Minutes of 2nd meeting of the One Health Consortium

Venue: NIAB and virtual mode

Date: 20th October 2021

Topic: Inauguration, Brainstorming

Attendees (in alphabetical order):

1. Dr Azhahianambi PV, TANUVAS
2. Dr. Archana GJ, Gandhi Medical College
3. Dr. Arnab Sen, ICAR Research Complex for Northeastern Hills
4. Dr. Arun Kuman Rawat, NIAB
5. Dr. Balamurugan V, ICAR-NIVEDI
6. Dr. Dhinakar Raj, TANUVAS
7. Dr. Diwakar Hemadri, ICAR-NIVEDI
8. Dr. Esther Lalzoliani,
9. Dr. Gopal Bohra, AIIMS Jodhpur
10. Dr. Gyamnya Baki Garam
11. Dr. Himani Dhanze, ICAR-IVRI
12. Dr. Hira Ram, ICAR-IVRI
13. Dr. Hosterson Kylla
14. Dr. Jasbir Bedi, GADVASU
15. Dr. JPS Gill, GADVASU
16. Dr. Kuldeep Singh, AIIMS Joduput
17. Dr. Nagamani K, Gandhi Medical College
18. Dr. Nagendra Hegde, NIAB
19. Dr. Nagendra Nath Barman, Assam Agricultural University
20. Dr. Ng Ibotomi Singh
21. Dr. Nitin Kurkure, MAFSU
22. Dr. Pankaj Suman, NIAB
23. Dr. Pronab Dhar, ICAR-IVRI
24. Dr. Pushkala Subramanian, TNMGRMU
25. Dr. Rajni Kant Srivastava, ICMR-RMRC Gorakhpur
26. Dr. RK Singh, Ex-IVRI
27. Dr. Sandeep Ghatak, ICAR Research Complex for Northeastern Hills
28. Dr. SB Barbuddhe
29. Dr. Sindura Ganapathi, Office of the Principal Scientific Advisor
30. Dr. Siraj Ahmad Khan, ICMR-RMRC Dibrugarh
31. Dr. Subeer Majumdar, NIAB
32. Dr. Sunil Kolte, MAFSU
33. Dr. Suresh KP, ICAR-NIVEDI
34. Dr. Swaraj Rajkhowa, ICAR-NRC Pig
35. Dr. Tapan Kumar Dutta, Central Agricultural University
36. Dr. Tilak Ghatani
37. Dr. Vikram Saini, AIIMS New Delhi
38. Dr. Vishnuraj, ICAR-NRC Meat
39. Dr. Yogesh Gadekar, ICAR-NRC Meat
40. Dr. Zohmingthangi

Minutes

1. Progress reports to be submitted strictly on time
    a. PIs must take responsibility
    b. Reports to be in uniform format – fonts, formats, styles, colors, figures, pictures etc.; it was suggested that Times New Roman 12 font, black or red colour be used
    c. UC should be verified before sending, and not be delayed at any cost; it may be noted delay or inaccuracy from one centre will delay release of funds for all
    d. Common digital formats could be uploaded or shared well in advance

2. Funds should be handled and used as per rules
    a. Funds to be parked in interest bearing account; interest to be remitted through Bharat Kosh and leftover funds at the end of the project are to be returned
    b. Non-recurring funds cannot be carried forward
    c. Equipment funds can include accessories but need to be included as part of the PO; and tenders must include 3 year CMC and 2 year AMC as far as possible and all efforts should be made to negotiate this within the budget available
    d. Recurring balance can be carried forward, but will be cut from the following year's budget
    e. Funds cannot be utilized across budget heads
    f. Daily wage and contractual salary to be as per rules
    g. Research personnel engagement to be as per DBT or DST guidelines

3. Appropriate permissions from all institutional committees must be in place as soon as possible. This includes
    a. IBSC clearance for handling biological samples
    b. IAEC clearance for obtaining samples
    c. Clearance from wildlife department for collection of samples related to wildlife
    d. Ethics Committee clearance for obtaining human samples, and to include and safely keep consent forms.

4. For collection of field samples as well as epidemiological data, an official order may be obtained from Animal Husbandry Department and/or Directorate of Health. All institutes/PIs should write to concerned officials citing DBT's sanction letter as evidence. A mechanism of providing a single letter at central government level was also mooted.

5. Materials and data should be freely shared between partners.

6. Common procedures to be developed for adaptation by all, including
    a. Sample collection
    b. Sample processing
    c. Sample storage
    d. Test protocol, including reagents, consumables, supplies
    e. Interpretation of data
    f. Reporting format

7. All efforts must be made to maintain
    a. Equipment logbook
    b. Sample collected, address
    c. Kits, chemicals, glassware purchase and daily consumption

d. Raw data – readings, calculations, results – both register and digital to be maintained for at least 2 years after the project.

8. Data obtained from one centre must be verified from another centre and if needed by third party; it was decided that all centres will analyse samples for all diseases and that at least two centres cover each disease.

9. Publication must be based on mutual agreement, but other members and DBT must be acknowledged. In any case, a no objection must be obtained from the other partners. All efforts must be made to include investigation labs and any field workers as authors.

10. Centres must avoid release of results to the media without double verification and approval of the project monitoring unit and core committee.

11. It was suggested that the following be included in the activities
    a. Hands-on training and workshops for lab workers, project scientists and young faculty through on-line modules, hands-on training, inter-lab exchange and/or deputation/working in peripheral labs
    b. Develop public awareness material for distribution
    c. Senior members of the consortia involve younger members in problem solving

12. All centres should be ready with latest results, technologies, HRD, workshop details etc. to be provided as and when asked. In addition, everyone must communicate performance, publications, success stories, etc. to the monitoring unit to highlight the work of the consortium. We need to constantly think about outputs from the project, besides just surveillance data, and these could be the following
    a. Pathogen surveillance and hotspots
    b. Development of sera panels (positive, negative, pre-vaccine, post-vaccine, post-exposure)
    c. Development of assays in kit format
    d. Validation of in-house kits
    e. Initiate dialog with IOE for approval of kits
    f. Data on syndromic diagnosis in humans
        i. Febrile illness negative for routine investigation to be tested for brucellosis, Q fever, scrub typhus
        ii. AES cases to be tested for JE, scrub typhus
        iii. Diarrhoea cases for cryptosporidiosis
        iv. Febrile gastroenteritis cases for Salmonella, Listeria
        v. Epilepsy cases for cysticercosis
    g. Preparation of a manual for sampling
    h. Meta-analysis
    i. Reviews
    j. Development of new diagnostic methods

13. Prolonged discussion ensued on the methodology to adopt for collection of samples from animals and criteria such as population, density, risk factors, prevalence (perceived, known prevalence, or derived through meta-data analysis) etc. were considered.
    a. It was decided that we would initiate sampling by considering population density to begin with.
    b. Sample collection strategy needs to be common.

c. Collection of samples should also be done for seemingly non-existent diseases (e.g., CCHF in NER).
d. We could think about sampling the environment (air, sewage, vectors etc.).

14. It was suggested that regional repositories be set up, so that kits can be carried to that place and tests performed; it was also suggested to use the same samples for testing for multiple pathogens.

15. It was suggested that a web site be created; Drs. Tapan Datta and Sandeep Ghatak to develop the template.

16. To collect disease information, epidemiological and risk data, a common format in digital as well as hard copy should be prepared.

17. Popularisation activities should be taken up by the Consortium. Accordingly,
    a. It was suggested that the Consortium should push for UG level course in all veterinary and medical college, as part of the curriculum, or take classes there.
    b. Leaflets/videos etc. containing interface between humans and animals, their need and yet the issues may be prepared and circulated. Relevant material may please be shared by the partners.
    c. World Zoonoses Day (6th July) to be celebrated and popularised by the Consortium.

18. For validation of kits, it was suggested that well established labs be identified for the task, and that reagents and components be obtained from the same source as how the assay was developed and standardized.

19. The Northeast partners requested that procurement of equipment be facilitated from a single centre.

20. The coordinating unit must serve as a single point of contact for any communication outside the consortium, including
    a. Disease reporting (however, medical centres may be mandated to inform local authorities as well as IDSP)
    b. Dissemination of data
    c. Contacting media, if at all and when needed
    d. Changes in project PI etc.
    e. Providing letters of support and facilitation whenever necessary.

21. It was agreed that centres share the burden of purchasing the kits and consumables based on the situation.

22. It was suggested that officers and others from state departments, who help in logistics and sample collection, could be included as Co-PIs (without financial commitment).

23. Separate subgroups for medical and veterinary fraternity was mooted.

24. The medical fraternity should develop case definitions, case history proforma, epidemiological history, demographics etc. and follow up with veterinary fraternity
    a. To test people associated with farm if animals found positive for TB, brucellosis.

b. To follow a hybrid approach where syndromic differential diagnosis as well as surveillance would be done.

25. As far as possible studies should be carried out in identified areas jointly by veterinary and medical scientists. Otherwise, information about confirmation of animal origin zoonotic pathogen in a farm/locality should be shared with medical researchers to collect sample and data from the same locality and vice versa.

26. The following action points were decided
    a. It was decided that the indicated centres should take up collection of literature for meta-analysis, identify risk factors and the test to be used.
        i. These activities must be completed in 3 weeks (around 10th November).
        ii. 20 years' publications should be listed and sent to Dr KP Suresh for putting them through for meta-analysis
        iii. Publications must be from India; if not, from neighbouring countries
        iv. For risk analysis, everyone should input the risk factors and the pertinent centre to collate for the disease indicated; Dr KP Suresh to share risk factor format

Disease	Meta-analysis	Risk analysis	Test to be used
Tuberculosis	TANUVAS	TANUVAS	TANUVAS
Brucellosis	GADVASU, NEH	GADVASU, NEH	GADVASU, NEH
JE	IVRI	IVRI	IVRI
CCHF	GADVASU	GADVASU	GADVASU
Q fever	MAFSU	MAFSU	MAFSU
Scrub typhus	MAFSU	MAFSU	MAFSU
Cysticercosis	MAFSU, IVRI	MAFSU, IVRI	MAFSU, IVRI
Cryptosporidiosis	TANUVAS	TANUVAS	TANUVAS
Salmonellosis	NRCM	NRCM	NRCM
Listeriosis	NRCM	NRCM	NRCM
ASF	AAU, NEH, CAU	AAU, NEH, CAU	AAU, NEH, CAU
PRRS	AAU, NEH, CAU	AAU, NEH, CAU	AAU, NEH, CAU
Nipah	AAU, NEH, CAU	AAU, NEH, CAU	AAU, NEH, CAU
LSD	NIAB	NIAB	NIAB
Swine influenza	NRCPig	NRCPig	NRCPig

    b. The following tests/kits were decided to be used for consideration for finalising one single test per disease, based on highest sensitivity and cost.

Disease	Test in human	Test in animal	Type of sample, human	Animal	Type of sample, animal
Tuberculosis	Microscopy, Isolation (only for in contact persons when animals are found positive)	Skin test, Bovigam	Sputum	Cattle, buffalo	Unclotted blood
Brucellosis	STAT, IgG ELISA (Novatech, Dimeditech)	cELISA (Svanovir, TANUVAS?), RBPT	Serum	Cattle, buffalo, sheep/	Serum

				goat, pig	
JE	ELISA (NIV)	HI (Dr Siraj), ELISA (imported kit, followed by positive sample to IVRI)	Serum, CSF	Pig	Serum
CCHF	ELISA (Zydus Cadila)	ELISA (ID VET)	Serum	Cattle, goat	Serum
Q fever	ELISA Novatech	ELISA Novatech	Serum	Cattle	Serum
Scrub typhus	ELISA (ICMR Manju Rahi)	PCR	Serum	Rodents	PM material from rodents; blood clot
Cysticercosis	Primarily clinical, MRI/CT scan of suspected epileptic / AES cases; Antigen ELISA	ELISA, slaughter house data in pigs	NA	Pig	Serum, PM observation
Cryptosporidiosis	PCR	PCR	Stool	Calves	Stool
Salmonellosis (NTS)	Culture	Culture	Stool	Poultry	Animal origin food sample
Listeriosis	Chromogenic media, isolation, PCR in neonatal diarrhoea, abortion, meningitis	Chromogenic media, isolation, PCR on food samples	Placental bits, stool, CSF	---	Animal origin food sample
ASF	NA	ELISA (Idexx, ID-Vet, Ingensa), real-time PCR	NA	Pig	Blood, serum, PM material
PRRS	NA	ELISA (Idexx, ID-Vet, Ingensa), real-time PCR	NA	Pig	Blood, serum, PM material
Nipah	CDC kit for testing in risk areas; NIV ELISA kit, real-time PCR	Australian kit (ask NIHSAD), UK kit?? Real-time PCR	Blood, serum, CSF	Pig, goat, bat (NER)	Blood, serum
LSD	NA	ELISA (Idexx, ID-Vet, Ingensa), Ask NIHSAD	NA	Cattle	Serum, skin scraping (nodule)
Swine influenza	NA	ELISA (Idexx, ID-Vet, Ingensa) for swine influenza and pan-influenza A	NA	Pig	Nasal / oro-pharyngeal swab, serum

Notes:

- All ELISAs, PCRs to be done by all; Specialised tests to be done by specialised centres
- Need to ascertain requirement for permission for Nipah and LSD

27. As discussed in the first meeting, consortium will meet briefly (30 min) every 15 days. All partners must present progress once every 3 months. It was suggested to have the meeting late in the afternoon.

28. The following committees were formed
    a. Core committee (in alphabetical order)
        i. Dr. DhinakarRaj, TANUVAS
        ii. Dr. JPS Gill, GADVASU
        iii. Dr. Kuldeep Singh, AIIMS Jodhpur
        iv. Dr. Nagendra Hegde, NIAB
        v. Dr. RK Srivastava, ICMR-RMRC Gorakhpur
        vi. Dr. Subeer Majumdar, NIAB
    b. Working committee (in alphabetical order)
        i. Dr. Azhahianambi, TANUVAS
        ii. Dr. Jasbir Bedi, GADVASU
        iii. Dr. Sandeep Ghatak, ICAR-RC-NEH
        iv. Dr. Siraj Khan, ICMR-RMRC Dibrugarh
        v. Dr. Tapan Dutta, CAU
    c. Advisory committee
        i. Dr. Baljit Singh, University of Saskatchewan – International Advisor
        ii. Dr. Mohan Gupte, Ex-NIE
        iii. Dr. RK Singh, Ex-IVRI
        iv. Dr. Sindura Ganapathi, Office of the Principal Scientific Advisor

(Dr. Nagendra Hegde)