Women Warriors of ICMR
Women scientists leading India’s fight against COVID-19

e-Samvaad (March, 2021)
Special edition on International Women’s Day

INDIAN COUNCIL OF MEDICAL RESEARCH
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The Coronavirus Pandemic is amongst the most challenging public health crises faced by the scientific and research community. A rapidly mutating, highly contagious novel coronavirus spread across international borders and resulted in lockdowns across the globe. It required a time and resource sensitive strategy based on accurate scientific research and innovation.

Indian Council of Medical Research being India's apex research body took the responsibility of spearheading the research and finding answers on how to best deal with coronavirus pandemic in India. In these efforts, the contribution of women scientists of ICMR has been invaluable. Women Scientists have led and were involved in every step of all the process which has made India's remarkable comeback possible. From isolating the strain, developing diagnostic tools, preparing guidelines, public health advisories, training staff, employment of technology, coordinating international efforts, overseeing local executions and following up on all COVID-19 related developments, women scientists have expanded the scope of research at an unprecedented pace.

This special edition of E-Samvaad is a small token of appreciation and salute to all women scientists at ICMR who worked under strenuous conditions and at great personal risk to help fight the pandemic. This is for women warriors of ICMR who are leading India's fight against COVID-19.

**Dr. Priya Abraham**
Director
ICMR-National Institute of Virology (NIV), Pune

India's laboratory based response to COVID-19 was led by ICMR-National Institute of Virology (NIV) situated at Pune. NIV was the only laboratory that formulated the RT-PCR methodology and started COVID-19 testing. NIV has many achievements to boast of like confirming the first case of COVID-19 entering the Indian boundary to culturing the virus and its variants (UK, South Africa & Brazil) to the development of COVID KAWACH ELISA and eventually the indigenous vaccine, 'COVAXIN'. Dr. Priya Abraham is leading the charge at the eminent institute. She believes that leaders have to lead from the front and work hard, in fact harder than their team. And they should be able to understand the importance of human resources – of the people who work for them. She spent many sleepless nights in the pursuit of achieving one goal and moving to the next swiftly. It is due to her leadership skills that NIV has delivered what was expected of a national virology institute in the tumultuous time of viral pandemic.

**Dr. Sanghamitra Pati**
Director
ICMR- Regional Medical Research Centre (RMRC), Bhubaneswar

Dr. Sanghamitra Pati is the director of ICMR-Regional Medical Research Centre, Bhubaneswar. She led the fight against COVID-19 pandemic and contributed significantly to the effective management and control of COVID-19 in Odisha, as well as neighboring states of Jharkhand and Chhattisgarh. Since the very onset, Dr. Pati ensured a smooth and seamless coordination between ICMR and the Odisha government towards strengthening of COVID-19 testing, surveillance and logistics management. RMRC, Bhubaneswar initiated the COVID-19 testing at its Regional Virus Research and Diagnosis Laboratory (VRDL) in March, 2020 and was the only testing facility in entire Odisha at that time. But, to fulfill the increasing testing needs, she operationalised the high throughput platform COBAS-6800 by setting up another BSL-II plus facility in record time. She was also involved in state-wide multiple rounds of sero surveys in Odisha, Jharkhand and Chhattisgarh, in addition to the national sero surveys.
**Dr. Hemalatha Rajkumar**  
**Director**  
ICMR-National Institute of Nutrition (NIN), Hyderabad

Dr. Hemalatha as the Director of the ICMR-National Institute of Nutrition, the largest nutrition research organisation in the country, led the fight against COVID-19 pandemic and contributed significantly in various capacities. Apart from managing one of the largest COVID-19 depots, and organizing rural and urban sero-surveillance, she meticulously planned and contributed as the Member of the Interministerial Central Team (IMCT) constituted by Government of India. Dr. Hemalatha, as a team member, has surveyed the containment zones, quarantine facilities, labour camps and COVID-19 dedicated hospitals during the peak of pandemic time. Her contributions in terms of developing intervention strategies through resource lectures, articles and App development at national level has led to successful implementation of government strategies for containment of the disease. Her contribution in extending quality animal (Hamster) support towards COVID-19 vaccine development in India helped expedite the development leading to indigenous vaccines being made available in record time.

**Dr. Shalini Singh**  
**Director**  
ICMR-National Institute of Cancer Prevention and Research (NICPR), Noida

Dr. Shalini Singh established the country’s largest High Throughput Viral Diagnostic facility for COVID-19 under the most stringent lockdown conditions with a capacity of 10,000 RT-PCR tests a day. More than 100 lab staff were hired and trained to work in 24x7 mode providing service to districts of Western UP and Delhi. Her team established an RT PCR Lab at Leh in May 2020 by providing necessary equipment and consumables. High Throughput RNA Extractors were also transported to support labs at Chandigarh, Ahmedabad and Chennai. Her team supported the ICMR Hqrs in the initial phase for purchase of RT-PCR testing kits and reagents for the depots. As Director of the WHO-FCTC Global Knowledge Hub on Smokeless Tobacco at NICPR Noida she raised an important issue of comprehensive ban of SLT products (manufacture and sale) along with ban on their use and spitting in public places. The MoHFW issued a comprehensive ban on Smokeless Tobacco and spitting in public places in India to contain spread of COVID-19 and the Union Home Ministry revised its guidelines for lockdown issued to contain COVID-19 by considering the act of spitting a punishable offence under the strict Disaster Management Act. 20 Indian states and a Union Territory implemented the Tobacco ban across India. She also ably led the three rounds of National sero-surveillance of SARS-CoV-2 infection in Western UP and containment zone of Delhi. Her team participated in the follow-up of COVAXIN recipients contributing to national data.

**Dr. Shanta Datta**  
**Director**  
ICMR-National Institute of Cholera and Enteric Diseases (NICED), Kolkata

Under the leadership of Dr. Shanta Dutta, ICMR-NICED (National Institute of Cholera and Enteric Diseases) was involved in various emergency activities in connection with COVID-19 infection during the pandemic situation. Since the inception, ICMR-NICED was designated as the regional center for testing clinical samples by RT-PCR for diagnosis of COVID-19 infection in West Bengal and other Eastern states of India. NICED has completed testing of more than 168780 clinical samples by RT-PCR and was also involved in capacity building for RT-PCR test to the lab personnel of both the Government medical colleges and hospitals and non-govt. labs in West Bengal. NICED was involved in kit validation, kit distribution and various multi centric vaccine trials to determine their safety, efficacy and immunogenicity against SARS-CoV-2 infection like Recombinant BCG (rBCG) vaccine trial and phase-III trial of the indigenous vaccine COVAXIN.
Dr. Smita Mahale, Former Director, ICMR-NIRRH was at the forefront of ICMR-NIRRH’s efforts in the fight against COVID-19. Under her leadership, ICMR-NIRRH undertook several activities as part of ICMR’s response to COVID-19. She was instrumental in setting up the central and regional depots for distribution of COVID-19 diagnostic reagents and the centre for validation and batch testing of COVID-19 diagnostic kits. Her efforts led to the establishment of a COVID-19 diagnostic facility at MRHRU, Dahanu, Palghar district, Maharashtra and an automated, high-throughput COVID-19 diagnostic facility at ICMR-NIRRH. Besides this, she was the coordinator for the PregCOVID registry, a database of pregnant women with COVID-19. She is also actively involved in research on COVID-19 and has co-authored several publications related to the impact of COVID-19 on pregnancy.

Dr. C Padmapriyadarsini
Director
ICMR-National Institute for Research in Tuberculosis (NIRT), Chennai

Another ICMR institute that contributed immensely during COVID-19 is ICMR-National Institute for Research in Tuberculosis. This institute, most famous for its contribution in the arena of Tuberculosis rose to the occasion and delivered in terms of conducting clinical trials, COVID-19 testing and also acted as depot of ICMR in the country for stocking and distribution of COVID-19 testing kits and reagents to the regional labs. Dr Padmapriyadarsini quickly planned and executed two important clinical trials – first one on repurposing BCG vaccine for the prevention of morbidity and mortality among elderly individuals from COVID-19 and another one is testing the safety & efficacy of COVISHIELD.

Dr. Smita Shrikant Kulkarni
Head-Division of Virology
ICMR-National AIDS Research Institute (NARI), Pune

Dr. Smita Kulkarni’s decisive leadership was instrumental in expediting the development of facilities for COVID-19 diagnosis by RT-PCR in a very short time. She led the team building effort to strengthen the COVID-19 diagnostic infrastructure and promoted research on SARS-CoV-2. She supervised all the activities related to diagnosis by RT-PCR making rampant scaling up possible in record time. She was designated as the voice of ICMR and was an effective messenger for ICMR-NARI in local meetings organized by the Collector and Commissioner. This helped the administration make well informed decisions regarding COVID-19 related rules. She was also invited as a speaker on the Rajya Sabha TV to share her expertise with the nation.

Dr. Seema Sahay
Head-Division of Social and Behaviour
ICMR-National AIDS Research Institute (NARI), Pune

Dr. Seema Sahay, Scientist at ICMR-NARI conducted studies of the attitude of the rural communities towards personal protective measures and led Maharashtra site for ICMR task force study on COVID stigma. As the member of research group under The National Task Force on COVID-19, she has contributed to the development of guidance documents for 1) Psychosocial Counselling for COVID-19 positive patients and their families. 2) Psychosocial counselling for health care providers and their family members, and 3) Psychosocial counselling for COVID-19 tested individuals in isolation/quarantine waiting results. As her ethical responsibility she strove to provide preventive drugs to mitigate the risk of acquiring HIV among MSM participating in PrEP demonstration study.
As the Head of Virology unit, Dr. Gupta spent sleepless nights designing the response strategy since the initial days of SARS-CoV-2 pandemic. The humongous task of ramping up the national testing capacity was put on her shoulders. She made sure that no stone is left unturned and roped in different sectors of the government machinery along with WHO-India & SEARO to create a mechanism of ensuring high quality testing by virtual lab inspections, troubleshooting, organizing training and implementing Quality Control program. She formulated testing protocols, advisories, conducting validations and commissioning testing platforms like RT-PCR, TrueNat and CBNAAT for increasing outreach of testing. She also coordinated development of COVID-19 vaccines, preclinical animal studies, clinical trials of ‘COVAXIN’ and ‘COVISHIELD’ as well as other vaccines in pipeline (Novavax, ZyCoV-D and Bio-E).

Responding to the need for generating evidence on treatment options for COVID-19, Dr. Godbole, a senior scientist at ICMR- National AIDS Research Institute, Pune, successfully led the ICMR-WHO Solidarity Pandemic Emergency Treatment Trial (WHO Solidarity Trial) as the National Coordinator and Principal Investigator. This multi-country multicenter trial was initiated in India in April 2020, within a month of commitment to joining this global effort following all national and local regulatory approvals. Initially, four potential antiviral agents were evaluated in the trial with nearly a thousand fifty participants in 26 sites across India. The interim results demonstrated little or no effect on overall mortality, initiation of ventilation and duration of hospital stay in hospital. Negative results are extremely important because they help avoid use of ineffective drugs saving costs and preventing side-effects and a false sense of security. Thus this trial was very important for clinical care of COVID-19.

There continues to be a great concern about the impact of COVID-19 among people living with HIV (PLHIV). She worked with the district AIDS prevention control unit and community partners to sustain HIV services provision (treatment and counseling) for PLHIV at the institutional ART centre and Research Unit during the lockdown period. She along with her team conducted a survey on knowledge, attitude and practices towards COVID-19 among PLHIV and efforts were taken to reduce anxiety and fear by giving correct information to PLHIV on COVID-19 prevention. She has initiated a study on prevalence of anti-SARS-COV-2 IgG antibodies, neutralizing antibodies and T-cell immune response among HIV infected individuals.

Dr. Thakar was designated as the lead scientist for the important task of validation of the Covid 19 serological kits for detection of IgG and IgM and total antibodies. She was then also involved in the development of the characterised panels for the same. This systematic approach has helped in making quality kits available for use in the market. She was also involved in assessment of the cell mediated immune response in COVID-19 vaccines such as COVISHIELD and will be overseeing the same in upcoming vaccines such as COVOVAX and a mRNA vaccine.
Dr. Sarah Cherian  
Scientist  
ICMR-National Institute of Virology (NIV), Pune

Heading the Bioinformatics group at ICMR-NIV, Pune, Dr. Cherian has played a vital role towards understanding the viral lineages, the geographical and temporal dominance of SARS-CoV-2 strains in India and exploring drug repurposing for treatment. She was part of the team that characterized the first two full genomes of the SARS-CoV-2 viruses from India. She represents ICMR-NIV as the nodal communication officer for media and communication activities and has contributed significantly to providing visibility of the institute. She has 12 research publications including a review and perspective in COVID-19. She has contributed to three book chapters in COVID-19 including one in the Manorama year book 2021.

Dr. Kavita Lole  
Scientist  
ICMR-National Institute of Virology (NIV), Pune

Dr. Kavita Lole was a member of the team at the NIC, Pune, to validate swabs, virus transport medium, RNA extraction kits and RT-PCR kits. She was involved in training at the new validation centers. She served as a member of the expert committee formed by ICMR to critically evaluate reasons for failures of indigenous kits and allow re-validations after significant improvements. She also contributed to development of an RT-PCR assay that bypassed the RNA extraction step. She finds it most satisfying that she could make a difference to the Make in India Kits.

Dr. Anuradha Tripathy  
Scientist  
ICMR-National Institute of Virology (NIV), Pune

Dr. Anuradha Tripathy worked and analyzed the immune response in COVID-19 patients during infection and recovery. She also investigated the CMI response of the ZyCoV-D DNA vaccine candidates in Rhesus macaques. Her comprehensive research identified biomarkers of recent SARS-CoV-2 infection and indicated that immunological reaction triggered in the Indian patients is mainly of pro-inflammatory character; T cell mediated and due to the reduced antiviral cytokine response. Detection of CTL response in recovered individuals and also in anti-SARS antibody negative recovered individuals established its putative role. Her current involvement includes identifying correlates of protection against SARS-CoV-2.

Dr. Jayati Mullick  
Scientist  
ICMR-National Institute of Virology (NIV), Pune

Dr. Jayati has been actively involved in leading the antiviral screening of potential repurposed/novel drugs for SARS-CoV-2. She was the lead for testing and validation of equipment/commercial technologies based on ozone and negative ion generation for surface decontamination of SARS CoV-2 from PPE. As chairperson of the ICMR-NIV Animal Ethics Committee, Dr. Jayati has actively worked to ensure smooth decision making for several primate experiments in relation to vaccine development for SARS-CoV-2. She has also led training programs on COVID-19 for the National Disaster Relief Force, National Centre for Cell Science, apart from institutional situational awareness training.
Dr. Roli Mathur
Scientist
ICMR-National Centre for Disease Informatics and Research (NCDIR), Bengaluru

Dr. Roli Mathur heads the ICMR Bioethics Unit at ICMR-NCDIR, Bengaluru and is the nodal officer for DHR ethics committee registry. In February 2020, under her leadership, ICMR Bioethics Unit was recognised as the first WHO collaborating centre for strengthening ethics in the South East Asia Region. Due to her efforts, in April 2020 India became one of the first countries in the world to publish the ICMR National Guidelines for Ethics Committees reviewing research during COVID-19 pandemic as well as the SOP for review of research in an emergency. As the member secretary of Central Ethics Committee on Health Research, which serves as the National Ethics Committee, she coordinated robust ethics review of large multicentre studies on clinical, basic sciences or epidemiological aspects of COVID-19 conducted by ICMR scientists across the country.

Dr. Pragya D Yadav
Scientist
ICMR-National Institute of Virology (NIV), Pune

Dr. Yadav is the scientist leading Asia’s first state-of-the-art facility to handle high risk pathogens at NIV, Pune. Her efforts and perseverance resulted in the isolation of SARS-CoV-2 virus. She played a critical role in development of ELISA and point-of-care diagnostics that were used in countrywide surveillance and in many field labs for screening COVID-19 samples and helped in management of the patients. Her contribution in conducting animal studies for the development of indigenous vaccines (COVAXIN & ZyDcoV) has been immense. She published 34 papers in peer reviewed journals and answered many unknown facts of virus and disease, which helped in strengthening the country’s response and by developing vaccines made India self resilient in this tough time.

Dr. Luke E Hanna
Scientist
ICMR-National Institute for Research in Tuberculosis (NIRT), Chennai

Dr. Luke Elizabeth Hanna, working as Scientist E in the ICMR-National Institute for Research in Tuberculosis, took the lead in setting up a state-of-the-art BSL-II Plus facility for COVID testing in record time and led the testing team at NIRT. She was also in charge of the ICMR Central Depot for COVID reagents at NIRT, helped with validation of testing kits, and supported the national COVID seroprevalence surveys as well as COVID-19 vaccine trials of ICMR. The institute is proud of its efficient and dedicated lab team who gave their best services to support the nation’s war against the pandemic every step of the way.

Dr. Aparna Mukherjee
Scientist
ICMR (Headquarters), New Delhi

During the initial days of COVID-19, important evidence was provided by the World’s largest plasma therapy trial in form of PLACID trial. This trial was also led by Dr. Aparna Mukherjee, who heads the Clinical Trial and Health Systems Research Unit at ICMR Headquarters. This study was conducted in 39 centers across the country with utmost scientific rigor and helped inform the policy makers and clinicians in India regarding the cautious use of convalescent plasma. Now, she is actively involved in the National Clinical Registry of COVID-19 – a comprehensive clinical database for the hospitalized COVID-19 patients.
**Dr. Smita Asthana**  
Scientist  
ICMR-National Institute of Cancer Prevention and Research (NICPR), Noida  

Dr Smita Asthana conducted critical SARS-CoV-2 sero-surveys in Western part of Uttar Pradesh. She promptly responded to the call despite being at heightened risk and wholeheartedly worked for the survey with determination to serve the country by generating authentic data. She played the best role to ensure support from local Govt district health authorities and other stakeholders for conducting the surveys. She efficiently monitored and executed the surveys by training, supervising and boosting the staff to fully fill the targets by managing logistics and ensuring adequate safety precautions. Her sharp vision, meticulous planning and execution led to successful and timely completion of the surveys.

**Dr. Madhu Chanda Mohanty**  
Scientist  
ICMR-National Institute of Virology, Mumbai Unit  

Dr. Mohanty has been actively involved in the smooth running of the COVID-19 diagnostic facility at the ICMR-NIV, Mumbai-Unit. She studied the role of the innate immune response genes as biomarkers, predicting disease outcome at the entry point of SARS-CoV-2. Her investigations revealed increased MDA-5 (melanoma differentiation-associated protein-5) in upper air-way cells of asymptomatic positive patients suggesting production of interferons which restricts disease progression. She also initiated investigation on SARS-CoV-2 in stool samples of asymptomatic children with Primary Immuno-deficiency (PID). The studies confirmed prolonged excretion of SARS-CoV-2 in these patients raising concerns of feco-oral transmission posing risk to the community.

**Dr. Arati Mane**  
Scientist  
ICMR-National AIDS Research Institute (NARI), Pune  

Dr. Arati Mane, a clinical microbiologist by training, is the Nodal Officer for SARS-CoV-2 RT-PCR based diagnostic testing at ICMR-NARI. She has been involved with the diagnostic reporting, coordination with sample collection centers/hospitals, data uploading on the government portals and communications with the state health authorities for ICMR-NARI. She has very efficiently led the study for validation of dry swab RNA-extraction-free method for SARS-CoV-2 diagnosis.

**Dr. Deepti Parasher**  
Scientist  
ICMR-National Institute of Virology, Pune  

Dr. Parashar was part of the test reporting team during the COVID-19 pandemic. For timely reporting, she coordinated with team members and successfully reported diagnostic results. Further, towards antivirals for SARS-CoV-2, she has predicted potential siRNAs based on the evaluation of in-silico predictions tools to ensure minimal non-specific binding. The predicted siRNAs could be useful in developing RNAi based therapeutics against SARS-CoV-2 if found effective by in-vitro and in-vivo studies.
Dr. Ragini Kulkarni
Scientist
ICMR-National Institute for Research in Reproductive Health (NIRRH), Mumbai

Dr. Ragini Kulkarni co-ordinated the establishment of a COVID-19 diagnostic facility at MRHRU, Dahanu, Palghar district, the first government facility to initiate services in this area. She also implemented two ICMR task force projects on COVID-19 as a site principal investigator. One of the projects assessed the impact of COVID-19 infection on maternal and child health services provided through the public health system in three districts of Maharashtra. The other project was aimed at understanding the mental health status of health care personnel involved in COVID-19 screening, testing and treatment and the stigma faced by them, in two hospitals in Mumbai, Maharashtra.

Dr. Saritha Nair
Scientist
ICMR-National Institute of Medical Statistics (NIMS), Pune

Dr Saritha Nair, a demographer and social scientist at the ICMR-NIMS, was deputed by the DG, ICMR, to be part of the Media Response team that persistently worked towards dissemination of COVID-19 testing and management strategies. Additionally, she has been the lead researcher in a multicentric community-based research to understand stigma related to COVID-19. The mixed methods study was conducted among COVID recovered individuals and people from the community and is expected to provide strategies for mitigation of stigma. She was also part of a study to assess impact of COVID-19 on Maternal and Child health Services aimed to inform the program and policy decisions.

Dr. Kavitha Rajsekhar
Scientist
Department of Health Research

Dr. Kavitha coordinates the Health Technology Assessment program of DHR and was a part of the core team responsible for strategic planning for testing enhancement to 10 lakh tests per day. She was also responsible for daily projections on availability of stock, report preparations on tests conducted state wise, procurement and orders placed for diagnostic kits for communication to Cabinet Secretariat and PMO. During the surge of cases in the Delhi, she was part of the team which enhanced RT-PCR testing. Under the Health Technology Assessment program she coordinated the study to assess the life cost analysis of Roche machines for procurement and the cost of RT-PCR tests.

Dr. Kangjam Rekha Devi
Scientist
ICMR-RMRC, Dibrugarh

Dr. Kangjam Rekha Devi is a renowned scientist of National and International repute and has completed her PhD in the field of Microbiology from Japan. She carried out three sero surveys in Assam during lockdown under challenging circumstances to understand trend in seropositivity. Part of the studies was published in the Indian Journal of Medical Research and The Lancet Global Health as a co-author. Dr Rekha also investigated psycho-social issues and stigma in COVID-19 patients and health workers. She also contributed to the study on the impact of COVID-19 on maternal and child health services through the public health system. Dr Rekha contributed to studying factors related to COVID-19 stigma, a mixed-method study. In a true sense, Dr Rekha was a front line COVID warrior, as evident from her contribution as a leader of research activities due to COVID-19 in India’s North Eastern Region.
Dr. Anita Shete  
Scientist  
ICMR-National Institute of Virology (NIV), Pune

As a core member of the Maximum Containment Facility, Dr. Shete contributed in development of the first anti-SARS-CoV-2 Human IgG detection ELISA. This assay was developed and transferred in record breaking time to seven commercial partners. During the initial phase of the pandemic no commercial assay was available to understand the humoral response to the disease. The actual burden of infection and its spread can be determined using this COVID KAVACH ELISA. She also optimized the antiviral screening platform which was the need of the hour during the pandemic of SARS CoV-2. She has published 22 research articles in COVID-19.

Dr. Rajalakshmi Vishwanathan  
Scientist  
ICMR-National Institute of Virology (NIV), Pune

As the member secretary of the ICMR-NIV Ethics Committee, Dr. Rajalakshmi took the lead to streamline the Ethics Committee procedures as per the ICMR COVID guidelines. She facilitated and supported the smooth processing and decision making for more than 25 institutional/multicenter research proposals for COVID-19. She has also been actively involved in situational awareness training and IEC activities for COVID-19 and provided support for drafting of MoUs/MTAs and License Agreements. Dr. Rajalakshmi is one of the team members for the COVID-19 vaccination drive for NIV staff for which she has liaised smoothly with local health officials and vaccination centres.

Dr. Varsha Potdar  
Scientist  
ICMR-National Institute of Virology (NIV), Pune

Dr. Potdar, heading the National Influenza Centre (NIC) successfully developed the in-house real time RT-PCR assay and synthetic positive controls which helped in the identification of the first three cases. She provided technical support to establish a nation-wide laboratory network (~1200) for diagnosis and monitoring QA/QC. She is involved in kit validations, genome analysis, development of real time-based kit to detect UK and South Africa variants, a combo-kit for influenza and COVID. She has worked as a technical committee member for ICMR and state procurement and incharge for supply and stock for diagnostic commodities. She has 16 research publications in COVID-19. She was felicitated by the governor of Maharashtra for her contribution in fight against COVID-19 pandemic.

Dr. Mallika Lavanya  
Scientist  
ICMR-National Institute of Virology (NIV), Pune

Having joined ICMR-NIV in January 2020, Dr. Lavanya encountered a huge challenge in the pandemic and a big responsibility of making reagents for COVID-19 testing at a time when the whole country was counting on the Institute for providing guidance and supplying reagents for nationwide testing. This continued until a supply of reagents for 5.7 million samples was undertaken. She initiated the study on the shedding of SARS-CoV-2 in feces of positive patients and published an article on the transmission of COVID-19 infection within a family cluster in Pune.
Dr. Vandana Saxena
Scientist
ICMR-National AIDS Research Institute (NARI), Pune

Dr. Vandana Saxena has been involved since the initiation of COVID-19 work at ICMR-NARI and contributed in setting up the SARS CoV-2 diagnosis facility. She has been instrumental in carrying out and supervising Real time PCR for SARS CoV-2 detection. She is the nodal person for the validation of RT-PCR kits at ICMR-NARI. She is also involved in ‘Dry Swab Validation’ study. Dr. Saxena also contributed to the capacity building by training the staff for BSL-II/III related work at ICMR-NARI. She has also given hands-on training to the other institution like Yashwantrao Chavan Memorial Hospital, Pune to carry out RT-PCR based SARS CoV-2 testing.

Dr. Sampada Dipak Bangar
Scientist
ICMR-National AIDS Research Institute (NARI), Pune

Responding to the need to understand the true extent of infection in the community, population-based sero-prevalence surveys were planned in 60 districts across India. Dr. Sampada Bangar, who is a medical epidemiologist by training successfully led the three rounds of Population-Based Sero-prevalence survey in six districts of Maharashtra, which was a highest hit state by COVID 19, covering 2400 individuals in each round. She also contributed significantly in studying factors related to COVID-19 stigma in Pune and Nandurbar districts of Maharashtra and studying determinants of adherence to protective measures against COVID-19 infection in rural communities in Satara district of Maharashtra.

Dr. Megha Mamulwar
Scientist
ICMR-National AIDS Research Institute (NARI), Pune

Dr. Mamulwar was identified as a member of COVID-19 response team right at the beginning of the pandemic. As a part of this team, she was responsible for data management of COVID-19 testing data for ICMR-NARI. She effectively assisted in the implementation of the WHO Solidarity trial. She was also involved in obtaining HMSC approval, EC approval, site selection and training of the concerned staff at the selected sites. She headed a team of five Information Technology engineers who were responsible for critical IT assistance for the institute during COVID-19 pandemic.

Dr. Amrita Rao
Scientist
ICMR-National AIDS Research Institute (NARI), Pune

Dr. Amrita Rao, played a crucial role for evaluation of the rapid and ELISA based COVID-19 antibody test kits and validation of dry-swab RNA extraction free method, which was compared with standard RT-PCR for SARS-CoV 2 virus. She was the nodal officer for follow up of COVAXIN implementation protocol. She is involved with patient care and treatment. She duly completed the study ‘Sustainable and Timely HIV/AIDS response:- community engagement in Mizoram’. During this period 3 of her articles were published; role of HIV self-test in COVID-19, a qualitative investigation of HIV oral self-test and HIV outbreak investigation at Unnao.
Dr. Swarali Kurle
Scientist
ICMR-National AIDS Research Institute (NARI), Pune

Dr. Kurle was involved in identification and preparation of facilities for RNA extraction, RT-PCR and ably trained the staff for Biosafety procedures and RNA extraction. She was also engaged in the CMI assessment, which included ELISPOT as well as cytokine assays of COVISHIELD vaccine trial. She was also responsible for procurement and stock management of PPE kits, reagents, consumables and testing kits. She was also involved in validation of various RT-PCR kits at ICMR-NARI, Pune, wherein more than 15 kits have been validated till date.

Dr. Dhanashree Dhananjay Jagtap
Scientist
ICMR-National Institute for Research in Reproductive Health (NIRRH), Mumbai

Dr. Dhanashree was part of the COVID-19 rapid response team at ICMR-NIRRH. She was actively involved in setting up the infrastructure for high throughput COVID-19 testing facility and was responsible for the depots for storage and distribution of diagnostic kits. She is the nodal officer for validation and quality assurance of COVID-19 diagnostic kits at NIRRH and has evaluated several kits, including those that have been commercialized. Besides this, she is involved in the COVID-19 research and has co-authored several manuscripts.

Dr. Sreelekshmy Mohandas
Scientist
ICMR-National Institute of Virology (NIV), Pune

Dr. Mohandas performed evaluation of the susceptibility of various animal models to SARS-CoV-2 and developed the Syrian hamster model. This was useful in pathogenicity, transmission studies and preclinical studies for various vaccine candidates. She was involved in the preclinical collaborative research in animal models of vaccine candidates like COVAXIN, ZyCoV-D, VLP-display vaccine and therapeutic studies for products like purified immunoglobulins and monoclonal antibodies against SARS-CoV-2. She contributed in developing diagnostic reagents against SARS-CoV-2 and was part of the laboratory testing team for clinical samples and QC testing.

Dr. Tanwi Trushna
Scientist
ICMR-National Institute for Research in Environmental Health (NIREH), Bhopal

Dr. Trushna has worked as investigator in Bhopal site during national sero-surveillance conducted in hotspot cities of India in 2020. She was involved in planning field activities, coordination of field staff and field-based data/sample collection. She is also an investigator in the ongoing study to evaluate the effectiveness of BCG vaccine in reducing morbidity/mortality among elderly. Her responsibilities includes planning of field activities, coordination, medical screening of participants to assess eligibility, supervising vaccination, management of adverse events, supervising data entry and presentation of results at review meetings.

Dr. Pallavi Rahul Shidhaye
Scientist
ICMR-National AIDS Research Institute (NARI), Pune

Dr. Sidhaye is working as a clinician and public health expert at NARI ART centre. She actively participated in providing clinical care to people living with HIV during the pandemic. She played a key role in implementation of the national guidelines for prevention of COVID-19 transmission. Her work involved health communication, guiding staff and PLHIV along with regular monthly training as per the MoHFW guidelines. She completed the KAP study among PLHIV at the centre.
Dr. Kiran Munne  
Scientist  
ICMR-National Institute for Research in Reproductive Health (NIRRH), Mumbai  

Dr. Kiran Munne is a medical microbiologist and lab in-charge for COVID-19 testing facility at NIRRH. She has been actively involved in supervision of diagnostic testing and reporting for COVID-19 at NIRRH. She analysed and interpreted results, communicated reports and performed troubleshooting. She is also involved in inventory management of consumables and kits as well as coordination of inter lab quality control (ILQC) and external quality assessment (EQA) activities for the testing facility. She is part of the team managing depots for distribution of testing reagents.

Dr. Surya Singh  
Scientist  
ICMR-National Institute for Research in Environmental Health (NIREH), Bhopal  

Dr. Singh has been engaged in COVID-19 depot and record management for the Madhya Pradesh and Vidarbha (Maharashtra) region since May 2020. She has also worked in the team for testing the effectiveness of BCG vaccine in reducing morbidity and mortality in elderly individuals in COVID-19 hotspots in India. She was given the responsibility to regularly follow-up the participants of the BCG vaccine trial in order to record their responses and manage the participant information sheet, which she did most diligently showing great results.

Dr. Rima Rakesh Kumar Sahay  
Scientist  
ICMR-National Institute of Virology (NIV), Pune  

Dr. Sahay drafted the guidelines for airline crew, aircraft and airport shuttle bus disinfection and biosafety training. She helped in reporting and drafting the standard operating procedures for the use of PPE, sample collection and shipment related to SARS-CoV-2. She is also coordinating the sample flow for the identification of SARS-CoV-2 variants of concern amongst international travellers.

Dr. Shilpa Tomar  
Scientist  
ICMR-National Institute of Virology (NIV), Pune  

Dr. Tomar was actively involved from early phase of the pandemic. She was instrumental in drafting documents for specimen collection, case record form provided to EMR Division, MoHFW, which were later incorporated for national use. She was part of the Rapid Reporting Team of ICMR, ensuring prompt and seamless dispatch of patient reports, including the expatriates for their earliest return to India. She also provided Biosafety training to NIV staffs. She participated in AIR's National science magazine session 'Vigyan Bharati' for creating awareness on "Precautions related to COVID-19".

Dr. Swapna Azhar  
Scientist  
ICMR-National Institute for Research in Environmental Health (NIREH), Bhopal  

Mrs Swapna Azhar from ICMR-NIREH has contributed to the BCG in COVID-19 Trials. In this trial her work was to explain the old people in the age group of 60 to 80 about the BCG vaccine, to convince them, clarify their doubts and encourage them for vaccination, obtaining their written informed consent, registering them and preparing their schedule, calling them for vaccination and later for follow up on 3rd and 6th month from the day of vaccination. To carry out this duty she contacted 600 old people out of which 157 took the vaccine.
Patron
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Secretary DHR and Director-General, ICMR

Communication Team
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Director, ICMR-RMRC, Gorakhpur and Scientist G & Head, Research Management, Policy, Planning and Coordination

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