

**SIES COLLEGE OF ARTS, SCIENCE AND COMMERCE (AUTONOMOUS),
SION WEST, MUMBAI - 400 022**

DEPARTMENT OF BIOTECHNOLOGY

A. Title of the Seminar/Workshop/Conferences:

Chromosomal Microarray

B. Background:

Department of Biotechnology, SIES College of Arts, Science & Commerce College (Autonomous), Mumbai under the aegis of BT talks (interactive sessions with alumni)

C. Aims/Objectives:

The main objective of the webinar series was to introduce the participants to:

1. Chromosomal microarray and its use
2. Scope of cytogenetics

D. Location:

The program was conducted using the online platform MS Teams. It was followed by a question-answer session between the resource person and participants.

E. Target audience/participants with expected number:

60 Undergraduate and postgraduate students

F. Details of Sessions:

The session was held on Saturday, 29th January 2022 from 3:30pm to 5:00 pm

G. Session and names of Resource Persons:

Ms. Tehmina Faizi, Scientific officer, Lilac Insights Pvt. Ltd., Mumbai, India

H. Expected outcome:

The feedback of participants stated that they found the session to be helpful, interesting and very relevant to the field.

The program helped them to understand:

1. Karyotyping
2. Prenatal cytogenetic screening
3. Affymetrix array and its interpretation
4. Various job opportunities in diagnostic sector



Dr. Tara Menon
Co-ordinator
Department of Biotechnology

29.01.2022

Annexure 1: Details of the resource person

- Ms. Tehmina Faizi is currently working as a scientific officer in Lilac Insights since 2019. She did her bachelors & masters in Biotechnology and is an alumni of our department. During her masters, she did her dissertation research in BARC under the guidance of her mentor, on cloning of *Deinococcus radiodurans* DR_0708 gene signal peptide in pKG plasmid, helping her gain expertise in various molecular biology techniques such as RT-PCR, qPCR etc. She also completed various courses on Nutrition and Lifestyle in Pregnancy, offered by Ludwig-Maximilians University and Autism Spectrum Disorder, offered by University of California, both via Coursera. At Lilac, Tehmina analyses chromosomal microarray data to identify microdeletions/duplications.

Annexure 2: Attendance Record

Timestamp	Full Name
29/01/2022 16:26:50	Shetty Harshitha Sunder
29/01/2022 16:26:57	Liza Fernandes
29/01/2022 16:27:16	Omkar Yadav
29/01/2022 16:27:21	Sakshi Gupta
29/01/2022 16:27:22	Jesal Vora
29/01/2022 16:27:26	Gauri Sham Jage
29/01/2022 16:27:32	Shilpa Sivadas
29/01/2022 16:27:41	Jyothika murugan
29/01/2022 16:27:53	Mansi Rawat
29/01/2022 16:27:58	Sayli Dabhade
29/01/2022 16:28:00	Aditi Rao
29/01/2022 16:28:05	Karishma Manoj Anam
29/01/2022 16:28:10	Bhavi Mashru
29/01/2022 16:28:37	Tisha Puthran
29/01/2022 16:28:38	Bhagyashree ramachandra Gubber
29/01/2022 16:28:38	Chirag Mansukh Kothari
29/01/2022 16:28:54	Jennifer Francis Nadar
29/01/2022 16:28:59	Aarathi kurup
29/01/2022 16:29:13	Amisha Bodke
29/01/2022 16:29:15	Durga Mohit Adelar
29/01/2022 16:29:29	Niveditha Narayanan
29/01/2022 16:29:33	Sheikh Ali Ahmed

29/01/2022 16:29:35	Susan Samuel Martin
29/01/2022 16:29:36	Shreshta Srinivasan
29/01/2022 16:29:42	Shaikh Misba Mohd Farid
29/01/2022 16:29:44	sharanya shankar
29/01/2022 16:29:56	Ayesha Ravindra Shedge
29/01/2022 16:30:06	Aditya Ravi Shetty
29/01/2022 16:30:07	Anisha Bhende
29/01/2022 16:30:14	Esha Anand
29/01/2022 16:30:20	MANALI SHAILESH PRADHAN
29/01/2022 16:30:21	Kajal Chandrajit Yadav
29/01/2022 16:30:31	Mohammed Amaan Ansar Shaikh
29/01/2022 16:30:36	Kundanagathu Roshni Ravindran
29/01/2022 16:30:37	Mamta Yarukala
29/01/2022 16:30:51	Shetty Saakshi Dinesh
29/01/2022 16:30:58	Jemema Agnes Tripena Raj
29/01/2022 16:31:07	Akshitha someshwar
29/01/2022 16:31:12	nikitamishra2405@gmail.com
29/01/2022 16:31:24	Ramsha Shaikh
29/01/2022 16:31:26	Syed Mahwash Fatima
29/01/2022 16:32:04	Kunali Ajay Ambavale
29/01/2022 16:32:06	Neha yadgiri Appani
29/01/2022 16:32:28	Sneha Anbalagan Dever
29/01/2022 16:32:37	Shruti Parmar
29/01/2022 16:32:53	Mahek Parmar
29/01/2022 16:33:53	Shreya Bangara
29/01/2022 16:34:14	Banupriya Swaminathan Iyer
29/01/2022 16:34:38	Sasha Deepak Shetty
29/01/2022 16:34:49	Omkar sundeep wakale
29/01/2022 16:35:00	Priyamvada Nath
29/01/2022 16:36:45	Siddhi Bute
29/01/2022 16:37:45	Manika Sawant
29/01/2022 16:38:21	Shweta Vishwakarma
29/01/2022 16:38:23	Niharika Milind Rahate
29/01/2022 16:39:37	Onkar Haripant Karajgikar
29/01/2022 16:42:24	Vaishnavi Mahalingam

29/01/2022 16:54:48	Nadar Sibiarechal
29/01/2022 16:57:04	Neha Sandeep Gaonkar
29/01/2022 17:15:24	SAYALI JOSHI

Annexure 3: Photographs of Seminar/Workshop



AFFYMETRIX GENE CHIP 3000 MICROARRAY



BT Talk on "Chromosomal Microarray" by Ms. Tehmina Faizi Shaikh

Prenatal Testing Algorithm For Women At Increased Risk

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graph TD; A[Indication  
Advanced maternal age, multiple soft markers on ultrasound,  
ultrasound anomaly, positive prenatal screen, etc.] --> B[Genetic counselling with testing options]; B --> C[No further testing]; B --> D[Invasive Testing (diagnostic)]; B --> E[Screening Test e.g. NIPT]; D --> F[QF-PCR/FISH  
Detects common aneuploidies: Down syndrome, Trisomy 18, Trisomy 13 and sex chromosome aneuploidies]; F --> G[If positive  
Karyotype]; F --> H[If negative  
No further testing]; E --> I[If positive  
Additional Testing e.g. Chromosomal microarray]; E --> J[If negative  
Depending on indication:  
• No further testing  
• Consider additional testing]; I --> K[Additional Testing e.g. Chromosomal microarray];
```

The flowchart details the following steps:

- Indication:** Advanced maternal age, multiple soft markers on ultrasound, ultrasound anomaly, positive prenatal screen, etc.
- Genetic counselling with testing options:** Leads to No further testing, Invasive Testing (diagnostic), or Screening Test (e.g., NIPT).
- Invasive Testing (diagnostic):** Leads to QF-PCR/FISH.
- QF-PCR/FISH:** Detects common aneuploidies: Down syndrome, Trisomy 18, Trisomy 13 and sex chromosome aneuploidies. If positive, leads to Karyotype. If negative, leads to No further testing.
- Screening Test (e.g., NIPT):** If positive, leads to Additional Testing (e.g., Chromosomal microarray). If negative, leads to a decision box: "Depending on indication: • No further testing • Consider additional testing".
- Additional Testing (e.g., Chromosomal microarray):** This step is reached from both the positive screening test and the positive QF-PCR/FISH results.

Lilac Insights pregnancy • newborn • genetics

Tehmina (Guest)

Participants: Tehmina (Guest), Subi Yousuf, Vaishnavi M..., Mahwash F..., BANUPRIYA..., +78

