JUNAGADH AGRICULTURAL UNIVERSITY

Department of Biotechnology | College of Agriculture | Junagadh – 362 001, Gujarat

ICAR-SPONSORED SHORT COURSE

Omics Technologies and Analytical Platforms for Climate Resilience in Agricultural Crops

Dt. 14–23 December 2026

CHIEF PATRON
Dr. V. P. Chovatia
Hon. Vice-Chancellor
JAU, Junagadh

PATRON
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Director of Research, JAU

EXECUTIVE COMMITTEE
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Dr. K. C. Patel
Director, IT, JAU
Dr. P. D. Kumawat
Principal and Dean, CoA

COURSE DIRECTOR
Dr. H. P. Gajera
Professor & Head (Biotech.)

COURSE COORDINATORS
Dr. M. V. Parakhia
Professor (Biotechnology)
Dr. A. G. Vala
Assistant Professor (Biotech.)

CO-COURSE COORDINATOR
Dr. U. K. Kandoliya
Professor (Biochemistry)

TECHNICAL COMMITTEE
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Dr. G. D. Guna

No.: JAU/Biotech/ICAR-Training/ 2450 /2026; Date: 29/ 10 / 2026

To,

The Vice-Chancellors of Agricultural Universities (SAUs/CAUs/ICAR DUs/CUs)
and The Director, ICAR Institutes

Subject: Nomination of Scientists/Faculty Members for the ICAR-sponsored Short **Course** on **"*Omics Technologies and Analytical Platforms for Climate Resilience in Agricultural Crops*" (14–23 December 2026).**

Sir/Madam,

The Department of Biotechnology, College of Agriculture, Junagadh Agricultural University (JAU), Junagadh, Gujarat, is organizing an ICAR-sponsored Short Course on "***Omics Technologies and Analytical Platforms for Climate Resilience in Agricultural Crops***" from **14 to 23 December 2026.**

The short course will cover advanced omics technologies and analytical platforms, including next-generation sequencing, functional genomics, transcriptomics, proteomics, metabolomics, bioinformatics, genome editing, plant–microbiome interactions, and advanced analytical techniques.

You are requested to circulate this information among the concerned departments and nominate eligible Scientists/Faculty Members whose work is relevant to the course theme. Young Faculty/Scientists not below the rank of Assistant Professor/Scientist or equivalent from SAUs/CAUs/ICAR/National Institutes in relevant disciplines of Agricultural Sciences are eligible to apply. A total of 25 participants will be selected through a screening process.

The duly completed application form, signed by the competent authority/Director/Head of the institution, should be emailed to training-biotek26@jau.in on or before **20 November 2026.** Lodging and travel expenses for selected participants will be provided as per ICAR guidelines and admissible norms.

Further details and the application form are available in the enclosed course brochure and on the university website: www.jau.in . Your cooperation in encouraging eligible candidates to participate is highly appreciated.

Yours faithfully

(Dr. H. P. Gajera)
Course Director &
Professor and Head (Biotechnology)

Encl.: Course brochure and application form

Course Director: Dr. H. P. Gajera, Professor & Head | **Email:** training-biotek26@jau.in
Course contacts: Dr. M. V. Parakhia mvpatel@jau.in (+91 99791 64149) | Dr. Ashish G. Vala ashishvala@jau.in (+91 94260 78983)

Junagadh Agricultural University

Organized

Indian Council of Agricultural Research

Sponsored

Short Course

On

Omics Technologies and Analytical Platforms for Climate Resilience in Agricultural Crops

14th December to 23rd December, 2026

Organized by

Department of Biotechnology, College of Agriculture

Junagadh Agricultural University

Junagadh-362 001, Gujarat, INDIA

Apply by 20 November 2026 | training-biotek26@jau.in

ABOUT THE UNIVERSITY

Established in June 1960, the institution has evolved from an early agricultural college into a major higher-education and research center, and was formally constituted as Junagadh Agricultural University (JAU) on 1 May 2004. The University serves ten districts across the Saurashtra region of Gujarat, encompassing nearly one-third of the state's land area. Its mandate is situated within arid and semi-arid agro-ecological conditions influenced by an approximately 788 km coastline.

JAU functions as an integrated hub for education, research, and extension, offering academic and professional programs in Agriculture, Horticulture, Agricultural Engineering, and Agri Business Management. The campus infrastructure includes centralized information resources (e.g., a Central Library), continuous digital connectivity, and specialized training facilities intended to support an effective teaching–learning environment.

The Department of Biotechnology was established at College of Agriculture, Junagadh Agricultural University, Junagadh under plan scheme-2008 with objectives : Teaching: post graduate degrees in M.Sc. and Ph.D. in Plant Molecular Biology and Biotechnology, Develop infrastructural facilities to conduct routine post graduate teaching and research programme, Offer training to P.G. Students and research staff on analytical techniques in Biotechnological research. Department of biotechnology has developed state of art laboratories with advanced instrumentation facility to conduct advance research in agriculture biotechnology like genome sequencing , Transcriptomics, Metagenomics, Gene editing etc. Department have high end instruments like Next generation sequencer, LC-MS, GC-MS, NanoLC-QToF, MP-AES, Scanning Electron microscope etc.

COURSE BACKGROUND

Modern agriculture faces severe challenges due to climate change, bringing unpredictable weather, droughts, and high salinity. To ensure future food security, developing climate-resilient crop varieties is crucial. This short course focuses on leveraging advanced "Omics" technologies and analytical platforms to explore plant responses to environmental stress. Participants will study structural genomics, transcriptomics, next-generation sequencing, proteomics, and metabolomics. Through expert-led lectures and hands-on laboratory practicals, the programme equips researchers with vital tools—ranging from bioinformatics to advanced platforms like LC-MS/MS and genome editing—to drive innovations in climate-smart agriculture.

COURSE CONTENT

This intensive short course provides a comprehensive exploration of cutting-edge molecular tools and analytical platforms crucial for developing climate-resilient crops. The curriculum covers advanced genomics, next-generation sequencing, and genome editing techniques to address climate-induced plant stresses. Participants will study the practical applications of RNA sequencing, transcriptomics, and comparative proteomics in stress biology, alongside plant–microbiome interactions. A strong emphasis is placed on metabolomics and metabolic profiling, utilizing high-end analytical systems such as LC-MS/MS, GC-MS, NIR spectroscopy, and MP-AES.

Beyond theoretical lectures, the training features extensive hands-on laboratory practicals covering DNA/RNA extraction, PCR electrophoresis, sequence quality assessments, and elemental composition analysis. The course concludes with collaborative participant projects and data analysis exercises, equipping researchers with actionable skills for climate-smart agriculture.

KEY TOPICS & PLATFORMS

Next-Generation Sequencing	Transcriptomics & RNA-seq	Functional Genomics	Genome Editing
Metabolomics & Profiling	Comparative Proteomics	Bioinformatics	Plant–Microbiome Interactions
LC-MS/MS	GC-MS	NIR Spectroscopy	MP-AES

ELIGIBILITY

Young Faculty/Scientists not below the rank of **Assistant Professor/Scientist** or equivalent from SAUs/CAUs/ICAR/National Institutes in the disciplines of Agriculture Sciences, with specialization in Agriculture biotechnology/ Genetics and Plant Breeding, Seed Science, Plant Genetic Resources, or any other relevant allied subject in agriculture, are eligible to apply. A total of **25 candidates** will be selected for this course. The selection of candidates will be made by a screening committee.

HOW TO APPLY

Interested and eligible participants are advised to fill the nomination proforma, which can be downloaded from the university website (https://jau.in) and is also provided on the last page of this brochure. Send the duly filled proforma, signed by the competent authority/director/head of the institution, to the email *training-biotek26@jau.in* on or before the last date (**20 November 2026**). Selected candidates will be informed by email. They are required to confirm their acceptance and share their travel plan via email.

IMPORTANT DATES

LAST DATE FOR SUBMISSION OF APPLICATIONS	INTIMATION TO SELECTED PARTICIPANTS	COURSE DURATION
20 November 2026	**25 November 2026**	**14 – 23 December 2026**

BOARDING, LODGING AND TRAVEL

- Boarding, lodging and travel expenses of selected participants will be borne from the training programme budget, as per **ICAR guidelines**.
- Accommodation will be provided at the **University Guest House**.
- Travel reimbursement will be restricted to the maximum admissible fare of **AC-III Class** by train or state road transport bus, by the shortest route, as per Government of India norms.
- Participants are required to produce valid tickets and other necessary documents in support of their travel claims, and are advised to book their return journey tickets well in advance.
- Participants are requested not to bring family members or accompanying persons, as accommodation and other facilities will be provided only to the selected participants.

REGISTRATION FEES: NIL — There is no registration fee for the selected participants.

HOW TO REACH THE UNIVERSITY?

Junagadh Agricultural University is located at **Motibag, Junagadh, Gujarat**, about 3.6 km from the Junagadh Junction Railway Station (Station code: JND) and 2.6 km from the local Junagadh Bus Stand.

3.6 km Junagadh Junction Railway Station (JND)

2.6 km Junagadh Bus Stand

TOURIST PLACES IN JUNAGADH AND NEARBY

Girnar hill

Uparkot forte

Somnath temple

Dwarkadhish temple

CHIEF PATRON

Dr. V. P. Chovatia
Vice Chancellor, JAU, Junagadh

PATRON

Dr. A. G. Pansuriya - Director of Research and P.G.Dean studies, JAU, Junagadh

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Dr. R. M. Solanki - Director of Students' Welfare, JAU, Junagadh
Dr. K.C.Patel - Director of Information Technology, JAU, Junagadh
Dr. P. D. Kumawat - Principal & Dean, College of Agriculture, JAU, Junagadh

ORGANISING TEAM

Course Director	**Dr. H. P. Gajera** Professor and Head, Department of Biotechnology, J.A.U., Junagadh
Course Coordinators	**Dr. M. V. Parakhia** Professor, Department of Biotechnology, J.A.U., Junagadh
	Dr. Ashish G. Vala Assistant Professor, Department of Biotechnology, J.A.U., Junagadh
Course Co-Coordinator	**Dr. Umesh K. Kandoliya** Professor, Department of Biochemistry, J.A.U., Junagadh

CONTACT PERSONS

Dr. H. P. Gajera
Professor and Head, Department of Biotechnology, J.A.U., Junagadh
Phone: 0285-2672080-90 PBX-453
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Dr. M. V. Parakhia
Professor, Department of Biotechnology, J.A.U., Junagadh
Mob.: +91 99791 64149
Email: mvpatel@jau.in

Dr. Ashish G. Vala
Assistant Professor, Department of Biotechnology, J.A.U., Junagadh
Mob.: +91 94260 78983
Email: ashishvala@jau.in

Note: All correspondence should be made on email: training-biotek26@jau.in

APPLICATION FORM FOR ICAR SHORT COURSE

on

Omics Technologies and Analytical Platforms for Climate Resilience in Agricultural Crops

Department of Biotechnology, College of Agriculture, Junagadh Agricultural University, Junagadh

14 – 23 December 2026 | Junagadh Agricultural University, Junagadh

1. Name (in block letters)		*Please affix your photo*
2. Gender (M/F)		
3. Date of Birth (DD-MM-YY)		
4. Affiliation details with address		
5. Mobile & Email		
6. Permanent address		
7. Total experience (SAU/ICAR)		
8. Reason for attending training		

9. Educational Qualifications (from Graduation onwards)

Degree	University	Subjects	Pass out Year
Graduation			
Post Graduation			
Ph.D.			

10. Teaching/Research experience (posts held during the last 5 years) (Attach sheet, If require)

Signature of the Applicant

CERTIFICATE

It is certified that the information furnished has been verified and found correct. Recommendation of the forwarding Authority/Institution:

Date: _____ *Place:* _____ **Signature of the competent authority with official seal**

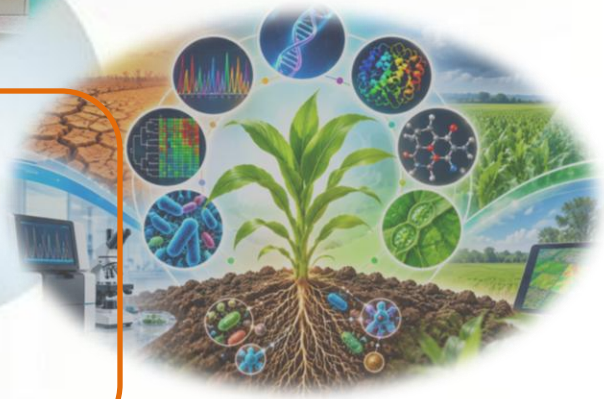
Please note: Submit the duly filled and scanned application form as per the instructions under "How to Apply" (email: *training-biotek26@jau.in*). Last date: 20 November 2026

JUNAGADH AGRICULTURAL UNIVERSITY
JUNAGADH-GUJARAT

ICAR SPONSORED 10 DAYS SHORT COURSE

OMICS TECHNOLOGIES AND ANALYTICAL PLATFORMS FOR CLIMATE RESILIENCE IN AGRICULTURAL CROPS

14th -23 rd December, 2026



Organized by :

Department of Biotechnology, College of Agriculture
Junagadh Agricultural University, Junagadh, Gujarat, INDIA

Sponsored by :

Indian Council of Agricultural Research (ICAR)

भाकृअनुप
ICAR

Correspondence:
training-biotek26@jau.in

Course Director
Dr. H. P. Gajera
hodbiotech@jau.in

Course Coordinator
Dr. M. V. Parakhia
mvpatel@jau.in
9979164149

Course Coordinator
Dr. A. G. Vala
ashishvala@jau.in
94260 78983

ABOUT THE INSTITUTE

Junagadh Agricultural University (JAU) serves ten districts across the Saurashtra region of Gujarat, encompassing nearly one-third of the state's land area.JAU functions as an integrated hub for education, research, and extension, offering academic and professional programs in Agriculture, Horticulture, Agricultural Engineering, and Agri Business Management.

The Department of Biotechnology was established at College of Agriculture, JAU, Junagadh under plan scheme. Department involved in Teaching: post graduate degrees in M.Sc. and Ph.D. in Plant Molecular Biology and Biotechnology. It has developed state of art laboratories with advanced instrumentation facility to conduct advance research in agriculture biotechnology like genome sequencing, Transcriptomics, Metagenomics, Metabolomics, Gene editing etc.

COURSE HIGHLIGHTS

This intensive short course provides a comprehensive exploration of cutting-edge molecular tools and analytical platforms crucial for developing climate-resilient crops. The curriculum covers advanced genomics, next-generation sequencing, and genome editing techniques to address climate-induced plant stresses. Participants will study the practical applications of RNA sequencing, transcriptomics, and comparative proteomics in stress biology, alongside plant–microbiome interactions. A strong emphasis is placed on metabolomics and metabolic profiling, utilizing high-end analytical systems such as LC-MS/MS, GC-MS, NIR spectroscopy, and MP-AES.

WHO CAN APPLY ?

Young Faculty/Scientists not below the rank of **Assistant Professor/Scientist** or equivalent from SAUs/ CAUs/ ICAR/ National Institutes in the disciplines of Agriculture Sciences with specialization in Agriculture biotechnology/ Genetics and Plant Breeding, Seed Science, Plant Genetic Resources, or any other relevant allied subject in agriculture

TRAVEL ,BOARDING AND LODGING

- Boarding, lodging and travel expenses of selected participants will be borne from the training programme budget, as per ICAR guidelines.
- Accommodation will be provided at the University Guest House.
- Travel reimbursement will be restricted to the maximum admissible fare of AC-III Class by train or state road transport bus, by the shortest route, as per Government of India norms.

COURSE HIGHLIGHTS

- Advanced genomics, next-generation sequencing, and genome editing techniques to address climate-induced plant stresses.
- Practical applications of RNA sequencing, transcriptomics, and comparative proteomics in stress biology,
- Plant–microbiome interactions.
- Metabolomics and metabolic profiling,
- Expose to High-end analytical systems such as LC-MS/MS, GC-MS and MP-AES.
- Hands-on laboratory practicals covering DNA/RNA extraction, PCR electrophoresis, sequence quality assessments, and elemental composition analysis.

LAST DATE FOR SUBMISSION OF APPLICATIONS	INTIMATION TO SELECTED PARTICIPANTS	COURSE DURATION
20 November 2026	25 November 2026	14 – 23 December 2026

VENUE

Department of Biotechnology
College of Agriculture
Junagadh Agricultural University
Junagadh-362001, Gujarat