

**SIES COLLEGE OF ARTS, SCIENCE & COMMERCE (AUTONOMOUS), Sion (W)**

**DEPARTMENT OF BIOTECHNOLOGY**

**Title:** Evolution of a human fungal pathogen: Centromeres, Chromosomal rearrangements, Speciation in *Cryptococcus neoformans*

**Day & Date:** Wednesday, 22<sup>th</sup> July 2020

**Time:** 5:00 - 6:30 pm

**Objective of the webinar:**

1. Life-cycle of *Cryptococcus neoformans*
2. To understand the comprehensive model to predict mitotic division in budding yeasts,
3. Evolution of Human fungal pathogens
4. To introduce to CRISPER-CAS mechanism

**Resource person:** Dr. Vikas Yadav, Post-doctoral Scientist, Department of Molecular Genetics & Microbiology, Duke University Medical Centre, USA

**Participants:** 76 Undergraduate and postgraduate students

**Platform/Methodology:**

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

**Outcome:**

The feedback of participants stated that they strongly found the session to be helpful and agreed that the content was of relevance.

The program helped them to understand:

1. Chromosomal re-arrangement in *Cryptococcus neoformans*
2. Evolution of human- fungal pathogens
3. Speciation techniques

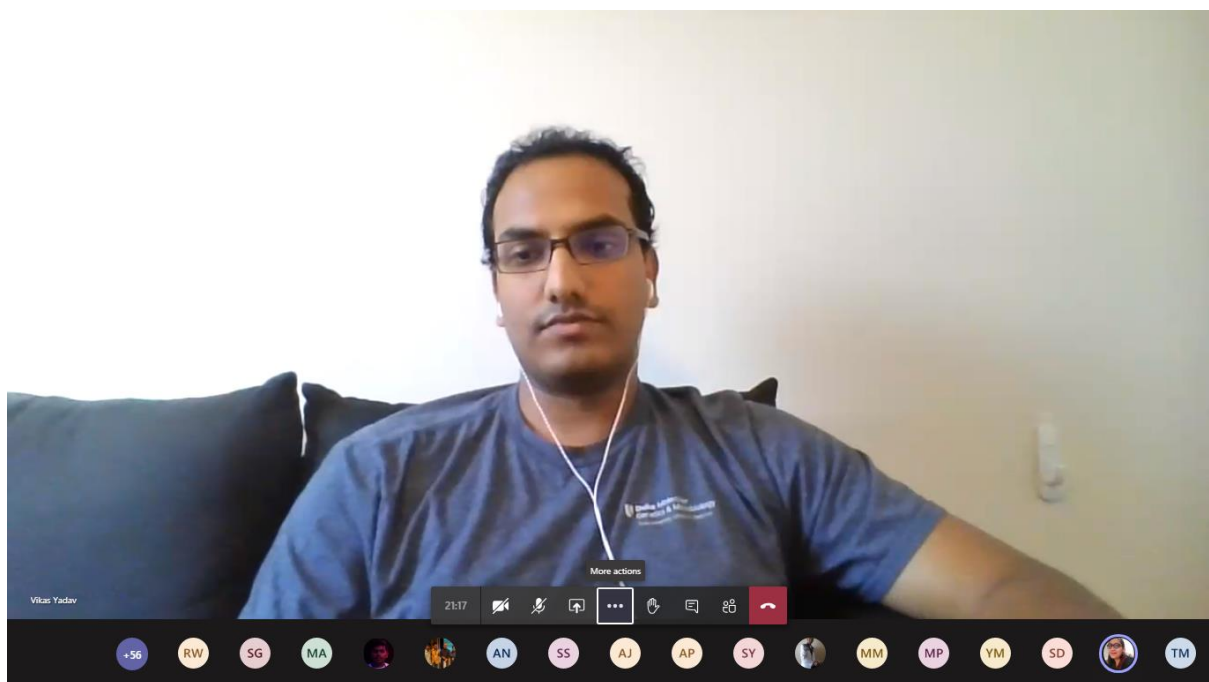
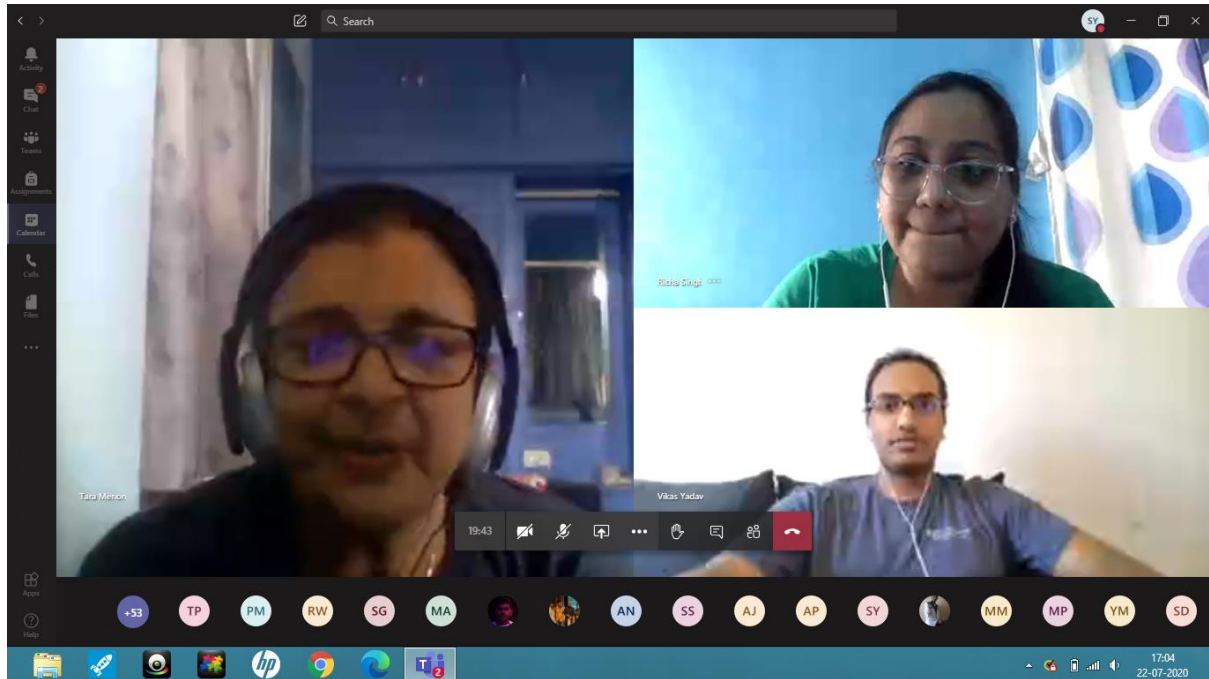


**Dr. Tara Menon**  
**Co-ordinator**  
**Department of Biotechnology**

**22.07.2020**

## Annexures to the report:

### Annexure 1: Pictures



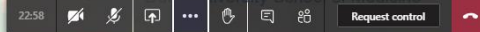
Evolution of a human fungal pathogen: Centromeres, Chromosomal rearrangements, Speciation in *Cryptococcus neoformans* by Dr. Vikas Yadav

# Evolution of a Human Fungal Pathogen: Centromeres, Chromosomal rearrangements and Speciation in *Cryptococcus neoformans*

Vikas Yadav, Ph.D.



Duke Molecular Genetics  
and Microbiology  
Duke University School of Medicine



Vikas Yadav



Summary

The summary slide is divided into several sections. On the left, there are microscopy images labeled 'Tubulin', 'CENP-A', and 'Merod', with sub-images for '0 min', '30', '40', '50', '60', and '90' minutes. In the center, a cell cycle diagram shows stages from 0.2-0.4 to 0.7-0.8, with a legend for 'Nuclear envelope', 'Nuclear pore complex', 'Chromatin', and 'Merodubules'. To the right, a genomic map shows centromeres (CEN) and telomeres (TEL) across chromosomes, with a legend for 'Reticulohyphae' (CCAN, CCAN + KIM, CCAN + KIM + Dna1). Below this, a chromosome ideogram (D) shows centromeres and telomeres for *C. neoformans* H99 and a comparison with *N. glabrata*. The bottom of the slide features a Zoom meeting interface with a chat window on the right containing several messages.

Meeting chat

- "Scientists often have a naive faith that if only they could discover enough facts about a problem, these facts would somehow resolve themselves"
- Lecture Series, De... Wednesday, July 22, ...
- Prajith Nambiar 5:28 PM Please post your questions here in the chat box
- YUKTA SUNIL MA... 5:42 PM 1 If we want to opt for antifungal treatment, is there a different mechanism to inhibit closed type mitosis and the open type mitosis?
- Mihir Prafulla Pradi... 5:48 PM 4 Can we utilize the fact that mitosis is not completely closed in cryptococcus to introduce molecules/antibodies which will disrupt further cell division as a therapeutic intervention for cryptococcal infections??
- Prajith Nambiar 6:11 PM Let the Questions flow here

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## Annexure 2: Attendance record

Timestamp	Full Name	Class	Roll No.
7/22/2020 18:29:24	Srushti Gujar	MSc II	6
7/22/2020 18:29:31	Mahima shah	SYBT	817
7/22/2020 18:29:40	Ankita Vijay Rane	MSc II	14
7/22/2020 18:29:55	Sayli Keshav Dabhade	TYBT	806
7/22/2020 18:30:03	Shilpa Sivadas	FYBT	1920827
7/22/2020 18:30:05	Yadav Omkar Vijay	FYBT	1920831
7/22/2020 18:30:06	Adithya Namboothiri	SYBT	822
7/22/2020 18:30:14	Mihir Pradhan	SYBT	825
7/22/2020 18:30:17	Jidhnyasa Sanjay Ghara	SYBT	1920808
7/22/2020 18:30:21	Shaguffta shaikh	SYBT	829
7/22/2020 18:30:24	Vishal Sudarshan Kandu	SYBT	1920840
7/22/2020 18:30:26	Karishma S Golungulu	MSc I	03
7/22/2020 18:30:27	Sristhi Alagesan	SYBT	821
7/22/2020 18:30:29	Karthik Shetty	TYBT	1920827
7/22/2020 18:30:41	Diksha Gajanan Shetti	FYBT	1920845
7/22/2020 18:30:46	Athira V Upendran	MSc I	13
7/22/2020 18:31:00	Ananya Shetty	SYBT	1920834
7/22/2020 18:31:04	Arpita A Khot	MSc II	10
7/22/2020 18:31:13	Ruchi Pawar	TYBT	820
7/22/2020 18:31:19	Akanksha Tupsakhare	MSc I	12
7/22/2020 18:31:21	Preethika Murali	TYBT	1920814
7/22/2020 18:31:22	Sowmya Murali	MSc I	11
7/22/2020 18:31:31	Manali Shailesh Pradhan	FYBT	821
7/22/2020 18:31:37	Aditya Ravi Shetty	FYBT	826
7/22/2020 18:31:39	Sandhya Yadav	MSc II	192018
7/22/2020 18:31:47	Niveditha Narayanan	FYBT	1920832
7/22/2020 18:31:55	Mansi rawat	TYBT	823
7/22/2020 18:31:59	Mahalaxmi Thevar	SYBT	836
7/22/2020 18:32:00	Darshana Joshi	TYBT	811
7/22/2020 18:32:06	Abhay Iyer	SYBT	811
7/22/2020 18:32:07	minichae balasubraman	MSc I	1920005
7/22/2020 18:32:13	Yukta Mahashabde	SYBT	1920816
7/22/2020 18:32:15	Nivita Nirankari	SYBT	823

7/22/2020 18:32:15	Nivita Nirankari	SYBT	823
7/22/2020 18:32:18	Anisha Bhende	SYBT	804
7/22/2020 18:32:18	Ritu Pawar	TYBT	819
7/22/2020 18:32:20	Mahek Parmar	SYBT	1920824
7/22/2020 18:32:20	ARUL JYOTHI PARAMA	MSc II	192001
7/22/2020 18:32:27	Sneha Uday Dutta	MSc II	192005
7/22/2020 18:32:38	Sharanya shankar	SYBT	832
7/22/2020 18:32:38	Afian Perpat Jeevan	SYBT	1920801
7/22/2020 18:32:39	Arpita Singh	MSc I	16
7/22/2020 18:32:47	Liza Peter Fernandes	FYBT	1920805
7/22/2020 18:32:49	Sejal Kanojia	SYBT	1920814
7/22/2020 18:32:53	Nabeela Quraishi	MSc I	09
7/22/2020 18:32:58	Tejashree Shivram Phep	MSc II	12
7/22/2020 18:33:02	Siddhi Bute	SYBT	806
7/22/2020 18:33:03	Chirag Mansukh Kothari	FYBT	1920808
7/22/2020 18:33:03	Niranjani K	TYBT	817
7/22/2020 18:33:12	Drishya udayan	MSc I	02
7/22/2020 18:33:21	Anusha R Shettigar	TYBT	825
7/22/2020 18:33:31	Sayali Joshi	SYBT	13
7/22/2020 18:33:32	Divya Elangovan	SYBT	1920807
7/22/2020 18:33:45	Aarathi kurup	TYBT	813
7/22/2020 18:33:50	Ashmita Pal	MSc II	192002
7/22/2020 18:34:03	Manasa Avanganti	FYBT	803
7/22/2020 18:34:35	Pooja sundaram	MSc II	08
7/22/2020 18:34:46	Noel Cheriyyan	FYBT	1920818
7/22/2020 18:34:55	Gayatri Achari	TYBT	801
7/22/2020 18:34:57	GUNA BRINDA MURUG	SYBT	820
7/22/2020 18:35:01	Spandana Tholar	SYBT	837
7/22/2020 18:35:22	JEMEMA AGNES TRIPE	SYBT	1920812
7/22/2020 18:35:35	Deeksha Sapaliga	SYBT	1920827
7/22/2020 18:35:49	POOJA UDAY MAHAJA	SYBT	815
7/22/2020 18:35:58	Rashmita Sahu	MSc I	20
7/22/2020 18:36:03	Shanmuga Sundari	SYBT	831

7/22/2020 18:36:07	Lawanya chappidi	MSc I	190001
7/22/2020 18:36:15	Anushka Anant Padmana	FYBT	1920801
7/22/2020 18:36:49	Jennifer Francis Nadar	TYBT	816
7/22/2020 18:37:11	Lanka Adityakumar	MSc I	004
7/22/2020 18:38:15	Sanchit Chetankumar Ja	MSc II	192008
7/22/2020 18:39:03	Harikrishna Rajendra Sa	TYBT	824
7/22/2020 18:41:01	Ujwal V Shetty	MSc I	10
7/22/2020 18:42:03	Navami Koyande	MSc II	11
7/22/2020 18:42:34	Aishwarya Ramakrishnar	SYBT	802
7/22/2020 18:42:50	Mary Menezes	TYBT	815
7/22/2020 18:45:19	Disha Poojary	MSc II	19

*Tara Menon*

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