

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

Title: In silico analysis of lipid remodelling enzymes and pathways in *Mycobacteria*

Day & Date: Saturday, 18th July 2020

Time: 3:00 – 4.30 pm

Objective of the webinar:

1. To give insights about metabolism and pathways of *Mycobacterium tuberculosis*
2. Computational tools to study pathways of *M. tuberculosis*

Resource person: Dr. Bhushan Dilip Damale, Ph.D Research Scholar, Bioinformatics centre, National Institute of Immunology, New Delhi

Participants: 56 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 found the session to be helpful and strongly agreed that the content was of current importance.

The program helped them to understand:

1. Metabolism of *M. tuberculosis*
2. The importance of modelling pathogenic organisms
3. In-silico tools used in the study




Dr. Tara Menon
Co-ordinator
Department of Biotechnology

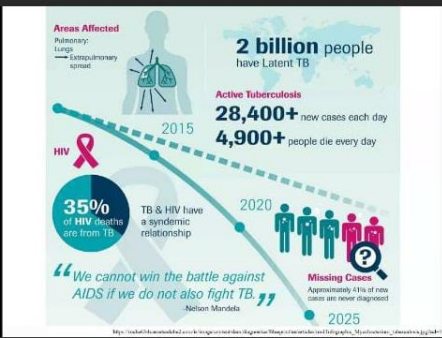
18.07.2020

Annexures to the report:

Annexure 1: Pictures

Utilizing COBRA (Constraint-based Reconstruction and Analysis) methods to model perturbations in *Mtb* metabolic network

Bhushan (Guest) 



Areas Affected
Pulmonary, Lungs, Extrapulmonary spread

2 billion people have Latent TB

Active Tuberculosis
28,400+ new cases each day
4,900+ people die every day

35% of HIV deaths are from TB


TB & HIV have a syndemic relationship

Missing Cases
Approximately 4.1% of new cases are never diagnosed

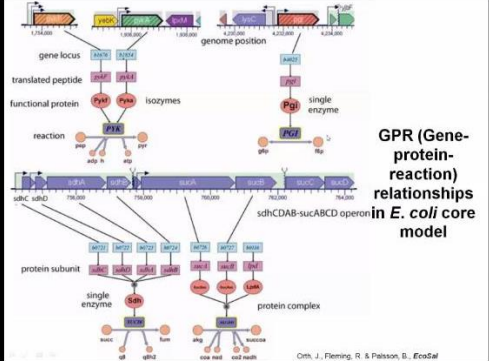
“We cannot win the battle against AIDS if we do not also fight TB.”
Nelson Mandela

2015 2020 2025

<https://www.who.int/news-room/fact-sheets/detail/tuberculosis>

 AN

Bhushan (Guest)




GPR (Gene-protein-reaction) relationships in *E. coli* core model

gene locus
genome position
translated peptide
functional protein
reaction
protein subunit
single enzyme
protein complex

sdhC, sdhD, sdhE, sdhF, sdhG, sdhH, sdhI, sdhJ, sdhK, sdhL, sdhM, sdhN, sdhO, sdhP, sdhQ, sdhR, sdhS, sdhT, sdhU, sdhV, sdhW, sdhX, sdhY, sdhZ

sdhCDBAC-sucABCD operon

Orth. J., Fleming, R. & Pelsson, B. *EcoSal*

 AJ

Bhushan (Guest)

Annexure 2: Attendance record

Timestamp	Full Name	Class	Roll No.
7/18/2020 16:23:34	Shaguffta shaikh	SYBT	829
7/18/2020 16:24:01	Adithya Namboothiri	SYBT	822
7/18/2020 16:24:05	Nabeela Quraishi	MSc I	09
7/18/2020 16:24:17	Ankita Vijay Rane	MSc II	14
7/18/2020 16:24:24	Aditya Ravi Shetty	FYBT	826
7/18/2020 16:24:30	Niranjani K	TYBT	817
7/18/2020 16:24:45	Yadav Omkar Vijay	FYBT	1920831
7/18/2020 16:24:54	Rashmita Sahu	MSc I	20
7/18/2020 16:25:06	Ananya Shetty	SYBT	1920834
7/18/2020 16:25:10	Sejal Kanojia	SYBT	1920814
7/18/2020 16:25:16	Dhanisha Mohapatra	FYBT	1920843
7/18/2020 16:25:40	Yukta Mahashabde	SYBT	1920816
7/18/2020 16:25:42	Harikrishna Rajendra S	TYBT	824
7/18/2020 16:25:52	Manali Shailesh Pradh	FYBT	821
7/18/2020 16:26:02	Bhagyashree Ramach	FYBT	806
7/18/2020 16:26:04	POOJA UADAY MAHA	SYBT	815
7/18/2020 16:26:12	Karishma.S.Golumgulu	MSc I	03

7/18/2020 16:26:13	Nivita Nirankari	SYBT	823
7/18/2020 16:26:18	Divya.Elangovan	SYBT	1920807
7/18/2020 16:26:19	ARUL JYOTHI PARAM	MSc II	192001
7/18/2020 16:26:21	Shanmuga Sundari	SYBT	831
7/18/2020 16:26:34	Sandhya Yadav	MSc II	192018
7/18/2020 16:26:45	Mihir Pradhan	SYBT	825
7/18/2020 16:26:48	Sharanya shankar	SYBT	832
7/18/2020 16:26:49	Chirag Mansukh Kotha	FYBT	1920808
7/18/2020 16:26:59	Ashmita Pal	MSc II	192002
7/18/2020 16:27:06	Mahima shah	SYBT	817
7/18/2020 16:27:13	Liza Peter Fernandes	FYBT	1920805
7/18/2020 16:27:25	Noel Cheriyan	FYBT	1920818
7/18/2020 16:27:40	Anusha R Shettigar	TYBT	825
7/18/2020 16:27:51	Karthik Shetty	TYBT	1920827

7/18/2020 16:28:00	Gayatri Achari	TYBT	801
7/18/2020 16:28:06	Darshana Joshi	TYBT	811
7/18/2020 16:28:18	Jennifer Francis Nadar	TYBT	816
7/18/2020 16:28:28	Siddhi Bute	SYBT	806
7/18/2020 16:28:35	Aishwarya Ramakrishn	SYBT	802
7/18/2020 16:28:41	Srushti Gujar	MSc II	6
7/18/2020 16:28:51	Tejashree Shivram Phe	MSc II	12
7/18/2020 16:28:57	Preethika Murali	TYBT	1920814
7/18/2020 16:28:58	Mahek Parmar	SYBT	1920824
7/18/2020 16:29:17	Afian Perpat Jeevan	SYBT	1920801
7/18/2020 16:29:36	Anisha Bhende	SYBT	804
7/18/2020 16:29:40	Sayli Dabhade	TYBT	806

7/18/2020 16:30:41	Yadav Krishnaveni Ran	MSc I	14
7/18/2020 16:31:50	Arpita Singh	MSc I	16
7/18/2020 16:32:06	Arpita A Khot	MSc II	10
7/18/2020 16:32:11	Aparna Iyer	TYBT	809
7/18/2020 16:32:22	Disha Poojary	MSc II	19
7/18/2020 16:32:30	Ritu Pawar	TYBT	819
7/18/2020 16:32:33	Manjyot Singh	SYBT	805
7/18/2020 16:32:51	Ruchi Pawar	TYBT	820
7/18/2020 16:34:08	Vishal Sudarshan Kan	SYBT	1920840
7/18/2020 16:35:14	Ujwal V Shetty	MSc I	10
7/18/2020 16:35:18	Diksha Gajanan Shetti	FYBT	1920845
7/18/2020 16:38:24	Spandana Tholar	SYBT	837
7/18/2020 16:45:28	Akshada Mutha	SYBT	819



Dr. Tara Menon
Co-ordinator
Department of Biotechnology

18.07.2020