



केरल केन्द्रीय विश्वविद्यालय
CENTRAL UNIVERSITY OF KERALA
TEJASWINI HILLS, PERIYE P.O, KASARGOD- 671 316

सं. सीयूके/एसीए/DL&TG/719 /2018/2020-2021/ 637/03254 दिनांकित 21.01.2021

Dr.Smitha Sudheer
Asst. Professor,
Dept. of Genomic Science, CUK

**Sub: Permission to conduct Online presentation by BD
Biosciences on its solution on COVID-19 Research. – Reg.**


Ref: Your Letter dated 13.01.2021.

Madam,

It is to inform you that ex-post facto approval of the Competent authority has been accorded to conduct Online presentation by BD Biosciences on its solution on COVID-19 Research on 15.01.2021 as requested by you.

Thanking you,

Yours faithfully,



ASSISTANT REGISTRAR(ACADEMIC)/
सहायक कुलसचिव (शैक्षिक)

सं. सीयूके/एसीए/DL&TG/719 /2018/2020-2021/

; of dated 21.01.2020

प्रतिलिपि अंग्रेजी सूची के अनुसार:

1. The Dean, SBS, CUK.
2. The Head, Dept. Of Genomic Science, CUK.
3. Office Copy.


ASSISTANT REGISTRAR(ACADEMIC)/
सहायक कुलसचिव (शैक्षिक)

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Central University of Kerala
केरल केन्द्रीय विश्वविद्यालय

Online Presentation

Mrs. Bhavani Gokulkumar
and
Mr. Hari. S,
Application Scientists at
BD Biosciences

**"BD Biosciences solution for COVID-19
Research"**

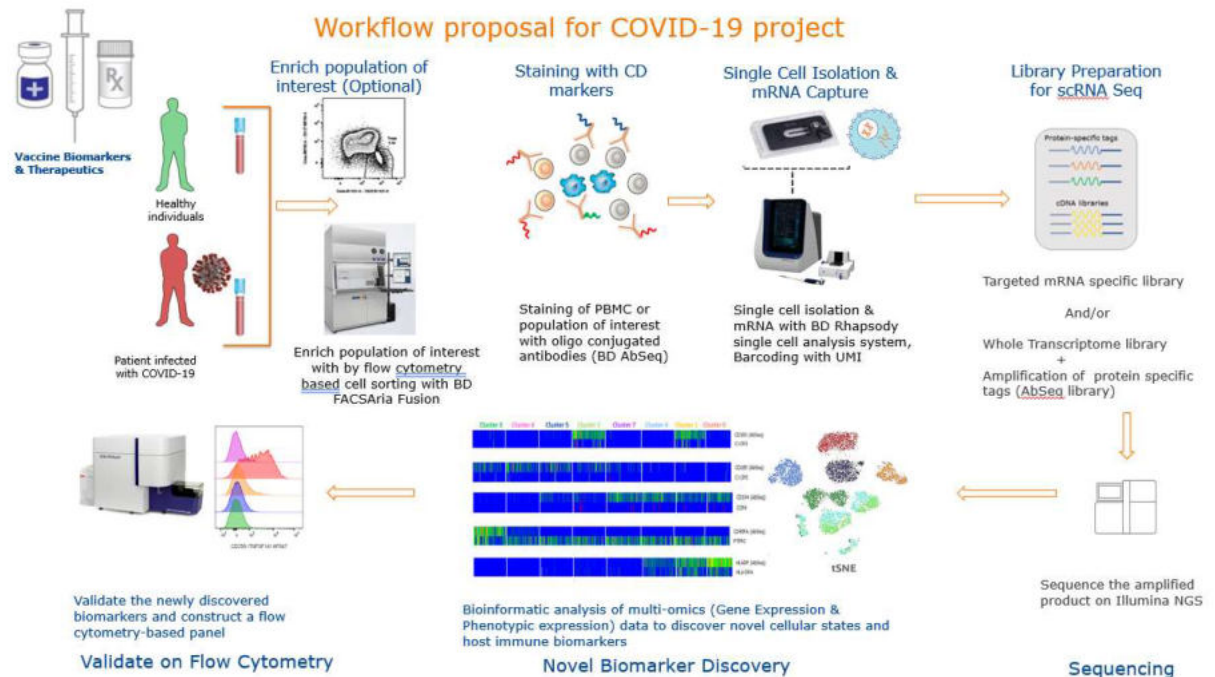
Friday, 15-1-2021 from 3 pm to 4 pm
on Microsoft Teams Platform

Coordinators: Smita Sudheer, PhD
Department of Genomic Science
and
Mr. Mahesh N Pai
Area Sales Manager at BD

BD Biosciences solution for COVID-19 Research.

Agenda:

- 1) Introduction to BD Biosciences portfolio.
- 2) Journey through BD Biosciences Flow cytometers.
- 3) Instrument workflow solution for COVID 19 Research studies.



a) Fluorescence-Activated Cell Sorting (FACS Sorter)

- Cell sorters models recommended for the Virology department /COVID 19 studies.
- Purification of antigen-specific T or B cells for **vaccine efficacy testing** or generation of **neutralizing monoclonal antibodies**
- **Purification of immune cells** of interest for downstream single cell multiomics analysis

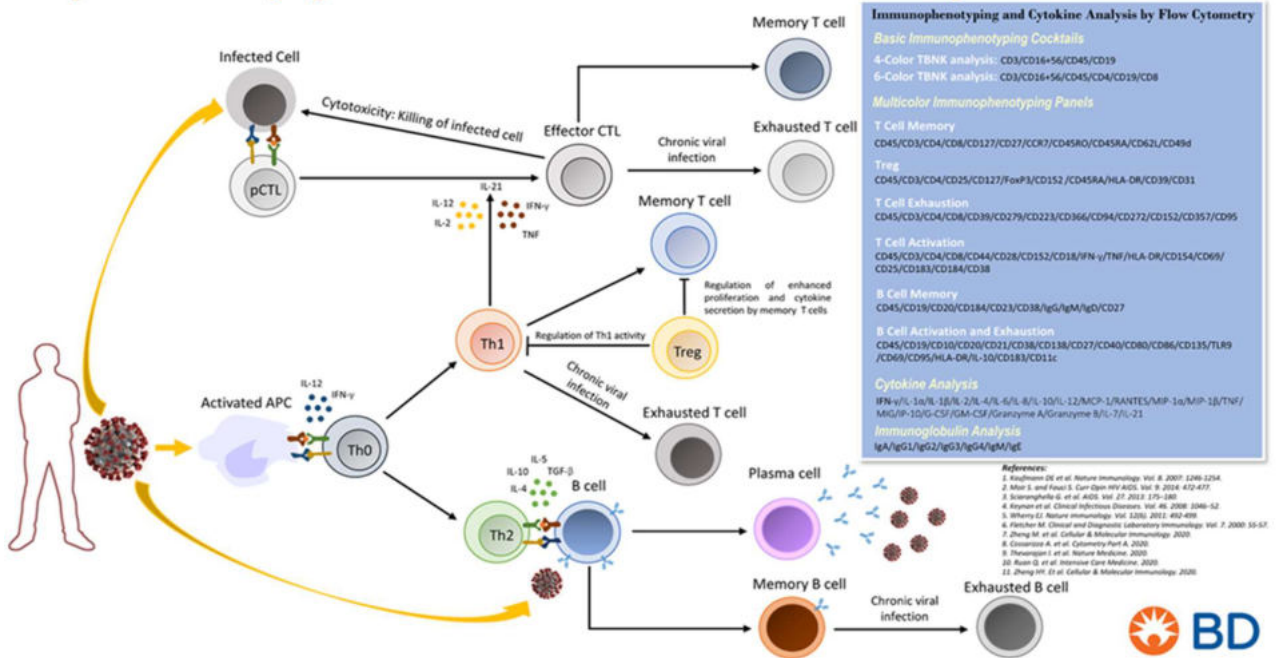
b) Rhapsody Single cell Multiomics and informatic solutions for the Virology department /COVID 19 studies.

- **Profiling immune cells** of interest via targeted or whole transcriptome analysis
- **Analysis of T or B cell receptor repertoire** and assessment of **cell clonality**
- Enhanced **immune cell characterization** and **signature discovery** through simultaneous analysis of protein and mRNA

c) Role of Flow cytometer analyzers in the study for Clinical research/Immune monitoring/Virology and Biomarker Research.

4) Reagent Panels/kits for COVID 19 Research: with reference to COVID 19 eBook.

Adaptive immunity against SARS-CoV-2: T and B cell mediated responses



Key Outcomes of the workflow solutions:

- **Immune characterization** to identify disease related **cellular states**.
- **Prognostic biomarker** identification for **disease staging** (understanding the severity and association with mortality).
- **Precision therapy** to control virus induced hyper-inflammation.
- **Vaccine efficacy testing**-short term and long-term memory cells characterization.

5) Discussion.

"BD Biosciences solution for COVID-19 Research", on 15-1-2021 from 3 pm to 4 pm.

Key words: Flow Cytometry, COVID 19, FACS, Immunology, Virology, Vaccine efficacy testing, precision therapy, cell states

Report: This program was conducted on an online mode and attended by faculty and students of SBS. This was more oriented towards how flow cytometry can be applied to various fields such as COVID 19 research, Immunology, Virology, Vaccine efficacy testing, precision therapy, identification of cell states, by the BD Biosciences team. It was quite beneficial for the students.