



Government of India
Bhabha Atomic Research Centre
Radiation Medicine Centre
TMH Annexe, Parel, Mumbai-12,
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Ref. RMC/ 4(24)/2017/195427

Date: 07/11/2017

Subject: Seeking approval for initiating collaborative work

Dear Sir,

An application for a collaborative work on anti-proliferative effect of novel 'Biopigments' extracted from different bacterial strains has been received from Ms. Miriam Stewart, HOD, Department of Microbiology, St. Xavier's College (Autonomous), Mumbai. The project is proposed by Dr.(Smt.) Pampi Chakraborty, Assistant Professor, Microbiology Department, St. Xavier's College (Mumbai). Dr. (Smt.) Chakraborty obtained her Ph.D. from Bio-Science Group in year 2006 -2007 (50th Batch) and is aware of the areas of work carried out in RMC.

The compounds that she is working with at present have shown promising results so far in different chemical and biophysical characterization studies. The anticancer potential of the drugs is proposed in vitro and in vivo cancer model systems. The initial phase of collaboration will require six months of experimentation followed by analyses.

This collaborative work will be mutually beneficial for both the institutions in deciphering potent and novel chemotherapy regimens.

I seek your kind permission for carrying out the collaborative work.

Thanking you,

Yours sincerely,

S Banerjee 7/11/17

(Dr. (Smt.) Sharmila Banerjee)
OS & Head, RMC, BARC

डॉ. (श्रीमती) शर्मिला बॅनर्जी
अध्यक्ष विधि एवं शोध केंद्र
Dr. (Smt.) Sharmila Banerjee
Head, Radiation Medicine Centre

Director,
BARC

K. N. Vyas
13 NOV 2017
के. एन. व्यास / K. N. Vyas
निदेशक, भा.प.अ. केंद्र
Director, B.A.R.C.



Department of Microbiology
ST. XAVIER'S COLLEGE
(AUTONOMOUS)
5, Mahapalika Marg, Mumbai - 400 001,
INDIA.
☎ 2262 0661/65

To,
Dr. (Mrs.) Sharmila Banerjee
Head
Radiation Medicine Centre (RMC),
Bhabha Atomic Research Centre
Tata Memorial Centre (Annexe Building)
E. Borges Marg, Parel
Mumbai-400012

Date: 6th Nov. 2017

Subject: Seeking help in *ex-vivo* anticancer and cytotoxicity testing of bio-pigments isolated from different bacterial strains

Dear Dr. Banerjee,
Greetings from the Department of Microbiology, St. Xavier's College!
My colleague, Dr. Pampi Chakraborty and her students have done a project on 'Biopigments'. Five bio-pigments have been extracted from different bacteria, isolated from soil samples. The pigments showed significant antioxidant property when estimated by ABTS and DPPH assays and showed UV protection in a cling film assay. The initial cell cytotoxicity of the pigments was also checked in mouse cell line by MTT assay. However, a detailed cytotoxicity study of all five pigments on skin cancer and breast cancer cell lines should be initiated.

Dr. Pampi Chakraborty obtained her Ph.D. from RMC, BARC and joined our department as Assistant Professor. She is aware of your expertise in this field. I shall be very grateful if you could kindly extend your help to do a further study on these promising compounds. Your help will be duly acknowledged in our publication.

Thanking you

Yours sincerely,

MB Stewart

Ms. Miriam Stewart
HOD, Department of Microbiology,
St. Xavier's College (Autonomous), Mumbai

Through

Dr. Agnelo Menezes

Dr. Agnelo Menezes
Principal
St Xavier's College - Autonomous,
Mumbai 400001



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- **Year:** 2017-2018
- **Name of Department:** Microbiology
- **Name of faculty involved:** Dr. Pampi Chakraborty
- **Collaborator details:** Dr. Sharmila Banerjee, OS, Head RMC, BARC
Dr. Avik Chakraborty, SO-E, RMC, BARC
- **Nature of collaboration:** Research
- Radiation Medicine Centre, BARC and department of Microbiology, St. Xavier's college both were involved in the project. The bacterial pigment isolation, characterization and some *in vitro* assays were done in the college. After that, anti-cancer and anti-inflammatory activities were checked in RMC.
- **Duration of collaboration:** Initiated for six months
- **Finances involved: (If any):** No such involvement
- **Publications from the collaboration:**
 1. A poster entitled 'Bacterial pigments protect against cell death' is presented by Ms. Shivali Patkar (Department of Microbiology, St. Xavier's College) and Ms. Megha Tawte (Scientific Officer-C, RMC, BARC) in the symposium 'Accelerating Biology 2019-towards thinking machines' held on 5th-7th February, at IISER Pune
 2. A manuscript entitled 'Evaluation of Antioxidant Potential and UV Protective Properties of Four UV-Induced Bacterial Pigments' is communicated in SN Applied Sciences ([Springer](#)) in the month of March, 2021.
 3. A manuscript entitled 'Marine bacterial pigment provides protection against ROS induced apoptotic death in mammalian macrophage cells (RAW 264.7)' is currently under preparation.



NAAC SSR Cycle 4 (2015-2020):
3_7_1_17_18_BARC_RMC_PampiC

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