

APPLICATION FORM FOR PARTICIPATION  
IN TRAINING COURSE

National Training Programme on  
Recent Advances in Assisted Reproductive  
Technologies of Small Ruminants  
Sponsored by ICAR's Scheduled Castes (DAPSC)  
and Scheduled Tribes (DAPST)

Organized at

ICAR - Central Institute for Research on Goats  
Makhdoom, Farah – 281122

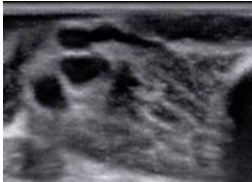
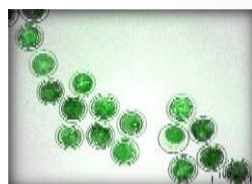
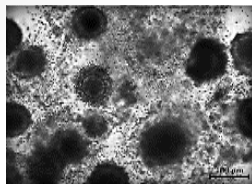
20<sup>th</sup> to 27<sup>th</sup> September, 2023

1. Name: .....
2. Designation: .....
- 3 (a) For employees: Present employer and address  
.....
- 3 (b) For students:  
Pursuing degree.....  
University / Institute / College .....
4. Address for correspondence:  
.....  
.....
5. Telephone:..... Mob:.....
6. Email: .....
7. Date of birth: .....
8. Sex: .....
9. Category (SC/ST): .....
10. Highest educational qualification (with  
specialization):  
.....
11. Teaching/Research/Professional Experience:  
.....  
.....

It is to certified that all the information  
furnished by me is true to the best of my  
knowledge.

Date: Signature of applicant

Recommendations of the forwarding authority with  
seal:



All correspondence should be addressed to

**Dr. S. P. Singh**

Senior Scientist & Course Director  
Animal Physiology and Reproduction  
Division

ICAR-Central Institute for Research on  
Goats  
Makhdoom, Farah – 281122, (U.P.), India  
Mobile: 9458264962  
Email: spsinghmail1@gmail.com



Announcement-cum-Information Brochure

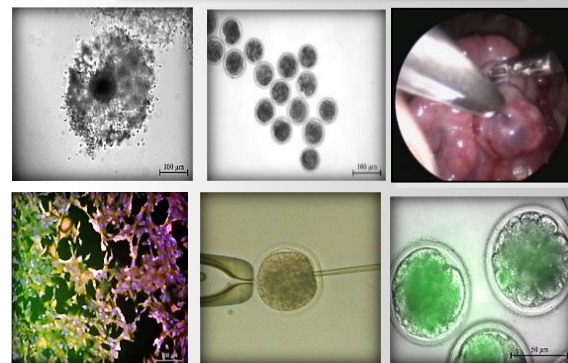
Training  
on

Recent Advances in Assisted Reproductive  
Technologies of Small Ruminants

Sponsored under

ICAR's Development Action Plan for Scheduled Castes (DAPSC)  
and Scheduled Tribes (DAPST)

20<sup>th</sup> to 27<sup>th</sup> September, 2023



Organized by

Animal Physiology and Reproduction (APR)  
Division

ICAR - Central Institute for Research on Goats  
Makhdoom, Farah – 281122, Mathura, (U. P.)

Website: <http://www.cirg.res.in/>

## About ICAR-CIRG and Animal Physiology & Reproduction Division:

The Institute was established on 12<sup>th</sup> July, 1979 with the vision to develop poor men's cow - goat as a source of livelihood security, poverty alleviation and employment generation. The Institute has acquired and developed modern laboratory facilities over the years to conduct research on Goat Genetics & Breeding, Feed resource development, Nutrition, Physiology, Reproduction, Management, Diagnosis & Prevention of Diseases, Transfer of improved Technologies and Milk and Meat Products technology.

At present the Division has developed impressive facilities for research and teaching in the areas of high end embryo biotechnological tools like animal tissue/cell culture, *in vivo* embryo and *in vitro* embryo production, animal cloning, parthenogenic embryo production, transgenesis, cryopreservation of gametes, stem cells and somatic cell lines, embryonic, spermatogonial and mesenchymal stem cell production and their application.

### Location and weather:

The Institute is located at nearly equidistance from two famous tourist places *i.e.* Mathura (25 km) and Agra (32 km). The weather at CIRG during September is moderate in Day time (25-30 °C).

### Assisted reproductive technologies:

Assisted reproductive technologies affect every facet of the reproductive process, from antral follicle selection to parturition, contributing in parallel to the scheduled genetic gain of the population. While in the cattle industry *in vivo* and *in vitro* embryo production is becoming a routine, in small ruminants that is still in infancy. These techniques include: artificial insemination, cryopreservation (freezing) of gametes or embryos, induction of multiple ovulations, estrus synchronization, embryo transfer, *in vitro* fertilization, micromanipulation, transgenesis, cloning, etc.



### Coarse contents (theory and practical):

- ❖ Collection, grading and *in vitro* maturation of oocytes
- ❖ *In vitro* embryo production through IVF and parthenogenetic activation
- ❖ Cryopreservation (freezing) and post-thaw evaluation of gametes (oocytes, sperms and embryos)
- ❖ Establishment and maintenance of cell lines (single cell isolation, culture, immunocytochemical and molecular characterization, and cryopreservation of somatic cells)
- ❖ Post-thaw evaluation and culture of somatic cells
- ❖ Electroporation and Microinjection techniques for production of genome edited cell lines and embryos
- ❖ Estrous synchronization
- ❖ Laparoscopic techniques [ovum-pick up (LOPU), AI, and laparoscopic assisted and surgical methods of embryo transfer]
- ❖ Ultrasonographic assessment of ovarian structures and pregnancy detection in goats
- ❖ Immunoassay of reproductive hormones

### Eligibility:

Applicants are invited from the Schedule Caste (SC) and Schedule Tribe (ST) community Scientists /Faculties /Research scholars /Students working /studying in the Government /Private Institutions /Organizations, having basic knowledge of animal reproduction.

### How to Apply:

Applications in the given format should be sent through proper channel to the Course Director. Forms are also available on the Institute's website (<http://www.cirg.res.in/>). Advance copy may be sent through email to Course Director for early registration. **Last date to apply is 5<sup>th</sup> September, 2023 (upto 5.00 PM).**

### Mode of Selection:

The seats are limited. Maximum number of participants will be 15 only. A list of candidates will be prepared as per the criteria laid for the course and will be displayed in the Institute website along with the intimation to the selected participants through email.

### Financial Assistance:

There is no registration or bench fee. The participants will be paid T.A. for to and fro journey by rail/bus/public transport by the shortest route as per entitlement, restricted to AC-II (on producing documentary evidence). Participants should produce a certificate that they have not received any travel support from the parent Institute/University/college to attend this training program.

### Boarding and Lodging:

Accommodation will be arranged free of cost in the Institute's Guest house facilities on sharing basis. Please do not bring your family members. It will not be possible to arrange for their accommodation at the Institute during the training period.

## ORGANIZING COMMITTEE

### Chief Patron



**Dr. M. K. Chatli**  
Director, ICAR-CIRG

### Patron



**Dr. S. D. Kharche**  
Head, APR Division

### Course Director



**Dr. S. P. Singh**  
Senior Scientist

### Co-course Director



**Dr. Y. K. Soni**  
Scientist

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India

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