

Promoting Aquaculture for Sustainable Food Production

UVAS

**Fisheries and Aquaculture
Newsletter****Introduction:**

The Department of Fisheries & Aquaculture, UVAS aims to provide excellence in higher education, training, research and development, services and advice in the fields of sustainable Fisheries and Aquaculture consequently contributing to economic and social development of the country.

Mission:

Produce highly skilled professionals in the field of Fisheries and Aquaculture to meet the demand of growing fisheries industry by resolving food and environmental problems.

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WORLD FISHERIES DAY 2021 OBSERVED AT UVAS

The Department of Fisheries and Aquaculture of the University of Veterinary and Animal Sciences (UVAS) Lahore in collaboration with Alltech Pakistan observed World Fisheries Day with the theme of "Fish is a future of protein" on November 25, 2021.

Various activities including a walk, seminar, fish netting, visit of fish processing & value edition unit, fish cooking & modal making competition organized to mark the day in befitting manner at Ravi Campus, Pattoki. Vice Chancellor University of Education Lahore (UE) Prof Dr. Talat Naseer Pasha was the chief guest and presided over the seminar while Vice-Chancellor of UVAS Prof. Dr. Nasim Ahmad, Dean Faculty of Fisheries and Wildlife Prof. Dr. Noor Khan, Dean Faculty of Animal Production and Technology Prof Dr. Anjum Khalique, Managing Director Alltech Pakistan Dr. Shahzad Naveed Jadoon, Chairman Department of Fisheries and Aquaculture Dr. Muhammad Hafeez-ur-Rehman, Director, Department of Fisheries Punjab, Dr. Ansar Cahthta,

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fisheries professionals from public & private organizations, fish feed representatives from industries, fish farmers, stakeholders and a large number of students and faculty members attended. While addressing the audience in the seminar, Prof. Dr. Talat Naseer Pasha said that it is direly needed that all the fisheries stakeholders must sit together and prepare a policy paper to address all those issues related to feed cost, unnecessary taxes and contamination of water faced by fisheries sector in the country. Speaking on the occasion, Prof Dr. Nasim Ahmed highlighted the collaboration of academia and fish industry. Following the footsteps of UVAS, many other well-known universities like Government College University Lahore (GCU), University of Education Lahore, Government College University Faisalabad (GCUF), Government College Women University Sialkot (GCWUF) and University of Sindh, Jamshoro celebrated the Fisheries Day this year.



12TH CONVOCATION (2021) OF THE UNIVERSITY OF VETERINARY & ANIMAL SCIENCE, LAHORE



12th Convocation (2021) of the University of Veterinary & Animal Science, Lahore was held on December 20, 2021 (Monday) at Main Campus, Lahore. In Convocation M.Phil. and Ph.D graduates of the Department of Fisheries and Aquaculture were awarded degrees and medals. Twenty-seven graduates in BS (Hons.) Fisheries and Aquaculture and 2 M.Phil. scholars were awarded Fisheries and Aquaculture Degree. Moreover, Dr. Fatima Sughra and Dr. Amna Ayub of the Department of Fisheries and Aquaculture were also awarded a Doctor of Philosophy (PhD) degree.



Dr. Fatima Sughra completed her doctorate degree under the supervision of Dr. Muhammad Hafeez-ur-Rehman and her research topic was “Immunogenic Potential of Different Adjuvanted Vaccines of *Aeromonas hydrophila* in Culturable Fish Species of Pakistan”. Currently, she is working as Lecturer in the University of Education, Township Campus, Lahore.



Moreover, Dr. Amna Ayub completed her degree under the supervision of Dr. Fayyaz Rasool with a research topic “Improving Performance of *Labeo Rohita* at Different Developmental Stages Fed Low Crude Protein Diets Supplemented with Limiting Amino Acids”. Immediately after PhD, Dr. Amna Ayub was selected and is serving as Assistant Professor in the Department of Zoology, Wildlife and Fisheries at University of Agriculture Faisalabad, Sub-campus Depalpur, Okara.

PROF. DR. NOOR KHAN WON PROJECT FROM PARB

Prof. Noor Khan won a project of worth 30.546 million Pkr from Punjab Agriculture Research Board (PARB). The title of the project is “Prospects of Induced Breeding of Catfish Species (*Pangasius Hypophthalmus* and *Wallago Attu*) for a Sustainable Supply of Seed to the Fish Farming Community of Pakistan”. The project will focus on the interaction of feed, growth, breeding potential and conservation of *Wallago attu* and *pangasius hypophthalmus*. The project will be a revolutionary step for fish farmers to boost their income and fish production with the introduction of this important group of fish species in aquaculture system of Pakistan. It will contribute directly to food security, livelihood and export earnings.



Wallago attu, commonly known as “Mali” is a carnivorous/omnivorous and hardy group of fish found in natural waters. This group has not gained any attention in Pakistan due to certain culture constraints such as high cannibalism, non-availability of hatchery, lack of rearing technology and quality fish seed, artificial feed. Yellowtail catfish, *Pangasius pangasius* locally known as pangas is one of the major food fish species, one of the largest and most important inland fisheries and highly productive culture system. However, unavailability of fry is the main constraint in the culture of this species as breeding techniques have not been established.

Speaking of the project, Prof. Khan said that the findings of this project would be a breakthrough in the fish farming in Pakistan. This project will focus on the conservation and direct interaction of feed and breeding potential which are not known for this group of fish species.

GOLD MEDALS WON BY FISHERIES SCIENTISTS OF UVAS IN ICAZ-2021

The 4th International Conference on Applied Zoology (ICAZ-2021) at Quaid-i-Azam University Islamabad, organized by The Applied Zoological Society of Pakistan with the collaboration of QAU with an aim to share, exchange and discuss new perspectives about the scientific advancements in various fields of Applied Zoological Sciences. In the ceremony awards were distributed among the scientists for their excellent work in the field of Zoology. Two Fisheries Researchers from Department of Fisheries & Aquaculture, University of Veterinary & Animal Sciences, Lahore, were awarded with Gold Medals in lieu of their achievements in Fisheries. Dr. Hamda Azmat, Associate Professor (UVAS) won Prof. Dr. Naeem Khan Gold Medal, Dr. Mahroze Fatima, Assistant Professor (UVAS) won Prof. Dr. Muhammad Afzal Gold Medal in Fish Nutrition. It is of immense pleasure for Department of Fisheries & Aquaculture and University of Veterinary & Animal Sciences, that the services/abilities of their scientists are acknowledged nationally and internationally. It is again of pleasure to remember that in the 3rd International Conference on Applied Zoology (ICAZ-2020), the Gold Medal for Fisheries contributions was also won by Prof. Dr. Noor Khan, a Fisheries Scientist of UVAS.

SUCCESSFUL PUNGASIOUS BREEDING AT FISH HATCHRY, UVAS

Department of Fisheries & Aquaculture, University of Veterinary & Animal Sciences, Lahore, and the Department of Fisheries Punjab jointly conducted successful induced breeding experiments on pangasius first time in public sector at Sindhuwan Fish Hatchery, Near Head Baloki, Kasur. This is another great breakthrough in the history of aquaculture industry of Pakistan after successfully developing and disseminating induced fish breeding technology of carps and sex reversal technology of Tilapia.

This success has been achieved by Dean Faculty of Fisheries and Wildlife Prof. Dr. Noor Khan, working on two research projects from HEC (Prospects of Culturing and Induced Breeding of Pangasius in Pakistan) and PARB (Interactive Effect of Manipulated Artificial Feeds on the Growth and Breeding Potential of *Channa* spp.) with the partnership of Punjab Fisheries Department.

The postgraduate students and staff of UVAS and Fisheries Department are now fully trained to culture, handle and breed Pangasius fish in captive condition. After developing its live and artificial feed in the country the seed of this commercially important fish will be abundantly available both at public and private hatcheries for fish farmers not only to increase their production but significantly enhance per capita fish consumption and export of this fish and fish products to international markets like Far Eastern countries.



INTERNATIONAL WEBINARS ORGANIZED BY THE DEPARTMENT OF FISHERIES AND AQUACULTURE, UVAS

1. Aquaculture Disease and Health Management



The Department of Fisheries and Aquaculture, University of Veterinary and Animal Sciences, Ravi Campus, has successfully organized an international webinar entitled “Aquaculture Disease and Health Management” under the theme “**Fish Bacterial Diseases and Vaccination System**” on 6th October, 2021, in collaboration with Pakistan Science Foundation under a project entitled “Isolation, molecular characterization of pathogenic bacteria and development of fish vaccine for culturable fish species of Pakistan”.

Worthy Vice Chancellor, Prof. Dr. Nasim Ahmad, and Dean Faculty of Fisheries and Wildlife, Prof. Dr. Noor Khan welcomed the participants and international guest speakers in the opening note of the event. The seminar provided useful insight into the bacterial diseases and vaccination in aquaculture. **Dr. Tae-Jin Choi**, elaborated the microalgae as a bioreactor of fish oral vaccine production while **Dr. Margaret Crumlish**, focused on the emerging and re-emerging bacterial diseases affecting farmed tilapia that is gaining more attention now a day in Pakistan Aquaculture Sector. **Dr. Truong Dinh Hoai**, discussed on the "*Aeromonas veronii* caused disease outbreaks in channel catfish (*Ictalurus punctatus*) in Vietnam". This bacterial strain has recently been isolated in one of the fish species from Pakistan. All the presentations were excellently presented in a very effective and impressive way. Chief organizer Dr. Muhammad Hafeez-ur-Rehman, Chairman Department Fisheries and Aquaculture and event Secretary Dr. Farzana Abbas, Assistant Professor thanked all the honorable guests and participants for their active participation.

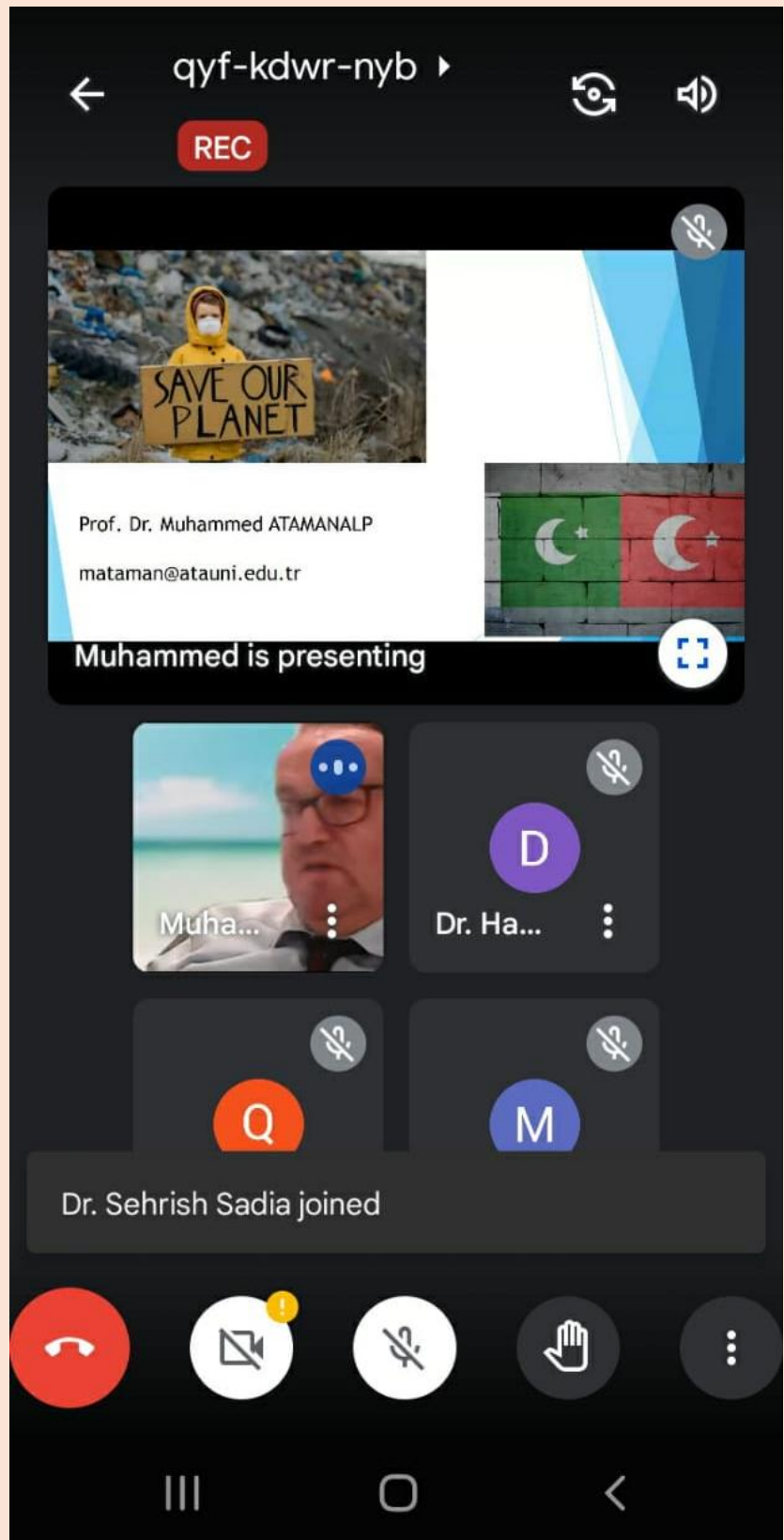


2. AQUATIC TOXICOLOGY: IMPACTS, ASSESSMENT AND REMEDIATION

Department of Fisheries and Aquaculture, University of Veterinary and Animal Sciences, Lahore has organized an International Webinar on **Aquatic Toxicology: Impacts, Assessment and Remediation** via Google Meet on Friday, November 6, 2021 at 1600 PST. Dean Faculty of Fisheries and Wildlife, Prof. Dr. Noor Khan, welcomed all the invited speakers and participants of the webinar. Vice Chancellor, University of Veterinary and Animal Sciences, Lahore, Prof. Dr. Nasim Ahmad, S.I., welcomed all the invited speakers, briefly explained the importance of this webinar in his inaugural session and congratulated Dr. Hamda Azmat, Associate Professor, Department of Fisheries and Aquaculture in organizing such a successful event with more than 100 participants.

Professor Dr Celine Alexia Godard-Codding, Associate Chair, Department of Environmental Toxicology, The Institute of Environmental and Human Health, Texas Tech University and TTU Health Sciences Center, Texas, USA was the first speaker of webinar who gave a detailed insight on Aquatic Toxicology and Protected Species Health Assessment. The second speaker of the webinar **Professor Dr. Muhammad Atamanalp**, Faculty of Fisheries, Ataturk University, Turkey presented a detailed and very informative lecture on Microplastics in Aquatic Toxicology. Lastly **Dr. Mehwish Faheem**, Assistant Professor, Government College University, Lahore, told the participants about Ameliorative potential of Medicinal Plants in Aquatic toxicology Research.

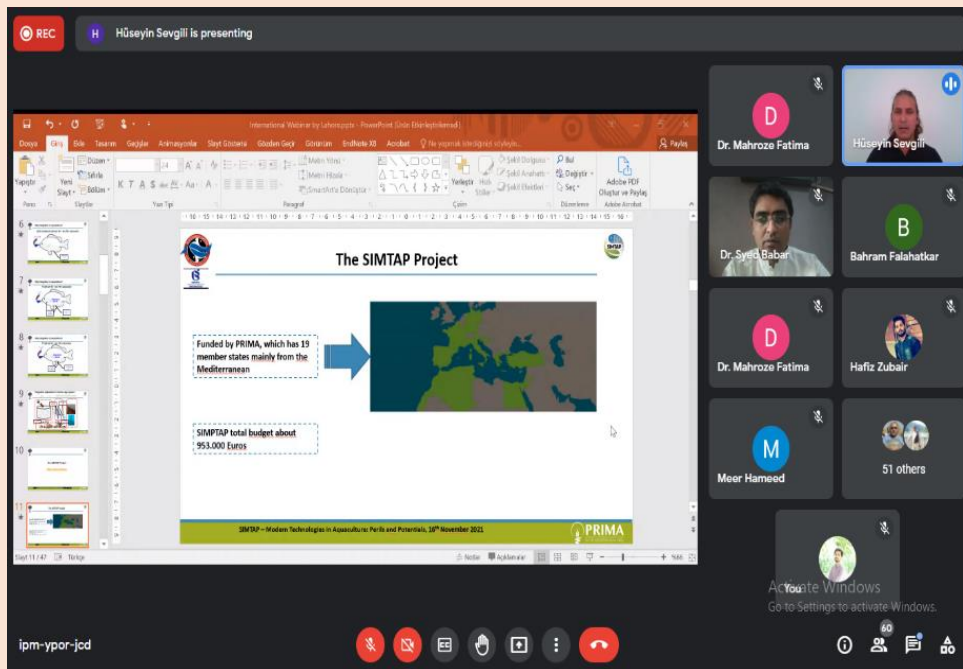
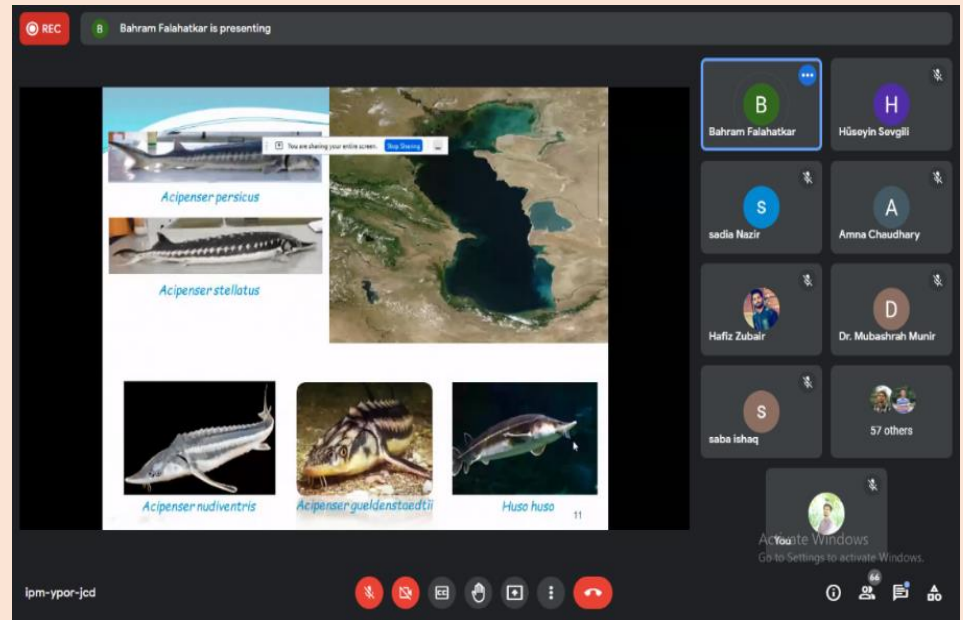
This webinar served as a forum for the discussion of interrelationships between environment and animal health. It provided an opportunity for toxicologists to learn about the toxic effects of pollutants on living organisms. It also helped to understand the environmental influence, development and progression of disease and create awareness among researchers about harmful consequences and effects of toxicants in food chain and food web. At the end Dr. Muhammad Hafeez-ur-Rehman, Chairman, Department of Fisheries and Aquaculture, gave vote of thanks to the invited speaker that despite having time difference they spared their time and gave very informative lectures.



3. MODERN TECHNOLOGIES IN AQUACULTURE: PERILS AND POTENTIALS

Department of Fisheries and Aquaculture, University of Veterinary and Animal Sciences, Lahore organized another International Webinar on **Modern Technologies in Aquaculture: Perils and Potentials** via Google Meet. The main purpose of the webinar was to exchange views on the advanced technologies and opportunities in Aquaculture which could help Aquaculture to determine its path for the expansion of services and facilities for mankind. This webinar served as a forum for the discussion on recent advanced technologies in aquaculture focusing explicitly on the ever-changing face of aquaculture, providing core scientific and commercially useful information on the remarkable growth in aquaculture production and in the advancement of new technological tools. Developments in these technologies will lead to the improvements in aquaculture production systems, resulting in increased production efficiency, higher product quality for consumers and a more sustainable industry.

Dean Faculty of Fisheries and Wildlife, Prof. Dr. Noor Khan, welcomed all the invited speakers and participants of the webinar and highlighted the importance of the seminar by stating “it is the need of hour”. Furthermore, he appreciated Dr. Mahroze Fatima, Assistant Professor, Department of Fisheries and Aquaculture on organizing a seminar with participants from industry and other universities.



Professor Bahram Falahatkar Fisheries Department Faculty of Natural Resources, University of Guilan, Iran and **Dr. Hüseyin Sevgili**, Associate Professor, Department of Aquaculture, Eğirdir Faculty of Fisheries, & Fisheries Application and Research Center, University of Applied Sciences, Isparta, Turkey. The Speakers delivered the aspiring lectures on the modern Aquaculture Technologies.

At the end Dr. Muhammad Hafeez-ur-Rehman, Chairman, Department of Fisheries and Aquaculture, UVAS presented vote of thanks to the invited speakers who despite their busy schedule found time to grace the occasion and shared their valuable words with us. Dr. Fatima, also thanked the participants for making the event a success and hoped to see them at any other forum soon.

FISHERIES RESEARCHERS PRESENTED THEIR WORK NATIONALLY AND INTERNATIONALLY

Faculty and postgraduate students of the Department of Fisheries and Aquaculture, UVAS actively participated (Oral presentations) in online international workshop on “Sustainable Agriculture and Aquaculture Development” on November 11-12, organized by Tra Vinh University (Vietnam) in collaboration with Southern Leyte State University (Philippines). Furthermore, the researchers of UVAS also delivered oral and poster presentations in the “3rd International Conference on Emerging Trends in Earth and Environmental Sciences (ETEES-2021)”, organized by CEES, University of the Punjab, on November 16-18, 2021, GC University Lahore in 1st Virtual Zoological conference on December 17-19, 2021. Dr. Muhammad Hafeez-ur-Rehman (Chairman, Department Fisheries and Aquaculture), Dr. Farzana Abbas (Assistant Professor), Miss Amina Shafique and Miss Nimra Mubeen (Postgraduate students) presented their valuable work on fish disease and health management. Similarly, the faculty also showed their keen interest in presenting their work on other such national and international forums.



FDB VISITED DEPARTMENT OF FISHERIES & AQUACULTURE, UNIVERSITY OF VETERINARY AND ANIMAL SCIENCES LAHORE.



The training students of Fisheries Development Board (FDB) visited Department of Fisheries and Aquaculture, UVAS. The Chairman Department of Fisheries & Aquaculture, Dr. Muhammad Hafeez Ur Rehman welcomed all the visitors, briefed about the Fish Processing Unit and highlighted the importance of Fish Processing Industry in the growing economy of Pakistan. He described the functioning and the value-added fish products made by the Processing Plant of UVAS in details. Dr. Shahid Sherzada, Lecturer, Department of Fisheries and Aquaculture, UVAS, briefed the members about the Fish Seed Rearing Unit & Fish Breeding Hatchery and described the importance of hatcheries and rearing units in the promotion of fisheries sector of Pakistan.



MOU BETWEEN PUNJAB FISHERIES DEPARTMENT AND DEPARTMENT OF FISHERIES & AQUACULTURE, UVAS

The standing committee of cabinet on legislative Business Considered and approved the MOU between Department of Fisheries Punjab and University of veterinary and Animal Sciences, Lahore, as vetted by the Law & PA Department.

THE FISH PROCESSING UNIT OF UVAS STARTED THE SALE OF FOLLOWING FISH VALUE ADDED PRODUCTS IN 2021

The Fish Processing Unit, Department of Fisheries and Aquaculture, UVAS, has started the production and sale of following value-added fish products along with raw fish to increase the consumption of fish among all age groups.



Frozen Processed Tilapia



Marinated Tilapia



Fried Fish



Fish Burger



Fish Nuggets



Marinated Rohu

PROF. DR. NOOR KHAN JOINED THE UNIVERSITY OF THE PUNJAB

Prof. Dr. Noor Khan relieved from University of Veterinary and Animal Sciences, Lahore on December 31, 2021, and Joined the Institute of Zoology, University of the Punjab, Lahore. The Vice Chancellor University of Veterinary and Animal Sciences Lahore, Prof. Dr. Naseem Ahmad appreciated Prof. Khan's services for the UVAS, presented him a shield of honor and wished him luck for his new assignments in University of the Punjab, Lahore.



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