
102	Ain Nur Afifah Binti Azman	Universiti Kebangsaan Malaysia
103	Ahmad Bazli Bin Ramzi	Universiti Kebangsaan Malaysia
104	Aulia Nisa'ul Khoir	Universiti Kebangsaan Malaysia
105	Dhiya Durani Sofian Azizi	Universiti Kebangsaan Malaysia
106	Hani Kartini Agustar	Universiti Kebangsaan Malaysia
107	Izwan Bharudin	Universiti Kebangsaan Malaysia
108	Mahendran Sithamparam	Universiti Kebangsaan Malaysia
109	Mardina Abdullah	Universiti Kebangsaan Malaysia
110	Nik Amni Binti Nik Husideen	Universiti Kebangsaan Malaysia
111	Noorashikin Binti Md Noor	Universiti Kebangsaan Malaysia
112	Nurkhalida Kamal	Universiti Kebangsaan Malaysia
113	Norsuzlin Mohd Sahar	Universiti Kebangsaan Malaysia
114	Siti Nurfatehah Binti Kamal	Universiti Kebangsaan Malaysia
115	Sabirin Abdullah	Universiti Kebangsaan Malaysia
116	Sam Janeeca Binti Sam Chih Long	Universiti Kebangsaan Malaysia
117	Siti Norliyana Binti Harun	Universiti Kebangsaan Malaysia
118	Sulaiman Ali Mohammad	Universiti Kebangsaan Malaysia
119	Rozida Mohd Khalid	Universiti Kebangsaan Malaysia

120	Sulaiman Ali Mohammad	Universiti Kebangsaan Malaysia
121	Wan Maznah Wan Omar	Universiti Sains Malaysia, Malaysia
122	Nik Mohd Izham Mohamed Nor	Universiti Sains Malaysia
123	Aminu Surajo Usman	Universiti Sains Malaysia
124	Nik Mohd Izham Mohamed Nor	Universiti Sains Malaysia
125	Sazlina Salleh	Universiti Sains Malaysia
126	Zoya Khan	Universiti Sains Malaysia
127	Faradina Merican Mohd. Sidik Merican	Universiti Sains Malaysia
128	Foong Swee Yeok	Universiti Sains Malaysia
129	Japareng Lalung	Universiti Sains Malaysia
130	Latiffah Zakaria	Universiti Sains Malaysia
131	Lim Hwee San	Universiti Sains Malaysia
132	Rashidah Abdul Rahim	Universiti Sains Malaysia
133	Umrana Maheer	Universiti Sains Malaysia
134	Zulaihat Hamza Abdullahi	Universiti Sains Malaysia
135	Najib Mohd Nasir	Universiti Malaysia Terengganu
136	Wan Mohd Rauhan Wan Hussin	Universiti Malaysia Terengganu
137	Emienour Muzalina binti Mustafa	Universiti Malaysia Terengganu
138	Ma Nyuk Ling	Universiti Malaysia Terengganu
139	Muhammad Hafeez Bin Jeofry	Universiti Malaysia Terengganu
140	Nurul Huda Binti Ahmad Ishak	Universiti Malaysia Terengganu
141	Nur Nabilah binti Ahmad Ariffian	Universiti Malaysia Terengganu
142	Najiah bt Musa	Universiti Malaysia Terengganu
143	Nadirah bt Musa	Universiti Malaysia Terengganu
144	Siti Sofo Binti Ismail	Universiti Malaysia Terengganu
145	Yeny Nadira Binti Kamaruzzaman	Universiti Malaysia Terengganu

146	Wan Mohd Rauhan Wan Hussin	Universiti Malaysia Terengganu
147	Muhammad Hafeez Jeofry	Universiti Malaysia Terengganu
148	Justin Sentian	Universiti Malaysia Sabah
149	Clemente Michael Vui Ling Wong	Universiti Malaysia Sabah
150	Mardani Abdul Halim	Universiti Malaysia Sabah
151	Nur Athirah Yusof	Universiti Malaysia Sabah
152	Ahmad Norazhar Mohd Yatim	Universiti Malaysia Sabah
153	Farrah Anis Fazliatul Adenan	Universiti Malaysia Sabah
154	Melissa C. Payus	Universiti Malaysia Sabah
155	Makdi Masnoddin	Universiti Malaysia Sabah
156	Rodeano Roslee	Universiti Malaysia Sabah
157	Siti Rahayu Mohd Hashim	Universiti Malaysia Sabah
158	Vijay Kumar Pattathil	Universiti Malaysia Sabah
159	Wan Nur Shuhaida Wan Mahadi	Universiti Malaysia Sabah
160	Nur Nadhirah Zakaria	Universiti Putra Malaysia
161	Nur Adeela Yasid	Universiti Putra Malaysia
162	Siti Aqlima Ahmad	Universiti Putra Malaysia
163	Wan Lutfi Wan Johari	Universiti Putra Malaysia
164	Adamu Idris Matinja	Universiti Putra Malaysia
165	Muhamad Nadzmi Omar	Universiti Putra Malaysia
166	Nur Farah Anis Abd Halim	Universiti Putra Malaysia
167	Samyuktha Balakrishnan	Universiti Putra Malaysia
168	Fabian Davamani Amalraj	International Medical University
169	Wie Sze Hong	International Medical University
170	Yih Yih Kok	International Medical University
171	Chan Kok Keong	International Medical University

172	Kenny Voon Gah Leong	International Medical University
173	Nur Alia Johari	International Medical University
174	Prof Patricia Lim Kim Chooi	International Medical University
175	Tan Boon Keat	International Medical University
176	Wong Chiew Yen	International Medical University
177	Wong Shew Fung	International Medical University
178	Ying Pei Wong	International Medical University
179	Chiew Yen Wong	International Medical University
180	Thomas Bracegirdle	British Antarctic Survey, United Kingdom
181	Francisco Aquino	Centro Polar e Climático, Instituto de Geociências Universidade Federal do Rio Grande do Sul Brazil
182	Satheesan K	Cochin University of Science and Technology Kerala, India
183	Jonathan Willie	Institut des Géosciences de l'Environnement CNRS/UGA, Saint France
184	Mohd Fadzil Firdzaus Bin Mohd Nor	Institute of Ocean and Earth Sciences, Universiti Malaya & National Antarctic Research Center, Universiti Malaya
185	Nuradilla Mohamad Fauzi	Institut Sains Biologi, Fakulti Sains, Universiti Malaya
186	César A. Cárdenas	Instituto Antártico Chileno
187	Sebastián Marinsek	Instituto Antártico Argentino Departamento de Glaciología, Gral. San Martín Argentina
188	Seong-Joong Kim	Korea Polar Research Institute (KOPRI) South Korea
189	Carla Ximena Salinas	National Antarctic Institute of Chile (INACH)
190	Marcelo González	National Antarctic Institute of Chile (INACH) & National Committee for Antarctic Research (CNIA)
191	Dmytro Cheberkus	National Antarctic Scientific Center of Ukraine
192	Evgen Dykyi	National Antarctic Scientific Center of Ukraine
193	Anastasiia Chyhareva	National Antarctic Scientific Center of Ukraine
194	Oleksandr Koloskov	National Antarctic Scientific Center of Ukraine

195	Andrii Zotov	National Antarctic Scientific Center of Ukraine
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