Report on the AWSAR Workshop held on 11th & 12th May 2023 at the Department of Computational Biology and Bioinformatics, University of Kerala, Thiruvananthapuram

A two-day training workshop on 'Popular Science Writing' under Augmenting Writing Skills for Articulating Research (AWSAR) Programme was held at the Department of Computational Biology and Bioinformatics, University of Kerala, Kariavattom, Thiruvananthapuram on 11th and 12th May 2023. AWSAR program is a flagship initiative of the Department of Science and Technology (DST), which aims at encouraging young scientists and researchers to communicate their research work in an effective and accessible manner. The workshop was jointly organized by the Department of Science and Technology (DST), Vigyan Prasar, Government of India in collaboration with the University of Kerala and Centre for Development of Imaging Technology (C-DIT). Various technical sessions were conducted that included topics on science communication, importance of science writing, key aspects to be taken into consideration in science writing for the public, how to make communication and writing catchy, how to write about the research, its editing, language, and presentation to attract common man. A total of 116 persons registered online for the workshop and was attended by 63 research scholars, both PhD scholars and Post Doctoral Fellows from Kerala. The program schedule is given in Annexure-1 and the list of participants is given in Annexure-2.

The inaugural function of the AWSAR Workshop marked the commencement of an empowering and innovative event. The workshop was aimed at enhancing researchers' writing skills and promoting effective articulation of their research findings. The inaugural function began with a welcome address by Sri. Jayadev Anand A.K, Registrar, C-DIT. The speaker expressed gratitude to the participants for their presence and acknowledged their commitment to advancing research and scientific communication. The welcome address set an inclusive and encouraging tone for the workshop, highlighting the importance of effective writing in bridging the gap between research and its wider dissemination. Keynote addresses were done by Dr. Nakul Parashar, Director, Vigyan Prasar, Department of Science and Technology, New Delhi and by Sri. Jayaraj G, Director, C-DIT. Delivering the keynote address, Dr. Nakul Parashar explained about the AWSAR programme of Vigyan Prasar and said that interested PhD/PDF

research scholars could participate in the science writing competition by uploading a 1500-word research story on the AWSAR website.

Delivering the keynote address, Sri. Jayaraj G. pointed out the importance of simplicity in science communication. Dr. Bharat Bhushan, Scientist, Vigyan Prasar, presented the details of the AWSAR project and shared valuable insights and experiences, emphasizing the significance of clear and impactful scientific communication. He also discussed the challenges faced by researchers in articulating their work. An overview of the AWSAR Workshop was presented during the inaugural function. The program's objectives, structure, and resources offered to the participants were outlined. The speakers highlighted the workshops, training sessions, and mentoring opportunities that the participants would engage to enhance their writing skills. They emphasized the importance of effective science communication in promoting the value and impact of research. The inaugural function of the AWSAR Workshop successfully set the stage for a transformative learning experience. It provided participants with valuable insights, inspiration, and networking opportunities.

Prof. Achuthsankar S. Nair, Head, Department of Computational Biology and Bioinformatics, University of Kerala; Dr. B.K.Tyagi, Consultant, Vigyan Prasar; Dr. Bharat Bhushan, Scientist, Vigyan Prasar; Dr. Gaurav Jain, Scientist, Vigyan Prasar; Sri. Srikumar Balakrishnan, Science Communicator & Journalist; Dr. Biju Dharmapalan, Science Communicator and Journalist; and Dr. Kollegala Sharma, Ex-Chief Scientist, CSIR-CFTRI were the resource persons for the workshop. They shared their insights on structuring research papers, improving clarity and conciseness, and effectively communicating scientific findings to the public. The subsequent sessions carried the promise of empowering researchers with improved communication skills, allowing them to effectively communicate their research findings to a wider audience.

Day 1 (11.May.2023)

Topic: Explaining research to non-experts

Resource Person: Prof Achuthsankar S. Nair

The session gave simple and effective tips on how to articulate words in science communication. Techniques on how to train oneself on the skill of science communication by talking about the same topic to people from different strata of society were explained. The speaker advocated that nature teaches us many things. How things and events from nature can be used to explain Science to the layman was explained with examples. The need for clarity in writing was emphasized during the session. How to bring clarity to writing was discussed-technique of mind maps-key words-construction of paragraphs. The Write Rewrite Re-rewrite technique to produce an article of more readability was also discussed. How to proofread the article by revisiting the same after a time gap was explained. The era of being Word Smart and the concept of Multiple Intelligence was introduced to the audience. The session concluded with the remarks that Science communicators should always have the spirit of inquiry and a scientific temper. Different science books were also suggested by the speaker to the audience for reading.

Topic: Understanding Science Communication

Resource Person: Dr. B. K. Tyagi

The talk gave an overview of understanding Science communication and the pattern it takes. Dr.Tyagi explained on i) How to start off with Science writing, ii) Different audiences (media, science person from other domains, common man, etc), iii) How to contextualize writing for each category of the audience. Insights on different steps involved in science communication such as how data has to be sorted, arranged, visually represented, and presented as a story was touched upon with examples. The reverse pyramid structure (Lead-body-tail) of Science Writing was explained in detail. The usage of images and cartoons to convey Science and its implications were discussed in different case studies. Tips on how to craft the title of the story in such a way that it etches public memory (usage of punch line) were discussed with examples. Science writing is more of an art. The speaker also remarked, apart from a simple reading material on science to the common man the communication should have the author's special comments on the local and international implications of the topic.

Topic: Fundamentals of Science Journalism

Resource Person: Sri. Srikumar Balakrishnan

The session gave a journalist's perspective on science communication. Different goals of science communication were discussed. The speaker emphasised on the point that science communication should be simple and effective. Science communication is about sharing recent findings of science to the public in an easily digestible manner and thereby increasing public appreciation of science. The facts that get communicated to the readers should be precise, genuine, and correct. Uncertain or false information should not be shared. Skillsets that a science journalist should possess were discussed which are interest in science, research, investigation, analytics, rigor, precision etc. Questions that science writers should have in mind while writing are why write, how to write, what is the central issue, what information should be included, and for whom it is intended etc were briefed during the session. Enhancing Science communication skills by reading popular Science journals/magazines and getting access to recent updates by being a member of Science societies were explained. The speaker concluded the talk with the remarks that science journalism/communication is a future-proofed profession

Topic: Difference between Technical and Science Writing

Resource Person: Dr. Biju Dharmapalan

The session helped the participants to get an awareness of technical writing and popular writing. The speaker acknowledged the significance of both technical and popular writing in research communication. The speaker pointed out that technical writing is crucial for communicating the research findings within the scientific community, and popular writing helps bridge the gap between researchers and the general public. Technical writing focused on conveying precise and detailed information to a specialized audience, using a formal style and specialized terminology. On the other hand, popular science writing aims to make complex concepts accessible and engaging to a wider audience by utilizing a conversational style, relatable examples, and storytelling techniques. The workshop emphasized the importance of developing skills in both technical and popular writing to effectively communicate research findings, bridge the gap between experts and the general public, and promote wider dissemination of scientific knowledge. He emphasised that this workshop aims to gain valuable insights and training in the writing approaches to enhance their research articulation abilities.

As a concluding note of the first day, Dr. Nakul Parashar asked all the participants to come up on the 2nd day of the workshop with a story with respect to their research work as an assignment. He said that the story will be discussed in the last session on the second day.

Day 2 (12.May.2023)

Topic: Fundamental of Science Writing

Resource Person: Dr.Kollegala Sharma

The speaker focused on the fundamentals of science writing, providing participants with essential skills and knowledge to effectively communicate their research findings. The speaker pointed out that participants need to learn how to express their ideas in a concise and straightforward manner, avoiding jargon and technical terms that may hinder understanding. His session mentioned how essential is to understand the structure of science writing and maintain scientific accuracy. Participants came to know how to organize their content logically, employing a clear introduction, methods, results, and conclusion sections. They also learned how to create effective headings and subheadings to guide readers through their work and to present their research findings objectively, supporting their statements with evidence, data, and appropriate citations. The speaker mentioned the techniques to make writing more captivating, such as using storytelling elements, real-life examples, and vivid descriptions. Dr.Sharma also emphasized on the importance of editing and revision in science writing. He also suggested simple tips while writing research stories.

Topic: Assessment of assignments and Discussion by all Experts

The assignments submitted by the participants were evaluated by the resource persons. After the assessment of these, overall suggestions were given by each expert which helped the participants to know about how effectively they have written and helped them to know their flaws in writing their story.

Topic: AWSAR story submission, guidelines, criteria, etc

Resource Persons: Dr. Bharat Bhushan, Dr. Gaurav Jain

The speakers gave a brief idea on how to submit an article for the AWSAR story submission. The speaker with the help of Dr.Gaurav Jain, showed the website of AWSAR and explained the process of submitting a story for publication. All the participants were encouraged to submit their research stories on the AWSAR web portal. Dr.Nakul Parashar said that after obtaining Ph.D., one can also take science communication as a career option.

The AWSAR workshop concluded at 1.30 PM on 12.May.2023. All the resource persons were presented with a memento as a token of gratitude.

Annexure-1

Workshop on Popular Science Writing under AWSAR Programme

Organized by

Department of Science & Technology and Vigyan Prasar, Govt. of India, New Delhi

in Collaboration with

University of Kerala, Thiruvananthapuram

and

Centre for Development of Imaging Technology (C-DIT)

Venue: Conference Hall, Department of Computational Biology and Bioinformatics, University of Kerala, Kariavattom, Thiruvananthapuram

Program Schedule

11th May 2023 (09:00 AM – 04:00 PM)	
Registration: 09:30 AM to 10:00 AM	
Inaugural Session	
10:00 AM – 10:10 AM	Welcome address by Sri. Jayadev Anand A.K., Registrar, Centre for Development of Imaging Technology (CDIT), Kerala
10:10 AM – 10:20 AM	Keynote address by Dr. Nakul Parashar, Director, Vigyan Prasar, New Delhi
10:20 AM – 10:30 AM	Keynote address by Sri. Jayaraj G, Director, CDIT, Kerala
10:30 AM – 10:40 AM	About the AWSAR project by Dr Bharat Bhushan, Scientist, Vigyan Prasar
10:40 AM – 11:00 AM	Tea Break
TECHNICAL SESSION 1	
11:00 AM – 12:00 PM	**Topic:** Explaining research to non-experts **Resource Person:** Prof Achuthsankar S Nair, Dept of Computational Biology and Bioinformatics, University of Kerala, Thiruvananthapuram
12:00 PM – 01:00 PM	**Topic:** Understanding Science Communication **Resource Person:** Dr B. K. Tyagi, Consultant, AWSAR Program, Vigyan Prasar
01:00 PM – 02:00 PM	LUNCH
TECHNICAL SESSION 2	
02:00 PM – 03:00 PM	**Topic:** Fundamentals of Science Journalism **Resource Person:** Sri. Srikumar Balakrishnan, Science Communicator & Journalist
03:00 PM – 04:00 PM	**Topic:** Difference between technical and popular writing **Resource Person:** Dr Biju Dharmapalan, Science Communicator & Journalist
12th May 2023 (09:00 AM – 01:00 PM)	
TECHNICAL SESSION 3	
09:00 AM – 10:00 AM	**Topic:** Fundamentals of Science writing **Resource Person:** Dr Kollegala Sharma, Ex-Chief Scientist, CSIR-CFTRI, Mysuru
10:00 AM – 12:00 PM	Assessment of assignments and discussion by all experts
TECHNICAL SESSION 4	
12:00 PM – 12:30 PM	**Topic:** AWSAR story submission, guidelines, criteria etc. **Resource Persons:** Dr Bharat Bhushan, Vigyan Prasar Dr Gaurav Jain, Vigyan Prasar
	Discussion & Queries
	LUNCH

Annexure-2

List of Participants of AWSAR Workshop

Sl.No.	Name	Category	Institute Name & Address
1	Jisha P Jayan	PhD	Bharathiar University, Coimbatore
2	Amina Thaj	PhD	Dept of Zoology, University of Kerala, Kariavattom
3	Vijayalakshmi B	PDF	University of Kerala, University of Kerala, Senate House Campus, Palayam, Thiruvananthapuram, Kerala 695034
4	Suresh KS	PhD	College of Engineering Trivandrum, Sreekaryam, Thiruvananthapuram
5	Gayatri Menon B	PhD	University of Kerala, Research Centre: C-DIT, Chithranjali Hills, Thiruvallam.P O, Thiruvananthapuram, Kerala 695 027
6	Sakthi Vel S.	PhD	C-DIT, Chitranjali Hills, Thiruvallam (P.O.), Trivandrum-27, Kerala, India
7	Sangeetha Gopan G S	PhD	College of Engineering Trivandrum (CET), Trivandrum 695016
8	Vaishna T	PhD	C-DIT, Chithranjali Hills, Thiruvallam PO, Trivandrum, Kerala ,PIN -695027
9	Anjana U	PhD	Space Physics Laboratory VSSC Trivandrum
10	Sishal Sasi	PhD	Punjabi University, Patiala 147002, Punjab
11	Dr. Prijitha R G	PDF	University of Kerala, Kariavattom Campus, Thiruvananthapuram
12	Junaida Ibrahim	PhD	Dept of Computational Biology & Bioinformatics, University of Kerala,
13	Jayasurya PK	PhD	Manonmaniam Sundaranar University, Abhishekhapatti, Thirunelveli
14	Rahul Raj	PhD	College of Engineering, Trivandrum, Sreekaryam, Thiruvananthapuram 695016
15	Neenu Mohan	PhD	Dept of Computational Biology and Bioinformatics, Kaaryavattom, UoK
16	Vinod M.P.	PhD	Dept of Computational Biology and Bioinformatics, Kaaryavattom, UoK
17	Dr. Sheeba K. Krishnan	PDF	Department of Computational Biology and Bioinformatics, University of Kerala, Karyavattom, Trivandrum.
18	Dr. Soumya SJ	PDF	Dept. of Computational Biology and Bioinformatics, Kariavattom, Thiruvananthapuram-695581

Sl.No.	Name	Category	Institute Name & Address
19	Aswathy T R	PDF	Dept. of Computational Biology and Bioinformatics, Kerala University, Kariavattom Campus
20	Arya K R	PhD	Department of Computational Biology and Bioinformatics, University of Kerala
21	Anuroopa Nadh	PhD	Department of Computational Biology and Bioinformatics, University of Kerala
22	Shahina K	PhD	University of Kerala
23	Vidhya N P	PhD	C-DIT, Chithranjali Hills, Thiruvallam.P O, Thiruvananthapuram, Kerala - 695 027
24	Sreelekshmi A K	PhD	Government College for Women, Vazhuthacaud, Thiruvananthapuram
25	Liju Elias	PDF	Dept. of Chemistry, University of Kerala, Kariavattom Campus, Thiruvananthapuram
26	Arya V V	PhD	Department of Computational Biology and Bioinformatics, University of Kerala, Karyavattom
27	Bhagyalekshmi Venugopal	PhD	Department of Aquatic Biology and Fisheries, University of Kerala
28	Jishnu V M	PhD	Department of Botany University of Kerala, Kariavattom
29	Arun R Pillai	PhD	Dept of Botany, University of Kerala, Karyavattom P.O Trivandrum 695581
30	Nishi Babu	PhD	Department of Zoology, University of Kerala, Kariavattom, Thiruvananthapuram, 695606
31	Merin Elizabeth George	PhD	Dept. Of Zoology, University of Kerala, Kariavattom, Trivandrum, Kerala
32	Silpa James	PhD	Department of Botany, University of Kerala, Kariyavattom
33	Sujitha P C	PDF	University of Kerala, Karyavattom
34	Rinu V Thomas	PhD	Department of Botany, University of Kerala, Kariavattom, Thiruvananthapuram, Kerala. Pin - 695581
35	Arsha K	PhD	Department of Botany, University of Kerala, Thiruvananthapuram, Kerala -695581
36	Deepthy R M	PhD	Department of Botany, University of Kerala, Kariavattom Campus, Thiruvananthapuram, Kerala.Pin:695581
37	Nisanth H P.	PhD	Aquatic Biology and Fisheries, University of Kerala, Thiruvananthapuram

Sl.No.	Name	Category	Institute Name & Address
38	Anaswarakrishna C P	PhD	University of Kerala, Karyavattam campus, Trivandrum
39	Divyashri	PhD	Department of Botany, University of Kerala, Kariavattom campus, Trivandrum
40	Soumya K R	PhD	Department of Aquatic Biology and Fisheries, University of Kerala, Thiruvananthapuram, Pin-695581
41	Binoy B B	PhD	CET Trivandrum, Trivandrum 695016
42	Anju H	PhD	Department of Botany, University of Kerala
43	Sreeja Parvathy	PhD	Department of Botany, University of Kerala, Kariavattom, Thiruvananthapuram
44	Surabhi S	PhD	Department of Botany, University of Kerala
45	Sruthy S.Nair	PhD	Department of Botany, University of Kerala
46	Sabitha Rani	PhD	DUK, Tvm
47	Mili Mohan	PhD	College of Engineering Trivandrum, Sreekaryam, Trivandrum
48	Sona Rachel Thomas	PhD	College of Engineering Trivandrum, Engineering College P.O, Sreekaryam, Thiruvananathapuram, Kerala PIN 695016
49	Deepa Irene C	PhD	College of Engineering Trivandrum, Sreekaryam - Kulathoor Rd, P.O, Sreekariyam, Thiruvananthapuram, Kerala 695016
50	Anju J S	PhD	College of Engineering Trivandrum, CET, Sreekariam
51	Devika R G	PhD	CET, Trivandrum, CET, Trivandrum
52	Smriti Govind	PhD	College of engineering Trivandrum, Chavadimuku, Sreekaryam, Trivandrum
53	Sini S Raj	PhD	University of Kerala, Dept. of Computer Science, Kariyavattom
54	Gokul .V	PhD	Department of Opto Electronics, University of Kerala
55	Ajith A	PhD	Department of Opto Electronics, University of Kerala
56	Anu .S.S	PhD	Department of ECE
57	Shaaitha.A	PhD	Department of Biochemistry, University of Kerala
58	Surabhi Sudhi	PhD	Department of Botany , NSS College, Pandalam, PATHANAMTHITTA

Sl.No.	Name	Category	Institute Name & Address
59	Saleena.Y	PhD(cmpltd)	Department of Computational Biology and Bioinformatics, University of Kerala
60	Dr.Ashwini Jayachandran	PhD(cmpltd)	Department of Computational Biology and Bioinformatics, University of Kerala
61	Dr.rani J R	PhD(cmpltd)	Department of Computational Biology and Bioinformatics, University of Kerala
62	Anjana Mohan. A	PhD	Department of Zoology, University of Kerala
63	Usha Kumari		Department of Zoology, University of Kerala