

## **The report of World Antimicrobial Awareness Week 2020 (November 18 to 24, 2020) celebration by FAO India and Indian Network for Fisheries and Animal Antimicrobial Resistance (INFAAR) institutes:**

- 1. The op-ed on antimicrobial resistance (AMR) by Tomio Shichiri FAO Representative in India and Dr. Rajesh Bhatia is Technical Advisor, FAO India was published in the national daily The Hindu, on 24.11.2020.**

### **Weaker Germs, Stronger Cures**

One Health' is the optimum approach to counter the impact of antimicrobial resistance

The advent of antibiotics ignited the hope of elimination of infectious diseases in humans and animals. However, this did not happen because of two reasons: the ingenuity and survival instinct of germs and the irrational use of antibiotics in humans and animals. Most of the germs have acquired the capacity to resist the action of affordable antibiotics. This phenomenon is known as antimicrobial resistance (AMR). The inability of antibiotics to treat patients and animals is wreaking havoc on human health, nutrition safety and economies. The long-term impact of AMR is almost comparable to that of the COVID-19 pandemic. AMR is estimated to cause 10 million deaths annually by 2050, unless concerted actions are initiated now. It will result in 7.5 % reduction in livestock production and negatively impact the global GDP by 3.5%.

### **Tackling the AMR challenge**

There are two major possible solutions to combat the AMR menace: discovery of new drugs, before the emergence of resistance in germs; and prudent use of available antibiotics. The first is an expensive and unpredictable process. Since 1984, no new class of antibiotics has been developed. The estimated cost for developing a new antibiotic exceeds \$1 billion. With rapid development of resistance, the life of new antibiotics becomes limited and the return on investment on new molecules gets diminished. This discourages the pharmaceutical industry to invest in these initiatives. The world is left with only one option: to use the available antibiotics carefully to ensure their efficacy for as long as possible.

The World Health Organization Global Action Plan on AMR (2015) provides a road map for tackling this challenge. This plan has been endorsed by the UN General Assembly. Almost 80 countries have developed their respective national action plans in alignment with this Plan.

The rational use of antibiotics in humans, animals, and agriculture warrants coordinated action in all sectors. These multi-sectoral, multidisciplinary and multi-institutional actions constitute the 'One Health' approach. This has gained currency across the world as an efficient and cost-

effective response to AMR and several other challenges, especially endemic zoonoses (diseases transmitted between animals and humans) and pandemics. It is reinforced by the fact that all the epidemics in the current millennium (SARS, MERS, bird flu and COVID-19) have originated from animals because of unwanted excursion of humans into animal domains. The COVID-19 pandemic has emphasised the urgency of implementing One Health. India's National Action Plan on AMR is an excellent example of the One Health approach and can be used as a guiding document to develop a workable road map for the country to respond to other similar public health challenges.

#### One platform for experts

One Health should not be construed as a standalone or new programme that has to be built de novo. This endeavour utilizes existing expertise and infrastructure in various sectors with a focus on inter-sectoral coordination, collaboration, and communication. The purpose of One Health is to provide a formal platform for experts to plan and work together towards shared objectives.

Implementation of One Health warrants a strong and continuous national narrative on zoonosis. It advocates a multi-sectoral response to public health problems, particularly pandemics, as also to address issues related to AMR. The approach supports focused actions on the human-animal-environment interface for the prevention, detection and response to the public health events that influence global health and food security. AMR is one of the biggest challenges to human and animal health. There is a need to optimally utilize emerging technologies to improve human health and development. One Health has been acknowledged as the optimum approach to counter the impact of AMR and future pandemics and must be adopted expeditiously.

2. **UN Hindi website correspondent interviewed Dr.Rajesh Bhatia, Technical Advisor for AMR, FAO India, on antimicrobial resistance. The link of the interview on AMR is given below;**<https://news.un.org/hi/audio/2020/11/1035112>
3. **As a part of INFAAR project and in response to the WAAW 2020, antimicrobial awareness programme was organized at ICAR-Central Institute of Brackishwater Aquaculture, Chennai during 18<sup>th</sup> -24<sup>th</sup> November 2020.**



Banners were displayed at the entrance of the institute and in the atrium for all the institute staff and visitors to be aware about the event.

All the creatives by WHO were displayed for the staff members of the institute through Televisions in corridors from the 18<sup>th</sup> to the 24<sup>th</sup> of November, 2020.







Starting from 18<sup>th</sup> November 2020, different competitions were organized among the children of institute staff and students of the institute.

Essay writing competition among the research scholars of CIBA was organized on 18<sup>th</sup> November 2020. The topic was “The role of citizens in making India safe from antimicrobials”. Three judges from the scientific staff evaluated these essays



Top three essays were rewarded with cash awards. All the participants were provided with participant certificates.

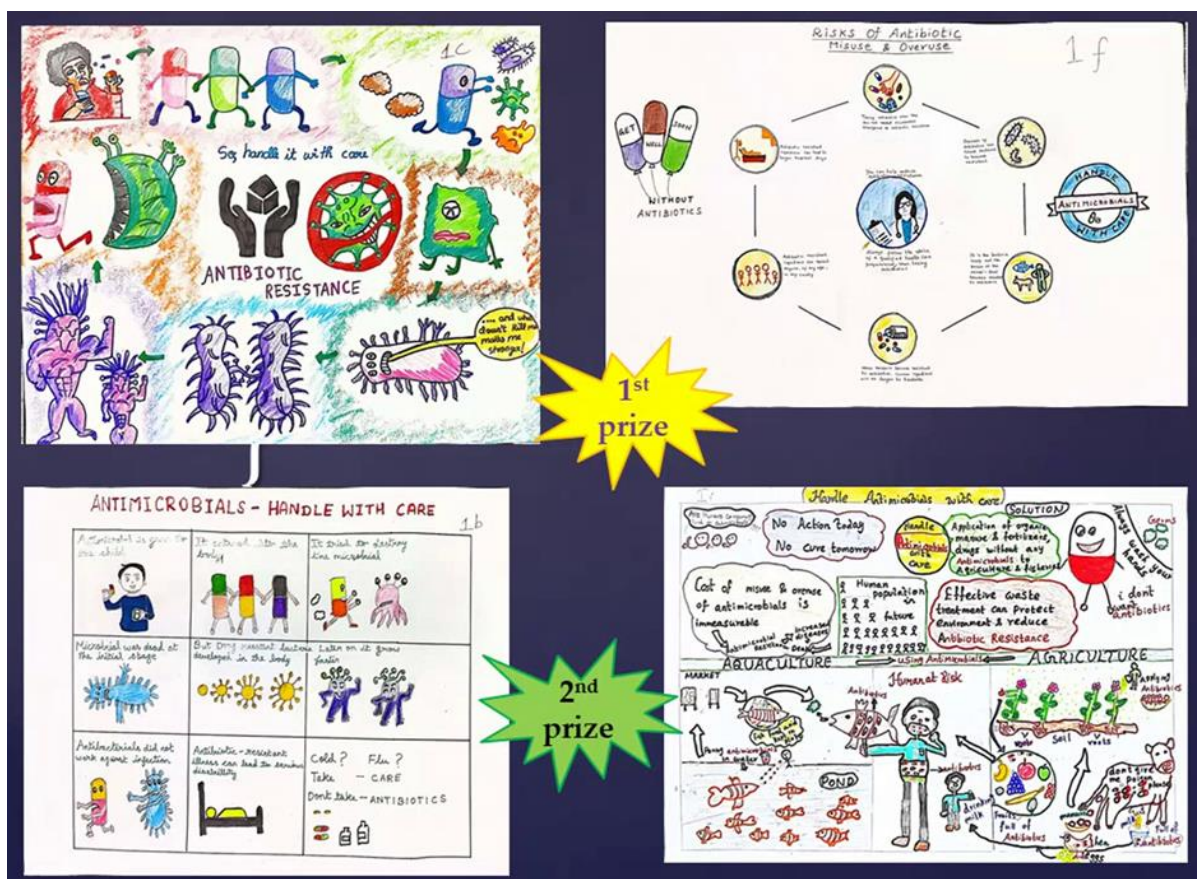
On 19<sup>th</sup> November 2020, an elocution competition was organized among the students of CIBA. The topic for this was “Can we avoid antimicrobials for a safer society?”. The participants were allowed 3 minutes to talk on the topic. Scientific staff of CIBA judged the participants based on their performance.



Similar to the essay writing competition, top three speakers were given cash award. All the participants were provided with participant certificates.

A drawing competition on the theme “Antimicrobials – Handle with care” was organized among the school children from the 5<sup>th</sup> to the 10<sup>th</sup> standard of the CIBA staff members. Entries were evaluated by the scientific staff and all the winners and participants were awarded with trophy and certificates.

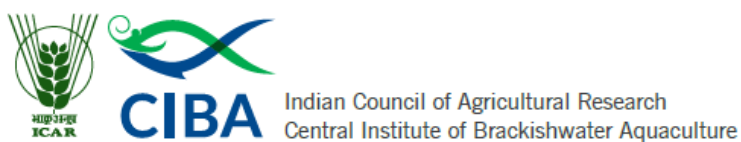




On the concluding day, 24<sup>th</sup> November 2020, an online awareness talk and the concluding meeting was organized. Several speakers on the field were contacted and two were agreed to give the talk. One of the speaker was Dr. Kelly Thornber from University of Exeter, UK with extensive experience on use of antimicrobials in aquaculture. This speaker shared about their institutes collaboration with Bangladesh and the results of their experiments in aquaculture in Bangladesh. The second speaker was Dr. Anusha Rohit, a professional clinical practitioner and researcher. She is the HOD of Microbiology division at Madras Medical Mission (MMM), Chennai. Her talk focused on the clinical point of view of antimicrobial use.

A brochure was prepared and the awareness talk was broadcasted live on YouTube. Accordingly, the brochure was circulated widely across different social media platforms to promote the event.

4. An online awareness programme was organized on 24<sup>th</sup> November. This was moderated by Dr. Subhendu Kumar Otta, Principal Scientist and PI of INFAAR project from CIBA. At the outset, the importance of the programme was underlined by Dr. P.K.Patil, Principal Scientist, CIBA. This was followed by the talk from Dr. Kelly Thornber.



विश्व रोगाणुरोधी जागरूकता सप्ताह - 2020

World Antimicrobial Awareness Week - 2020

18<sup>th</sup> - 24<sup>th</sup> November 2020

### Antimicrobial Awareness Talk

24<sup>th</sup> November 2020 | 2.30 pm - 4.30 pm IST

Speakers



**Dr Kelly Thornber**

University of Exeter, Stocker Road,  
Exeter, EX4 4QD, UK

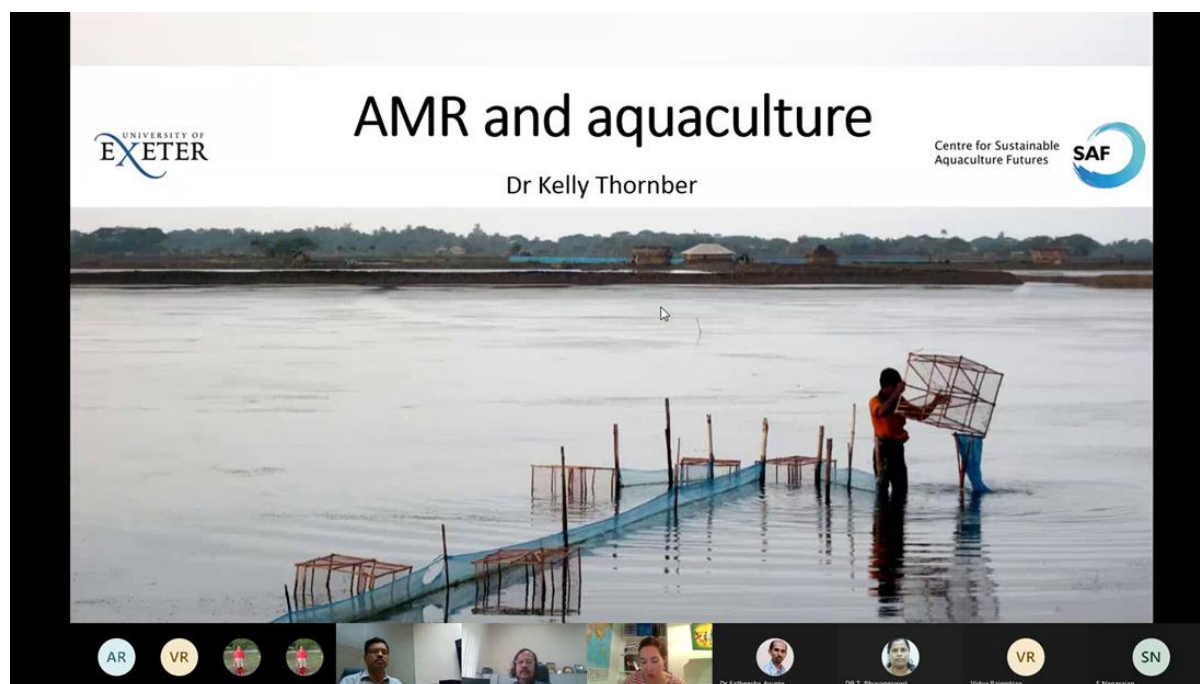


**Dr Anusha Rohit**

The Madras Medical Mission College,  
Chennai, India



Link to join: <https://youtu.be/cCihhwOk3F0>



The talk was followed by a question answer session which was moderated by Dr. Satheesha Avunje, Scientist, ICAR-CIBA.



This was then followed by the talk from Dr. Anusha Rohit of Madras Medical Mission, Chennai.



The following question answer session for this section was moderated by Dr. Vidya Rajendran, Scientist, ICAR-CIBA





Soon after the awareness talk, Dr. S.V. Alavandi, HOD I/C of Aquatic Animal Health and Environment Division of CIBA spoke regarding the importance of AMR and organization of such awareness building sessions.

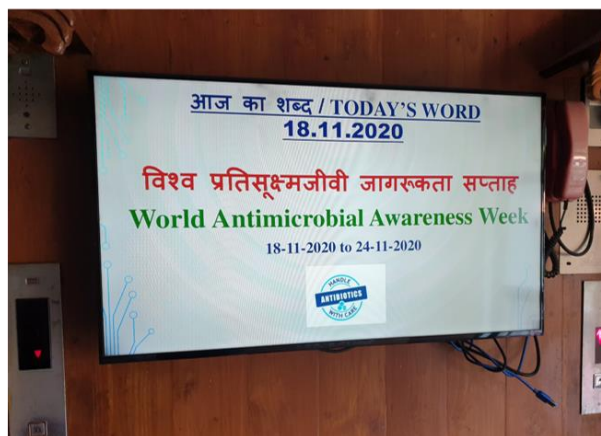
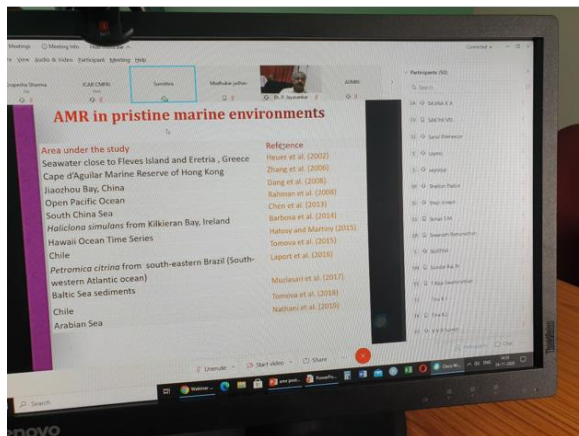


## 5. World Antimicrobial Awareness Week celebrated at ICAR-CMFRI

World Antimicrobial Awareness Week was celebrated at ICAR-CMFRI from 18 to 24 November 2020. As part of the celebrations, a webinar was conducted where Dr.Sumithra T.G., Scientist and Member of INFAAR delivered a talk on “Antimicrobial Resistance in Marine Environment: Implications on human health” on 24<sup>th</sup> November, 2020. Scientists, technical staff and research scholars from CMFRI Headquarters and different research centres actively participated in the webinar. Additionally, a painting drawing competition was also held for the children of staff of CMFRI and research scholars on the subject ‘Get smart on drugs to fight antimicrobial resistance’. Best poster drawings were rewarded and e-appreciation certificates were given to all the participants.



**Best posters received for poster drawing competition**



**WAAW celebrations at CMFRI**



## 6. World Antimicrobial Awareness Week celebrated at ICAR-NBFGR

World Antimicrobial Awareness Week was celebrated at ICAR-NBFGR from 18 to 24 November 2020. As part of the celebrations, posters and awareness material on prudent use of antimicrobials were displayed at the entrance of office laboratory block. On 21 November 2020, Dr Gaurav Rathore, Principal Scientist & Head, FHME, ICAR-NBFGR explained to staff and students about the problem of AMR in human and animal sector. Dr Kuldeep K. Lal, Director, NBFGR addressed the gathering on importance of Infection Prevention and Control measures for minimizing AMR risks specially during COVID pandemic. All the scientific and technical staff of INFAAR from ICAR-NBFGR actively contributed in organizing the programme.



## **7. Activities undertaken by ICAR-Central Institute of Freshwater Aquaculture, Bhubaneswar, Odisha during World Antimicrobial Awareness Week, 2020 (18-24 November)**

On the occasion of World Antimicrobial Awareness Week, 2020; ICAR-Central Institute of Freshwater Aquaculture, Bhubaneswar, organized three Farmers Meet to generate awareness. Here the farmers interacted with the scientist and with different stakeholders viz. entrepreneurs, Govt. Officials, to create awareness on responsible use of antibiotics, development of antimicrobial resistance and its impact on public health.

Fish Health Camp was organized association with NGO, Darbar Sahitya Sansad (DSS) at Balipatna, Khordha on 21 November, where around 70 fish farmers, farm women and Govt. officials attended the meet. Director ICAR-CIFA Dr. S.K. Swain inaugurated the meet. The farmers were appraised about the adverse effect of excessive use or irracionale use of different antimicrobials in health care, household and agricultural practices, live stock production; the development of antimicrobial resistance and how judiciously use of chemicals and drugs in aquaculture will be helpful in sustainable aquaculture production. The harmful effect of antibiotics on the human health and environment, were showcased through charts and posters. A Leaflet on "Responsible use of drugs and chemicals in aquaculture" were distributed.





Another Farmers Meet on responsible use of drugs & Chemicals in aquaculture was organized at Bhusandpur, Khordha district, Odisha on 24 November 2020. Around 60 progressive fish farmers; District Fishery Officer, Khordha; State Fisheries Department Officials, Scientists from CIFA attended the programme. An interaction programme was held and farmers were advised to generate awareness other fellow farmers and their family members for judicious and rationale use of antimicrobial agents. A Leaflet on "One Health Approach to contain Antimicrobial Resistance" was released by DFO, Khordha and were distributed. Three progressive farmers were felicitated for practising sustainable aquaculture. Around 50 water and fish samples were also analyzed and the farmers were advised accordingly. The program was coordinated by Dr. S.S. Mishra, Head, FHMD, Mr. S. N. Sahoo, Scientist, and Dr. P. Choudhary, Scientist, ICAR-CIFA, Bhubaneswar.





Another Farmers Scientist Interaction meet and Awareness programme was organized at Brahmagiri, Puri district, Odisha on 25 November 2020. Around 55 progressive fish farmers; DFO, Puri, State Fisheries Department Officials, Scientists from CIFA attended the programme. An interaction programme was held to aware fish farmers and stakeholders about judicious use of Aquadrugs and they were enlightened about global initiatives taken to contain AMR and how to prevent the growth of antimicrobial resistance rise which is a major global threat now a days and. The Leaflets on "One Health Approach to contain Antimicrobial Resistance" and "Responsible use of drugs and chemicals in aquaculture" were distributed. Around 80 water and fish samples collected from various ponds were also analyzed and the farmers were advised accordingly to maintain water quality and prevent disease occurrence. Three progressive farmers were felicitated for advances in fish farming activities. The program was coordinated by Dr. S.S. Mishra, Head, FHMD, Mr. S. N. Sahoo, Scientist, and Dr. P. Choudhary, Scientist, ICAR-CIFA, Bhubaneswar.



**8. World AMR awareness week under the “Indian Network for Fisheries and Animal Antimicrobial Resistance (INFAAR)” programme was organised by ICAR-CIFRI, Barrackpore during 18th to 24th November 2020.**

The main objective of the programme was to create awareness among the fish farmers, fishermen, livestock farmers to reduce the use of antibiotics in the rearing and growing period of the fish and animals. In this connection, an awareness programme was created at Farakka, West Bengal on 18th Nov. 2020. More than 50 fishermen, youth, women, and students participated while adhering to the Covid-19 protocol. Dr. A. K. Sahoo, PI of the project reiterated the importance of the week (18th to 24th November 2020) for creating wider awareness on the antibiotic uses and consequences of the over and under use of antibiotics towards developing antibacterial resistance. Furthermore, Dr. Sahoo highlighted the role of effective communications including mass media through radio talks and news clips in the local language. In this programme, masks, sanitizers and leaflets were distributed among the participants. Mr. Arnab Chakrabarty, a news reporter of the UttarBanga Sambad was highly motivated by the programme and suggested to carry forward such activities in large numbers at the village level. A pledge was taken by all the participants to stop misusing the antimicrobial products in animals and fisheries and in Inland open waters particularly in ponds, rivers and wetlands. As a part of the awareness programme, more than 40 students from Digsui Sadhana Banga Vidyalaya, Hooghly Dist, West Bengal were participated in a virtual platform on the topic “Antibiotics: Handle with Care” on 21 November 2020. Furthermore, research scholars and scientific staffs of the ICAR-CIFRI were participated on the AMR awareness programme and the theme and objectives were vividly explained by Dr. A. K. Bera, Co-PI of the AMR project. The programme was co-ordinated under the guidance of Dr. B.K.Das, Director, ICAR-CIFRI, Barrackpore.

## **9. Activities at Sardarkrushinagar Dantiwada Agricultural University, Sardarkrushinagar**



The recent pandemic of COVID -19 disease has changed life in many ways. Adaptation of online dissemination of knowledge is one among them. Unlike last year, WAAW 2020 was celebrated through online virtual modality. Literature related to WAAW-2020 in vernacular language was shared on all the students and teacher's groups. Online lecture on the importance and methodology of Anti-Microbial Susceptibility Testing (AMST) was organized for undergraduate students enrolled in Veterinary and Food Microbiology courses. Students were also made aware about global actions taken to curb the menace of antimicrobial resistance with special emphasis on role of veterinary professionals encompassing One health approach. Videos explaining the importance of preservation of antibiotic resources were explained on online platform.

## **10. Activities undertaken by ICAR-Indian Veterinary Research Institute, ERS, Kolkata on the eve of World Antibiotic Awareness Week, 2020**

ICAR-Indian Veterinary Research Institute (IVRI), Eastern Regional Station (ERS), Kolkata undertook different activities on the eve of World Antibiotic Awareness Week, 2020 to increase awareness on antimicrobial resistance among different stakeholders associated with animal husbandry and livestock rearing.

ICAR-IVRI, Kolkata organized an awareness programme for the farm workers involved in pig and goat farming activities at ICAR-IVRI, Kalyani campus of Nadia, West Bengal. The workers were briefed about the impending danger associated with unscrupulous use of antimicrobials in livestock farming. Further the workers were also advised to take precautions and use appropriate measures to avoid contracting animal-borne zoonotic and communicable diseases.





**World Antibiotic Awareness Week, 2020 at IVRI, Kalyani campus, Nadia, WB**

Dr Samiran Bandyopadhyay, PI (ICAR-INFAAR) and Senior Scientist, Dr P Dandapat, Co-PI(ICAR-INFAAR) and Principal Scientist and Dr S Naskar, PI (AICRP-Pig) and Principal Scientist were present in the programme. Apart from farm workers, few goat entrepreneurs were also present in the same.

Further, ICAR-IVRI, Kolkata organized an interaction programme with the dairy workers working at ICAR-National Dairy Research Institute, Kalyani where the dairy workers and the supporting staffs of NDRI, ERS were briefed about the importance of prudent and judicious use of antimicrobials for dairy animals. Apart from Dr Samiran Bandyopadhyay, PI (ICAR-INFAAR) and Senior Scientist, Dr P Dandapat, Co-PI(ICAR-INFAAR), Dr. Amitava Ghosh, Chief Technical Officer and Dr. Somnath Dutta, Asst. Chief Technical Officer were present in the said programme.



**World Antibiotic Awareness Week, 2020 at NDRI, ERS, Kalyani**

## 11. ICAR-NIVEDI, Bengaluru organized a weeklong awareness programme



A week long program to spread awareness regarding use of antimicrobials in day to day life among scientists, young researchers, school students and general public commenced on 18<sup>th</sup> November 2020. Introductory remarks by Dr. B. R. Shome underlined the history of WAAW and the role of global agencies supporting this event annually in November. He also discussed the impact of uncontrolled antimicrobial use during lockdown for COVID-19 pandemic and shared his concern over 2 fold rise in deaths then estimated 10 million due to AMR by 2050.



## AMR PLEDGE

Misuse or abuse of antimicrobials contributes to the development of antimicrobial resistance (AMR). Everyone is at risk for developing infections which may be caused by resistant microbes which antimicrobials fail to treat resulting in worsening the infection which is not only a threat to public health but increases healthcare cost also.

ICAR-NIVEDI recognizes AMR as a major public health threat and organizes awareness program during AMR week every year in the month of November since 2018. It can make a difference by committing to use antimicrobial judiciously.

I, \_\_\_\_\_ pledge to:

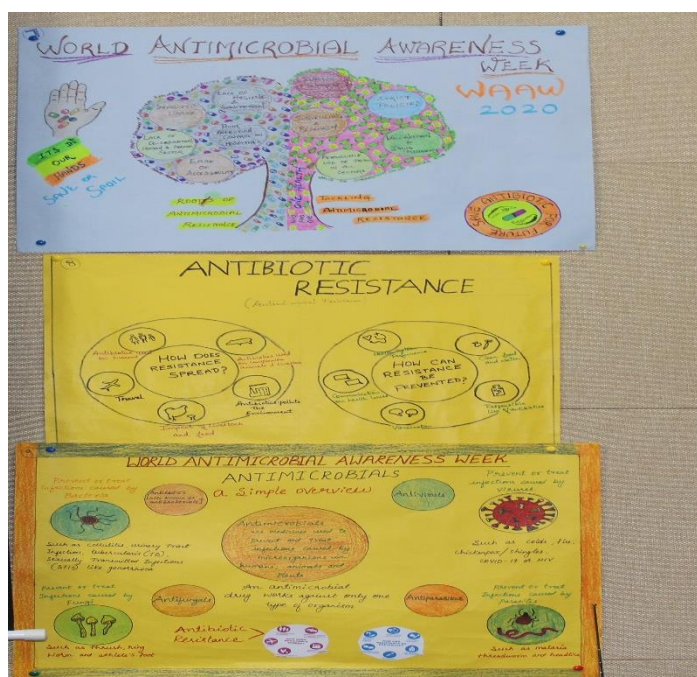
- a. Use antimicrobial only when prescribed to me by my Doctor/ healthcare provider and always complete my treatment regime
- b. Avoid self-medication and prescription sharing with my friends and family members
- c. Practice good personal hygiene and keep my surroundings clean
- d. Promote judicious use of antimicrobials to my family members, friends and colleagues



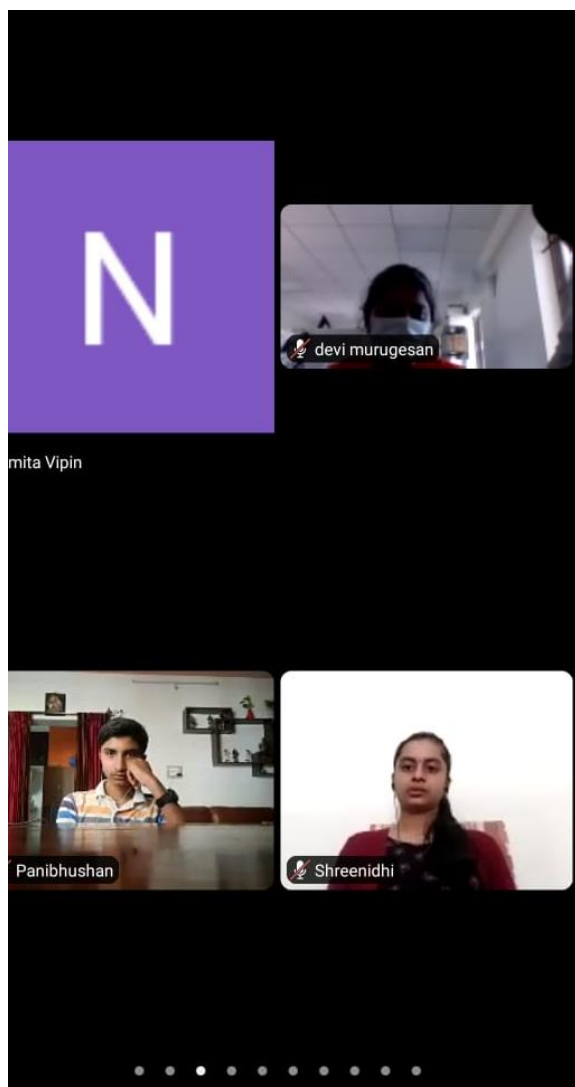


WAAW-2020 pledge taking ceremony at ICAR-NIVEDI, 18<sup>th</sup> November 2020

On the second day of the celebrations, Research and Technical staff from ICAR-NIVEDI participated in the drawing and slogan writing competition on the theme of Impact of Antimicrobial use.

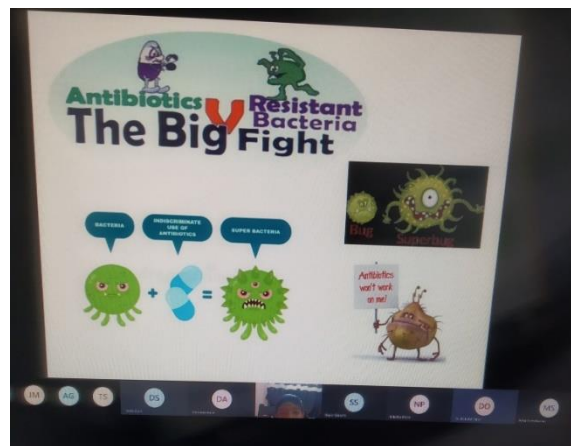


On the third day, an informal talk with students of Royal Concorde International School, M S Palya, Bengaluru was initiated by Ms. Devi Murugesan, SRF, Indo-UK project on AMR at ICAR-NIVEDI through zoom app. During the hour long session she interacted with 62 students from 7<sup>th</sup> to 9<sup>th</sup> grade on the topic of Antimicrobial use and its impact.



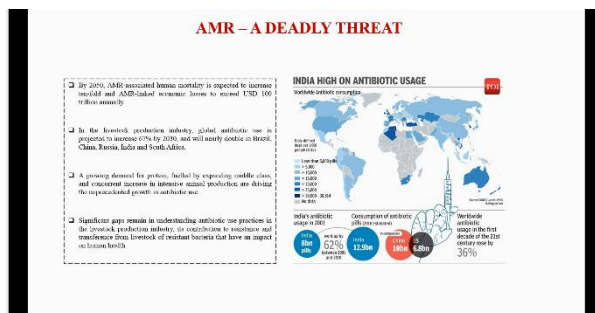
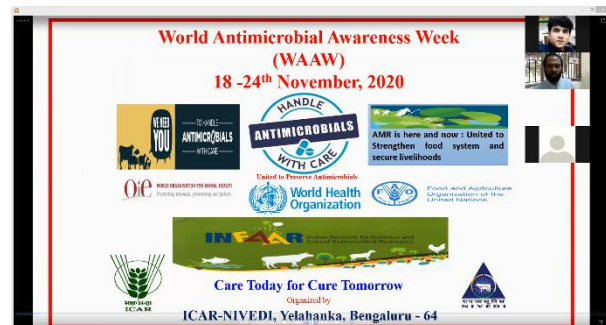


On the fifth day of the WAAW a ZOOM meet was conducted by Dr. Rakshit Ojha, Research Associate-II, Indo-UK (NEOSTAR) project. Dr. B. R. Shome, Principal Scientist and Director (Acting) ICAR-NIVEDI introduced the participants to the concept of AMR and its impact in today's world. He also spoke about the tripartite collaboration of WHO-FAO-OIE in mitigating the threat of AMR. He also presented on tackling antimicrobial resistance through One Health approach. A total of 65 people joined the meet from ICAR-NIVEDI, Dayanand Sagar University from Bengaluru and from International Livestock Research Institute, Sweden. Dr. Rakshit explained regarding Antimicrobial use/ misuse in the field of Agriculture, Aquaculture, Community, Hospital and Environmental settings, he also briefly highlighted the objectives of

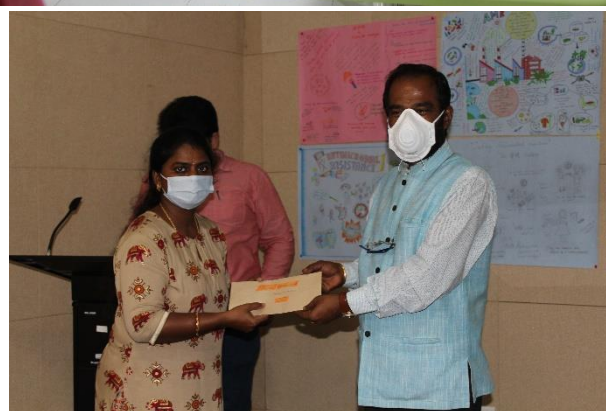




Global action plan and National action plan and how these aim to form strategies to tackle AMR.



On the sixth day of the WAAW, the eve on completion of one week of WAAW-2020, a formal closing ceremony was organized where all the scientific and technical staff gathered in the auditorium of Farmer's Hostel at ICAR-NIVEDI. Dr. Rakshit Ojha briefed the gathering regarding week long activities organized by AMR team of NIVEDI. Further drawings of NIVEDI staff and students from various schools was judged by Dr. Mudassar Chanda and Dr. M. Nagalingam Scientists at ICAR-NIVEDI. The winners of the competition were rewarded with cash prizes. School students were recognized for their talent and knowledge about antimicrobials and their use and were presented with mementoes.





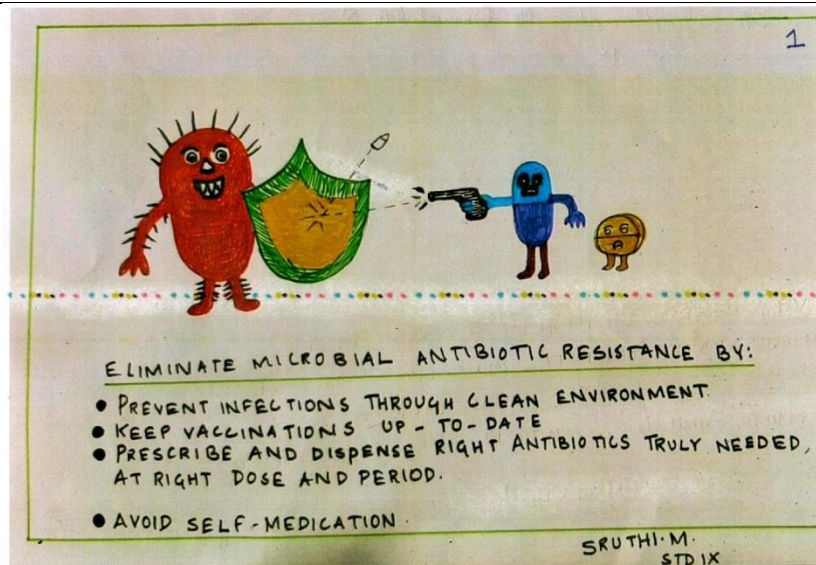
Group photo: Valedictory function WAAW-2020 18-24<sup>th</sup> November 2020, ICAR-NIVEDI, Bengaluru-64

## 12. WAAW 2020 observed by ICAR-CIFT Head quarter Kochi

The simplest and easiest way of containing AMR is the creating awareness among various stakeholders across the sector. ICAR-CIFT observed WAAW (World Antimicrobial Awareness Week) 2020 from 18 to 24 November 2020 with this year's theme "Antimicrobial: handle with care". This year ICAR-CIFT has taken five initiatives for AMR awareness. Due to COVID-29 related restrictions the observance of WAAW 2020 was limited to the ICAR-CIFT staff members and their family.

A painting competition was held school children of ICAR-CIFT staff members keeping with the theme of the year. The paintings received from children were adjudged by the experts and the first, second, third were awarded. Below are some of the winning entries.

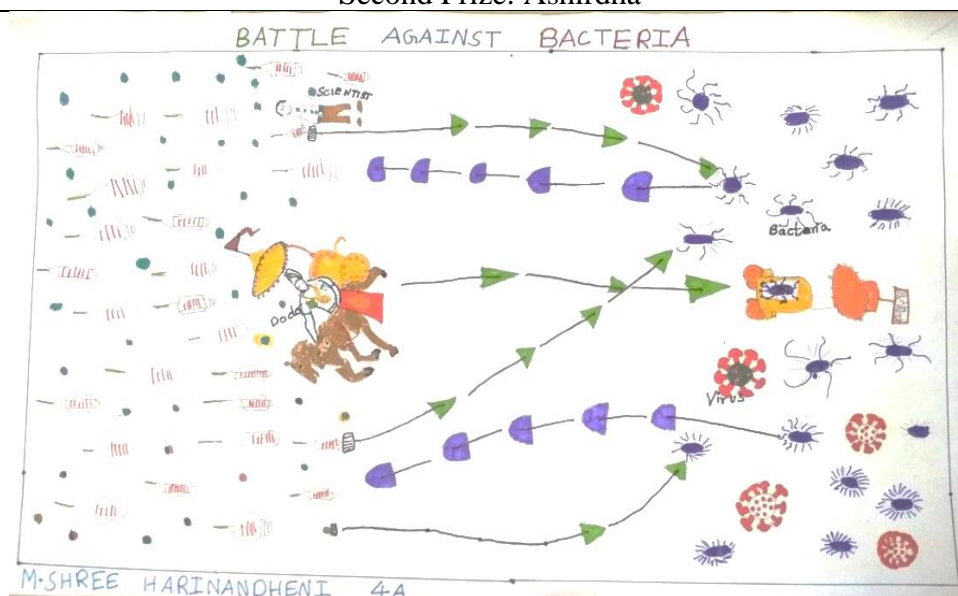




First Prize: Sruthi



Second Prize: Ashirdha



Third Prize: Shree Harinandheni



The Scholars of ICAR-CIFT were invited for the brochure making competition on the theme in line with WHO's theme Antimicrobials: Handle with care. Seven nominations were received. There were awarded prizes and others were given letter of appreciation for participations.

On 18<sup>th</sup> November, 2020 a meeting was held at MFB Division Dr. M.M. Prasad, PS & HOD addressed the gathering and stressed on the importance of taking the message to masses as it is crucial to reach ground level to make the AMR fight a success.

Dr. M.M. Prasad Principal Scientist and Head of Microbiology, Fermentation and Biotechnology Division and a member of the INFAAR delivered a talk to the staff members of ICAR-CIFT on "**Antimicrobial Resistance (AMR) Literacy: Need of the hour**" on 24<sup>th</sup> November.