YENEPOYA
(DEEMED TO BE UNIVERSITY)
Recognized under Sec 3(A) of the UGC Act 1956
Accredited by NAAC with 'A' Grade

Details of the Collaborative Activity

2020-21

Name of the Collaborating Institute: Advanced Centre for Treatment Research and Education in Cancer (ACTREC), Navi Mumbai, Maharashtra.

Name of Collaborating Department: Yenepoya Research Center.

Activities:

- **Student Exchange and Observer-ship**

Ms. Vinitha Rani PhD scholars of YRC underwent 3 months training and research posting between November 2020 to January 2021 in ACTREC for between under Dr. Jayant Sastri Goda

ATTESTED
Dr.Gangadhara Somayaji K.S.
Registrar
Yenepoya(Deemed to be University)
University Road, Deralakatte
Mangalore- 575 018, Karnataka

Research YRC <research@yenepoya.edu.in>

Fwd: Selection Letter - Trainee - Ms. Vinitha Rani

1 message

vinitha inith <vinithainith05@gmail.com> Fri, May 28, 2021 at 10:24 AM
To: Research YRC <research@yenepoya.edu.in>

--------- Forwarded message ---------
From: **SCoPE Cell** <scope@actrec.gov.in>
Date: Wed, Nov 11, 2020, 11:20 AM
Subject: Selection Letter - Trainee - Ms. Vinitha Rani
To: <vinithainith05@gmail.com>
Cc: godajayant sastri <godajayantsastri@gmail.com>, Security Department <security@actrec.gov.in>, Ojaswini Upasani <oupasani@actrec.gov.in>, SCoPE Cell <scope@actrec.gov.in>

No. SCOPE / Training / 4998 / 2020 9 November, 2020

To,
Ms. Vinitha Rani
H No. 2-55/41, Nidhi,
Thunga Nagar, Alape, Padil
Mangaluru - 575007

Email ID: vinithainith05@gmail.com

SELECTION LETTER

Dear Ms. Vinitha Rani,

This is to inform you that you have been selected to work as a **Trainee** under the supervision of Dr. Jayant Sastri Goda, Dept. of Radiation Oncology, CRC, ACTREC from November 23, 2020 till January 29, 2021.

- You will have to be regular in attendance, comply with the rules and regulations of the Centre, and will not be entitled to any leave during the training period without your supervisor's approval as also prior intimation to SCOPE Cell.

- You will have to pay a refundable Security Deposit of Rs.1000/-. The payment will have to be made at the time of joining either in cash, swiping Credit card / Debit card or by demand draft payable to "TMC, ACTREC" at Navi Mumbai.

In the morning on the date of joining, you will have to report directly to SCOPE Cell (Rm. No. 331A, Khanolkar Shodhika, ACTREC) with a printout of this email and the following: hard copy of your curriculum vitae, two identity card size photos, birth date proof (original driving license/ PAN card would do) and the requisite payment. Once the paperwork is under way, you will be directed to Radiation Oncology department.

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Dr. Satish Munnolli
Officer-in-Charge, SCOPE Cell

c.c.: Dr. Jayant Sastri Goda (Supervisor), Security section, and SCOPE Cell

PROGRESS REPORT FOR THE WORK DONE AT ACTREC, Mumbai

Project Title: Development and Investigation of adjuvant therapeutic strategies for treating malignant glioma using gamma radiation and angiogenesis inhibition.

Project Sanction No: 35/14/23/2017-BRNS

Name of the Principal Investigator: Dr. Ashwini Prabhu, Assistant professor, Yenepoya Research Centre, Yenepoya (deemed to be University)

Name of the Principal Collaborator: Dr. Jayant Sastri Goda, Professor, Department of Radiation Oncology, ACTREC, Mumbai

Name of Research Fellow: Ms. Vinitha Rani, Yenepoya Research Centre, Yenepoya (Deemed to be University)

Duration of the work at ACTREC: 23/11/2020 to 28/02/2021

Details of the work done:

We have successfully completed the orthotopic and xenograft tumor model study which was proposed. After the completion of the study the vital organs and tumor was collected to carry out the histology, immunofluorescence, flow cytometry and ELISA experiments. Certain parameters will be evaluated in the tumors which includes tumor growth factors, cellular apoptosis of tumor cells using Annexin V-FITC, histology using H and E staining and immunofluorescence for Gamma H2AX, ROS, VEGF, FGF and angiogenin expression in tumors. Additionally, quantification of the angiogenic growth factors will be evaluated using ELISA in the tumor homogenates. Additionally, tissue homogenates will be screened for MMP activity using gelatin zymography. Hematological parameters will also be assessed.
The Biodistributionl study was also carried out and vital organs were collected to understand the localization of the drug in various organs at different time points. However, the analysis of the study is pending and has to be further carried out.

Ashwini Prabhu

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drastically increased in radiation arm, reduced in drug arm and a drastic reduction of tumor intensity was seen in the adjuvant treatment group (radiation+ drug). The drug was efficient in sensitizing the radiation treatment and acted as a radiosensitizer resulting in the decrease of tumor intensity.

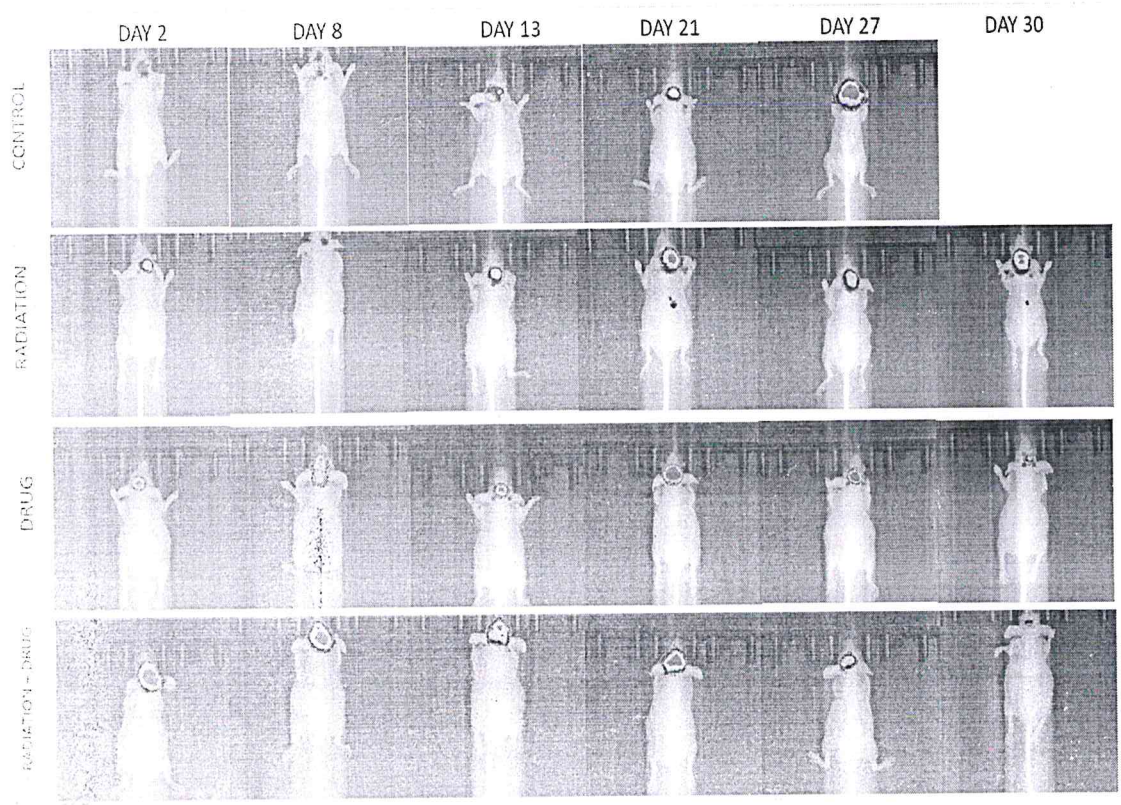

Fig 2: Orthotopic Tumour Model in CD1 Nude Mice representing the comparison between Control, Radiation, Drug and Radiation + Drug groups

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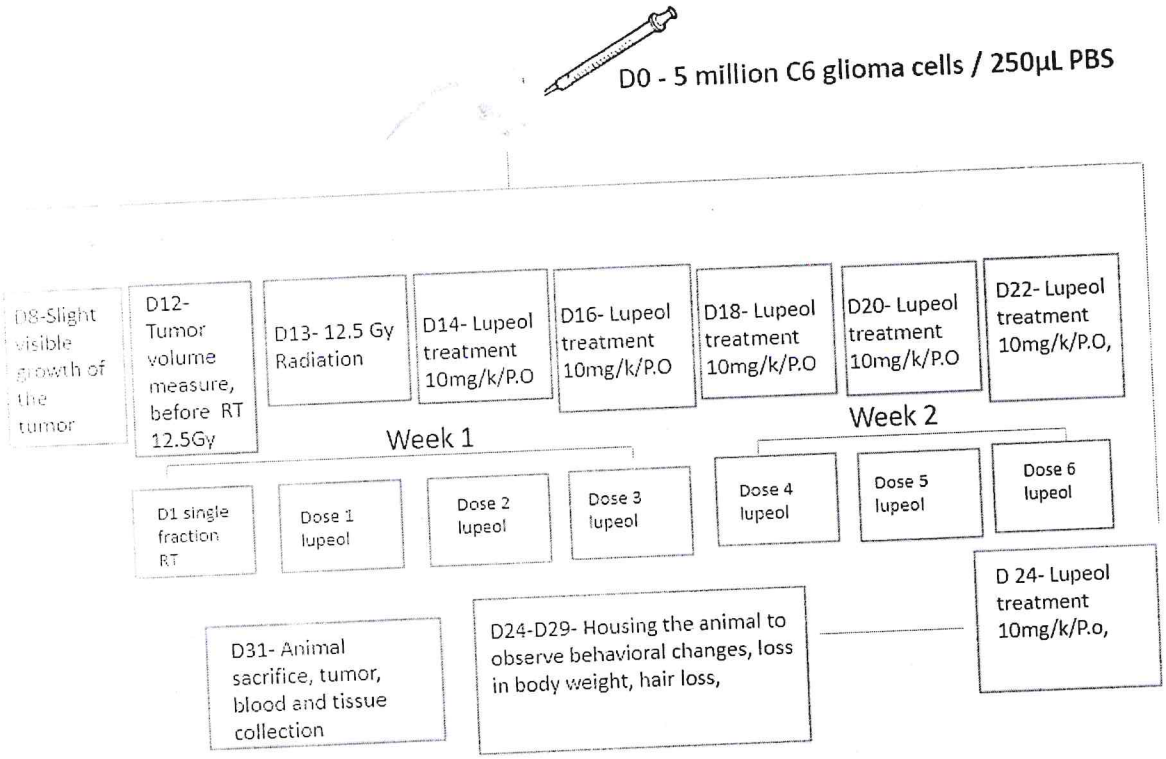

Fig 3: Schematic Representation of the work plan proposed for Xenograft Model Study

The work plan followed for the study is represented in the form of a flow chart above. On Day 0, the animals were injected with 5 million C6 glioma cells subcutaneously in the left flank region after shaving desired region of the animals. On Day 8 the animals showed slight visible tumor growth in the injected region and however on Day 12 the growth of the tumors became more prominent after which the animals were used for the study. On Day 13 the radiation and radiation+ drug arm was subjected to single fraction radiation of 12.5 Gy. Radiation+ Drug arm received drug dose followed by radiation therapy on every alternate day for two weeks (10mg/kg/p.o). Only radiation arm received single fraction of 12.5Gy radiation. Control group did not receive any treatment. On Day 15 there was a slight increase in the tumor across all the groups. On Day 19 there was slight decrease in the tumor volume in radiation and radiation + drug arm followed by increase in tumor on Day 23. It was also observed that on Day 27 and Day 31, the tumors decreased in radiation arm as well as radiation+ drug arm. The control group showed no significant decrease in tumor volume and size.

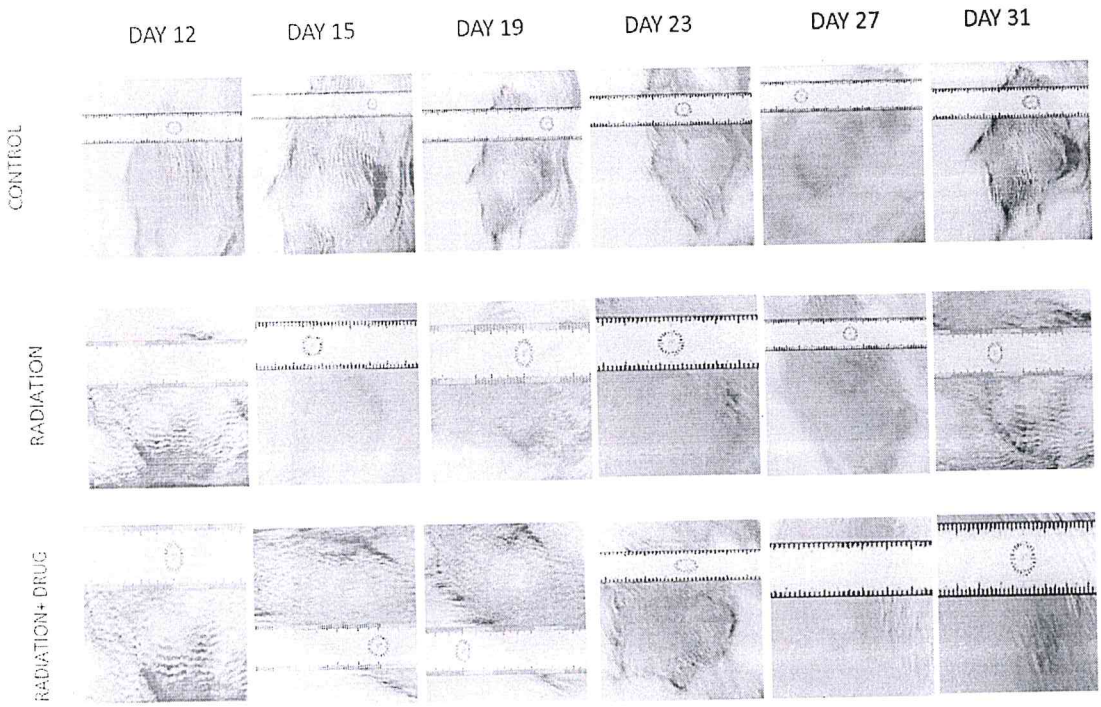

FIG 4: Xenograft Tumour Model in SD Rats representing the comparison between Control, Radiation and Radiation + Drug groups

Dr. Ashwini Prabhu

Principal Investigator- BRNS Project

Yenepoya Research Centre

Yenepoya ((Deemed to be University)

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