

Ref No: SBS/2021/23231

DT: 12/12/22

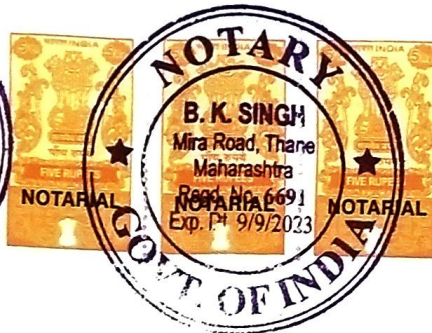
HGM SCHOOL OF BIOMEDICAL SCIENCES
Inward No. HGM/SBS/4221
Date 12/12/22
Receiver Name *JL*



महाराष्ट्र MAHARASHTRA

2022

30AA 963657



प्रधान मुद्रांक कार्यालय, मुंबई
प. सु. वि. क्र. ८००००२६
-7 NOV 2022
सक्षम अधिकारी L

श्रीमती लता सांगळे

Collaboration Agreement

This collaboration agreement is only for this present study " Evaluation of cytogenetic abnormalities in Chronic lymphocytic leukemia by Interphase FISH" by Miss Nupurkaur Devendra Sandu at SRL Diagnostics, Mumbai.

This agreement is made on 15/12/22 by and between MGM School of Biomedical Science and SRL Diagnostics, Goregaon, Mumbai-410218.

Therefore, in consideration of foregoing research study, along with the mutual consent and agreement of the institutes, the study title states "Evaluation of cytogenetic abnormalities in Chronic lymphocytic leukemia by Interphase FISH"



जांझण-१ Annexure - 1

फयत प्रतिज्ञापत्रासाठी Only for Affidavit

गुदांक विकत घेणान्याचे नाव

Nyapur D Jadhav

गुदांक विकत घेणान्याचे रजिदारी पत्ता

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दिनांक

29 NOV 2022

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29 NOV 2022



Obligations of the collaborating institutes shall include:

A. SRL Diagnostics: Selection of Samples

Evaluation of Cytogenetic abnormalities in Chronic Lymphocytic Leukemia by Interphase FISH

1. Permission to access and assess sample and clinical data to research activity.
2. Maintaining the records and photographs.

B. MGM Hospital

1. To Establish the frequencies of most common chromosomal aberrations with different patterns by fluorescence In-situ Hybridization.
2. To establish their prognostic significance based on literature studies.
3. All data generated as a result of assessment performed under this agreement shall be shared between the collaborating institutes only and shall be owned by them.
4. Any confidential, proprietary, non-public ideas and information belonging to any of the institutes that are disclosed orally or in written, or furnished to other instituted in connection with this agreement will be maintained by the receiving institute as confidential and shall be held in trust.
5. It is contemplated that the results of this collaboration will be jointly published. Authorship of the results of the collaboration will be based on the contribution made by the individual party to the research results being published.
6. The fees for the project to be made as cheque in favour of SRL Diagnostics.
7. This agreement contains the entire understanding of the collaborating Institute to the subject matter hereof and supersedes all prior discussions documentations or agreements between them.
8. Each person executing this agreement represents and warrants that they are acting on behalf of the Institute identified in the first paragraph of the agreement and not as individual entity. Each person further warrant that they are authorized to enter such agreements for and on behalf of their respective institutes.
9. This agreement shall be governed under the law of India and courts of Mumbai shall have exclusive jurisdiction.
10. Notices should be in writing and shall be mailed or delivered to the following address-



MGM Institute of Health Sciences,
Sector 1, Kamothe,
Navi Mumbai – 410209

Guide

Dr. Anjali Sabnis
HOD and Professor,
Department of Medical
Genetics,
MGMSBS, MGMMIHS,
Kamothe, Navi Mumbai.

Anjali Sabnis

Professor
Cytogenetic Unit
Department of Genetic
MGM School of Biomedical Sciences
Kamothe, Navi Mumbai, 410209



Co-Guide

Dr. Anurita Pais
Head, Cytogenetics
Department,
SRL Diagnostics Ltd.,
Mumbai, India.

Student

Miss Nupurkaur Devendra Sandu
Msc. Medical Genetics,
MGMSBS,
Kamothe, Navi Mumbai

Nupur Sandu



Mansee Thakur

Director

Dr. Mansee Thakur
I/C Director,
MGM School of Biomedical Sciences,
MGMSBS, MGMIHS,
Kamothe, Navi Mumbai.



Director

MGM School of Biomedical Science
Kamothe, Navi Mumbai



BEFORE ME

B. K. Singh
B. K. SINGH
NOTARY
MAHARASHTRA,
(Govt. of India)

29 NOV 2022

Proposed format for making the report

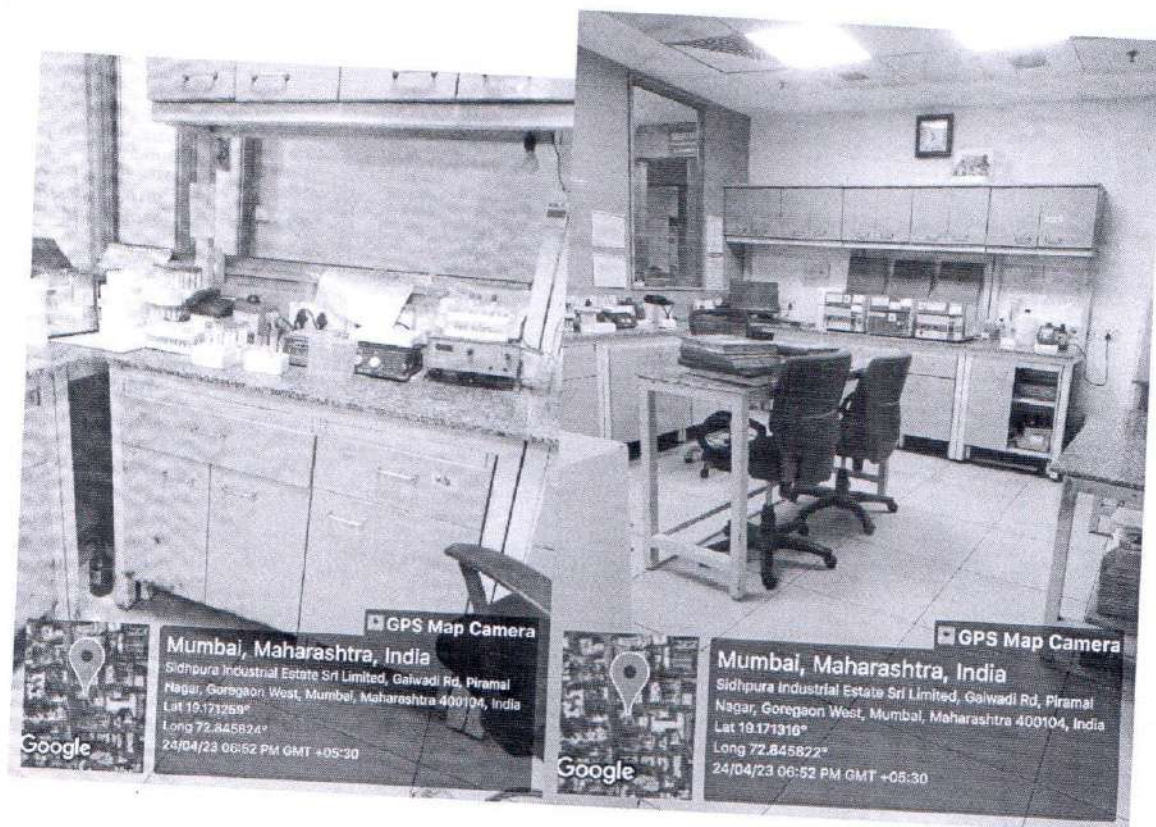
Department or Institute Header: **MGM School Of Biomedical Science**

MOU Activity

1. **Title of the MOU:** Collaboration Agreement
2. **Date (Start and Finish) and Venue :** From 15 dec 2022, Ranbaxy
3. **Name of Partner Institutions/ Industry:** Ranbaxy
4. **Details of students:**

Sr. No	Program name	Year /Semester	Total no of Students	Student Name
1	MSc medical genetics	Sem- 4 second year	3	pruthvirajgaikwad , nupur Sandhu mohsininamdar .

5. **Details of Activity: (Time table/ schedule, Circular, Attendance Assessment)**





Signature	Signature <i>Jaini</i>
Name of the Incharge faculty Designation Department	Name of the HOD or HOI (with stamp) Designation Department or Institute

Kindly enclose/attach

1. Time table/ schedule, Circular, Attendance, Assessment.
2. Photos (Geotagged)

[Handwritten Signature]

Director
MGM School of Biomedical Science
Kamothe, Navi Mumbai

MGM INSTITUTE OF HEALTH SCIENCES

ATTENDANCE SHEET FOR THESIS WORK

2023- 2024

MONTH: October

DATE	SMRUTI RAUT	SOU MI GHOSH	S. S. MALATHY	SIGNATURE OF CO-GUIDE
1			S U N D A Y	
2			H O L I D A Y	
3	raut	ghosh	Malathy	} CAUTZ
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31	raut	ghosh	Malathy	

MGM INSTITUTE OF HEALTH SCIENCES
ATTENDANCE SHEET FOR THESIS WORK

2023- 2024

MONTH: NOVEMBER

DATE	SMRUTI RAUT	SOUMI GHOSH	S. S. MALATHY	SIGNATURE OF CO-GUIDE
1	Smruti	ghosh	Malathy	} <u>CAUT</u>
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9	Smruti	ghosh	A	
10	Smruti	ghosh	A	
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14		H O L I	D A Y	
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MGM INSTITUTE OF HEALTH SCIENCES

ATTENDANCE SHEET FOR THESIS WORK

2023- 2024

MONTH: DECEMBER

DATE	SMRUTI RAUT	SOU MI GHOSH	S. S. MALATHY	SIGNATURE OF CO-GUIDE
1	<u>Smruti</u>	<u>ghosh</u>	<u>Malathy</u>	
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4	<u>Smruti</u>	<u>ghosh</u>	<u>Malathy</u>	
5	<u>Smruti</u>	<u>ghosh</u>	<u>Malathy</u>	
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DAILY REPORTING

3/10/2023 → DAY 1

9:30 AM - 4:00 PM

- 1) Introduction to the different laboratories and its instruments
- 2) Reading about methods & intro about principle of instruments
- 3) Discussion about literature
- 4) Demonstration and pipetting practice in biosafety cabinet

4/10/2023 → DAY 2

9:30 AM - 4:00 PM

- 1) DNA extraction using Qiagen DNA extraction kit. (Spin column)
- 2) Determination of DNA concentration using Qubit 4.
- 3) Starting of MLPA procedure - (Day 1) for DMD sample → HYBRIDIZATION.
Left overnight for 16-20 hrs in the thermocycler.

5/10/23 → DAY - 3 [9:30 - 4:00]

- 1) Continuation of MLPA.
 - Ligation procedure
 - PCR (prepared mastermix)
 - Capillary electrophoresis (Plate preparation, Seq studio)
 - Pipetting practice

6/10/23 - DAY - 4 [9:30 - 4:00]

- 1) Analysis of MLPA results using Coffalyser.net
- 2) Reading of literature (Contents of kits)
- 3) Pipetting practice (0.5 - 10 μ l)

9/10/23 - DAY - 5 [9:30 - 4:00]

- 1) Reading research papers [Problemix 021]
- 2) Pipetting practice (10 - 100 μ l)

10/10/23 - DAY 6 [9:30 - 4:00]

- 1) Reading about SMA protein stability
- 2) Pipetting practice (0.1 - 2 μ l), 0.5 - 10 μ l

11/10/23 - DAY 7 [9:30 - 4:00]

- 1) Use of Mendelcy software
- 2) Reading about problemix contents

12/10/23 DAY 8 [9:30 - 4:00]

- 1) Using Mendelcy software / plug in to add references.
- 2) Reading research papers about SMA deletion gene conversion
- 3) Webinar on rare diseases by Thermo Fischer [3 - 4:00]

13/10/23 DAY 9 [9:30 - 4:00]

- 1) Research paper reading for review of literature.
- 2) Pipetting practice (Reverse pipetting) (10 - 100 μ l)
- 3) Dead volume & uniformity in pipetting.

16/10/23 DAY 10 [9:30 - 4:00]

- 1) Research paper hunt of past 5 years for introduction
- 2) Pipetting practice

17/10/23 DAY 11 [9:30 - 4:00]

- 1) Introduction writing for review article
- 2) Pipetting practice.

18/10/23 DAY 12 [9:30 - 4:00]

- 1) Molecular testing in genetics introduction
- 2) Pipetting practice (10-100 μ l)

19/10/23 DAY 13

- 1) Discussion of techniques for review paper
- 2) Pipetting practice (0.5-10 μ l)

20/10/23 - 22/10/23 - HOLIDAY

23/10/23 DAY 14

- 1) Dussehra celebrations
- 2) Different types of molecular testing in genetics

24/10/23 - HOLIDAY

25/10/23 DAY 15

- 1) Compilation of introduction for review article
- 2) DNA extraction (observe)

26/10/23 DAY 16

PCR, FMR assay.

2) Discussion about ACMG guidelines
& review article

27/10/23 DAY 17

- 1) Fragment analysis of FMR assay.
- 2) Reading about Inner & outer PCR.

30/10/23 DAY 18

- 1) Introduction writing for thesis
- 2) Pipetting practice
- 3) Ligation hybridization of MLPA sample

31/10/23 DAY 19

- 1) Ligation
- 2) PCR assay for MLPA
- 3) Paper reading
- 4) Capillary electrophoresis

1/11/23 DAY 20

- 1) Analysis of DMD sample results
- 2) Discussion about introduction for thesis writing

2/11/23 DAY 21

- 1) Collecting information about RFLP
- * B

3/11/23 DAY 22

1) 9:30-12:00 → collecting research papers for SMN protein stability and SMA in Asia.

2) 12:00-7:00 → Conference on 'Inborn Errors of Metabolism' for Medicos.

6/11/23 DAY 23

1) Introduction to writing about SMA and types of SMA

7/11/23 DAY 24

1) Review article compilation
2) Pipetting practice

8/11/23 DAY 25

1) Completed research article with conclusion.

9/11/23 - 14/11/23 - Absent.

15/11/23 DAY 26

1) Completion of DNA conc. by Qubit.
2) SR4 gene extraction

16/11/23 DAY 27

1) SR4 gene electrophoresis & PCR

17/11/23 DAY 28

1) SR4 gene electrophoresis
2) DNA extraction for preservation

20/11/23 DAY 29

1) Gel electrophoresis of SR4 gene repeat
2) Reading papers.

21/11/23 DAY 30

1) DNA extraction of preservation & SMA.
2) Qubit
3) ACMG guidelines

22/11/23 DAY 31

1) Reading about different classes of SMA.
2) Genes in SMA.

23/11/23 DAY 32

- 1) Denaturation of SMA sample,
Hybridization overnight

24/11/23 DAY 33

- 1) Ligation
- 2) Mastermix preparation for PCR
- 3) Coflyser analysis

25/11/23 DAY 34

- 1) Repeat SMA ligation

27/11/23 DAY 35

- 1) DNA preservation sample DNA extraction
- 2) Fragile X DNA extraction (self)

28/11/23 DAY 36

- 1) NGS online course.
- 2) Clases of SMA.

29/11/23 DAY 37

- 1) Online course about NGS in COVID

30/11/2023 DAY 38

- 1) DNA extraction demo by machine.
- 2) Qubit.

1/12/2023 DAY 39

- 1) DNA extraction by extraction machine of multiple samples (3 samples).

4/12/2023 DAY 40

- 1) NGS course and assignment
- 2) Swayam NPTEL, Biomedical research course - 1 lecture
- 3)

5/12/2023 DAY 41

- 1) DNA extraction of 2 samples along with duplicates
- 2) DNA concentration along with using Qubit



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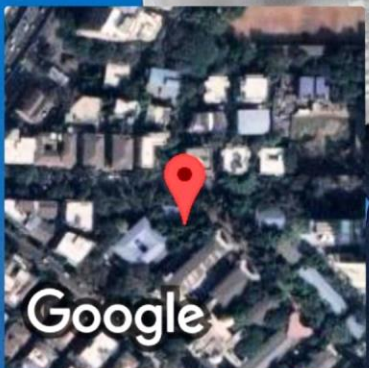
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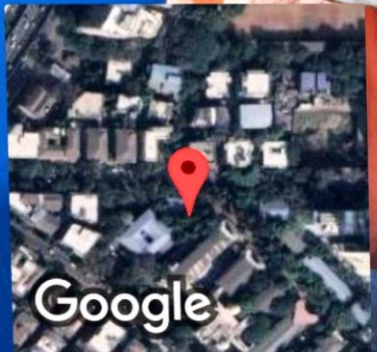
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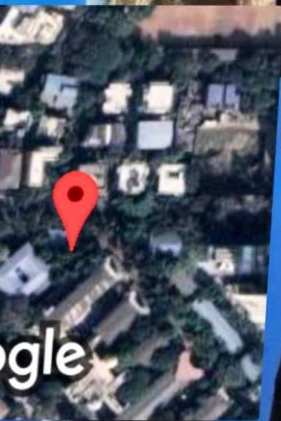
Mumbai, Maharashtra, India

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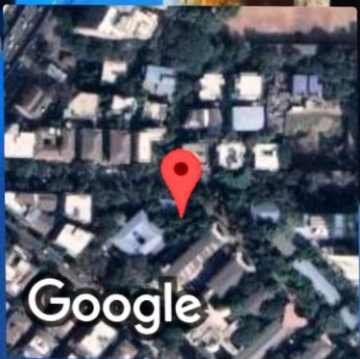
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