



Gene and Cellular Therapies: Advancing Precision Medicine

Continuing Medical Education (CME) and Workshop on Cell & Gene Therapies for Oncology and Rare Diseases

Theme: Novel Technologies for Cancer & Rare Diseases at Intersection of
Science and Medicine

Translational Genomic Group

Date: 21 November 2025

Venue: LT-1, AIIMS Jodhpur

Introduction

Gene and cellular therapies are revolutionizing modern medicine by targeting disease at its genetic core. Unlike traditional treatments, these therapies aim to cure – not just manage – complex conditions.

In **Oncology**, CAR-T cell therapy reprograms a patient's immune cells to identify and destroy cancer. It has achieved remission rates over 80% in certain leukemia and lymphomas and is now being adapted to tackle solid tumors.

For **Rare Genetic Diseases** – more than 7,000 affected patients worldwide – gene therapy offers transformative outcomes. Zolgensma, for spinal muscular atrophy (SMA), delivers a healthy gene to restore motor function in infants. Diseases like sickle-cell anemia are now being treated with **CRISPR-Cas9**, a ground-breaking gene-editing tool.

Cellular therapies, such as stem-cells and immune-cell transplants, further support regeneration and immune repair from within. In 2025, the landscape continues to shift: The Zevaskyn gene-modified cell therapy was approved by the U.S. Food and Drug Administration (FDA) for the rare skin disorder recessive dystrophic epidermolysis bullosa (RDEB).

Meanwhile, new cellular entry pathways for viral vectors (e.g., AAV-mediated delivery via the newly identified receptor AAVR2) promise safer, more efficient gene delivery.

Scalability, manufacturing and regulatory uncertainty remain major constraints – yet recent reports show trial-assets growing and non-oncology cell-therapy trials now dominating new starts.

The development of cellular nanoparticles and off-the-shelf immune cell products (such as universal donor CAR-NK cells) further reflects the field's maturation.

This CME program explores how the field is overcoming these obstacles – especially in the development of cellular nanoparticles – through innovation, cross-disciplinary collaboration, and cutting-edge research.



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Join us to discover how science is being reengineered to meet real-world clinical needs, ensuring that therapeutic innovation remains agile, impactful, and future-ready.

Guest of Honor: Dr. (Prof.) Goverdhan Dutt Puri, Executive Director AIIMS Jodhpur

Organizing Committee:

Chairperson: Dr. Kuldeep Singh, Professor and Head Department of Paediatrics, AIIMS Jodhpur

Organizing Co- chairperson:

- **Dr. Pratibha Singh, Dean Academic, professor and Head Department of Obstetrics and Gynecology, AIIMS Jodhpur.**
- **Dr. Shilpi Gupta Dixit, Professor Department of Anatomy, AIIMS Jodhpur.**

Secretary: Dr. Parmod Kumar, Assistant Professor, Department of Medical Oncology/ Haematology, AIIMS Jodhpur

Co-Secretary:

1. **Dr.Siya Ram Didel, Associate professor, Department of Paediatrics**
2. **Dr. Anubhav Gupta, Associate Professor, Department of Transfusion Medicine**

Scientific Committee Members

Faculty

Dr. Puneet Pareek
Professor and Head
Radiation Oncology

Dr. Jeewan Ram Vishnoi
Additional Professor and Head
Surgical oncology

Dr. Dharma Ram Poonia
Associate Professor
Surgical oncology

Dr. Akanksha Solanki
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Dr. Bharti Devnani
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Pathology

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Biochemistry

Dr. Gopal Krishna Bohra
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General Medicine

Dr. Abhishek Purohit
Additional Professor
Pathology

Dr. Ravinder Shukla
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Endocrinology



Gene and Cellular Therapies: Advancing Precision Medicine

Dr. Nivedita Sharma

Associate Professor
Surgical oncology

Dr. Parmod Kumar

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Medical Oncology/ Haematology

Dr. Saptarshi Mandal

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Transfusion Medicine

Dr. Anubhav Gupta

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Assistant Professor
Transfusion Medicine

Dr. Meenakshi Gothwal

Additional Professor
Obs and Gynaecology

Dr. Sojit Tomo

Assistant Professor
Biochemistry

DM Residents

Dr. Megha K

Sixth Semester
DM (Medical Oncology)

Dr. Pratibha Bansal

Third Semester
DM (Medical Oncology)

Dr. Tara Chand

Second Semester
DM (Medical Oncology)

Dr. Rakesh Kumar

Second Semester
Post-Doctoral Fellowship
(Clinical Haematology)

Dr. Rishi P. Nair

Eleventh Semester
DM (Radiation Oncology)

Dr. Kalyani Nair

Eight semester
DM (Radiation Oncology)

Dr. Usha Srinag

First Semester
DM (Medical Oncology)

Dr. Niharika Singh

Second Semester
Post-Doctoral Fellowship
(Clinical Haematology)

Dr. Aneesh Myneni

First Semester
DM (Medical Genetics)

Dr. Anirban Kumir

First Semester
DM (Medical Oncology)

Dr. Adarsh Patil

First Semester
DM (Medical Oncology)

Dr. Eveeta Baruah

Third Semester
DM (Hematopathology)

Dr. Tejasvi Sharma

Second Semester
DM (Hematopathology)

Scientists & Research Staff

Dr. Dolat Singh Shekhawat

Post Doctorate fellow (Medical Genetics)
NIHR (AIIMS Jodhpur- University of Leicester (UK) collaboration)

Mr. Jitender Rathore

Project Support –III
NIDAN Phase-II Project

Dr. Amit Mittal

Scientist D
Health Technology assessment

Miss. Shambhavi Singh

Project Support –III
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Dr. Mamta Patel

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Health Technology assessment

Mr. Mahipal Chaudhary

Technical Assistant
CRSS Project

Dr. Priya Amrit

Health Economist/Scientist C
Health Technology assessment



Gene and Cellular Therapies: Advancing Precision Medicine

Aims and Objectives:

- To gain knowledge and understanding about recent developments in Cell therapies, gene therapies and tissue engineering from medical perspectives.
- Skills development to integrate system biology, artificial intelligence into cell therapies and it's clinical application
- To generate innovative but realistic ideas for further science
- Develop basic understanding of regulatory and ethical issues for establishing facility

Target Audience:

- Clinicians
- Transfusion physicians
- Pathologists
- Biochemists
- Researchers & Bio-scientists
- Bio-engineers & Bio-innovators
- Bio-informatics

Format of the CME:

- Blended learning- pre-CME online material and interactive offline sessions
- Pre-CME basic learning through e-learning platforms, Poster presentations and Quiz
- Continuing development and networking

Domains

- Clinical Experience and utility of Gene and cellular therapy in Oncology and rare diseases
- Science behind CAR- T cells development and gene editing methods
- Engineering of CAR- T cell and gene editing: The Laboratory work
- Manufacturing and regulatory approvals for gene and cellular therapy



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EXPERTS

Haematology and Oncology

	Area of Expertise	Institute	Experience in Gene Editing/ Gene therapy
National			
Dr. Pankaj Malhotra Professor and Head	Clinical Haematology	PGI Chandigarh	Ongoing trial on CAR-T cell Therapy
Dr. Deepam Pushpam Associate Professor	Medical Oncology	IRCH AIIMS Delhi	Conducting Clinical Trial for CAR-T cell therapy
Dr. Mayank Singh Additional Professor	Medical Oncology/ Lab oncology	IRCH AIIMS Delhi	Developing Indigenous BCMA-CAR for Multiple Myeloma under ICMR project
Dr. Surender Kumar Sharawat Scientist I (level 11)	Medical Oncology	IRCH AIIMS Delhi	<ul style="list-style-type: none"> Stem cell Characterization and Assessment Molecular Biology: DNA and RNA extraction from blood and tissues, PCR, RT-PCR

Gene Therapy

	Area of Expertise	Institute	Experience in Gene Editing/ Gene therapy
National			
Dr. Udhay Prakash Kulkarni Professor	Clinical Haematology and Gene Therapy	CMC Vellore	<ul style="list-style-type: none"> Gene Therapy for Hemophilia Hemoglobinopathies
Dr. Shivprakash Ramalingam Associate Professor	<i>Biological Sciences and Bioengineering</i>	IIT Kanpur	<ul style="list-style-type: none"> Generation and use of pluripotent stem cells Next-generation Chimeric antigen receptor for the treatment of B cell malignancies
Dr. Satyam Arora Additional Professor Regional Director South East Asia, ISBT	Transfusion Medicine & Apheresis physician (Pediatric)	PGICH, Noida	<ul style="list-style-type: none"> CAR -T cell Transfusion medicine
Dr. Gaurav Kharya	Pediatric Hemato Oncologist and bone marrow transplant physician	Apollo Delhi	Gene therapy



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AGENDA

Day 1 (CME)
21th November 2025

Timing	Session Details	Speakers
8:00 - 8:30	Registration & Tea	
8:30-9:30	Inaugural Session	Welcome address: Dr. Kuldeep Singh Address by: Head of the Institute: Dr. (Prof) Goverdhan Dutt Puri Lamp lighting and Felicitation of Dignitary invitee
9:30 - 10:10	Session I	Evolving landscape of Gene editing and Cellular therapies in Haematology Dr. Pankaj Malhotra
10:10-10:50		Gene editing and Cellular therapies in Oncology: A newer armamentarium against cancer Dr. Deepam Pushpam
11: 50- 11:05	Tea Break	
11:05-11:45		Apheresis of Lymphocytes for CAR-T cells Dr. Satyam Arora
11:45-12:25		Developing CAR T cell in Govt set up: Opportunities and Challenges Dr. Mayank Singh
12:25-12: 55		From Bench to Bedside: Regulatory and GMP Challenges in Gene Therapy Development Dr. Udhay Prakash Kulkarni
12:55-13:30		Regulatory and GMP Aspect for Gene Therapy Development in India Dr. Surender Kumar Sharawat
13:30 - 14:00	Lunch	
14:00 –14:30	Session II	CRISPR- Cas9 in CAR T cell Dr. Gaurav Kharya
14:30-15:00		Development of cell and gene therapy for beta-hemoglobinopathies and hematological malignancies Dr. Shivprakash Ramalingam
15:00-15:30	Open Discussion with Experts	
15.30– 16:00	Session III	Session led by – Dr. Kuldeep Singh 1) Diagnosis and Screening for rare Diseases Dr.Charu Sharma 2) Supporting rare diseases through MEIC/DEIC/NHM- Dr Neeraj Gupta/ Dr Sushil Chaudhary
16:30-16:45		Valedictory function: All senior faculties of AIIMS Jodhpur Vote of Thanks: Dr. Parmod Kumar
16:45	High Tea	



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Day 2 (Workshop)
22th November 2025

Departments	Session
Pathology	<ul style="list-style-type: none">• Flow cytometry
Transfusion Medicine	<ul style="list-style-type: none">• Cryopreservation
Biochemistry	<ul style="list-style-type: none">• Liquid Biopsy for Lung cancer
NIDAN Kendra	<ul style="list-style-type: none">• Digital droplet PCR

Contact Us

Registration	Posters	Quiz	Workshop
Dr. Dolat Singh Shekhawat Post Doctorate fellow (Medical Genetics) Ph: 9460549309	Dr. Saptarshi Mandal Additional Professor Department of Transfusion Medicine Ph: 8003996883 Dr. Parmod Kumar Assistant Professor Department of Medical Oncology/ Haematology Ph: 9810200367	Dr. Abhishek Purohit Additional Professor Department of Pathology Ph: 7665676899 Dr. Siya Ram Didel Associate professor Department of Paediatrics Ph: 9592079797	Dr. Anubhav Gupta Associate Professor, Department of Transfusion Medicine Ph: 9914125443 Dr. Abhishek Purohit Additional Professor Department of Pathology Ph: 7665676899

Event Co-ordination

Dr Kuldeep Singh, Prof & Head, Pediatrics; Ph: 8003996940; email singhk@aiimsjodhpur.edu.in

Dr SiyaramDidel, Associate Professor, Paediatrics- Ph-9592079797

Dr. Anubhav Gupta, Associate Professor, Department of Transfusion Medicine Ph: 9914125443

Dr Parmod Kumar, Assistant Professor, Medical Oncology/ Haematology- Ph: 9810200367

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To Register: scan QR code