SHEETAL PATHANIA

Personal

Permanent Address
Village Nolahri Post Office Talara Tehsil Fatehpur Disttrict Kangra, Himachal Pradesh, India 176051

Mobile number
604 404 0172

spathania@bccrc.ca

Date of birth
11-08-1997

Place of birth
Kangra

Gender
Female

Nationality
India

Marital status
Unmarried

LinkedIn
https://www.linkedin.com/in/sheetal-pathania-47b0a71a6/

Languages

English ●●●●○
Hindi ●●●●●
Korean ●●○○○

Work experience

Researcher Aug 2021 - Mar 2023
Gangnam Severance Hospital, Yonsei University, South Korea, Seoul, South Korea

I have two years Researcher experience at Gangnam Severance Hospital, Yonsei University, South Korea in “Design, synthesis and evaluation of purine and pyrimidine based KRAS G12D inhibitors: Toward potential anticancer therapy”

Oncogenic RAS is the one of the most common mutations in human tumors, and is present in approximately 30% of human cancers. A series of molecules were synthesized as KRAS G12D inhibitors. The molecules were further evaluated for their antiproliferative activity using the WST Cell viability assay on KRAS G12D mutated cancer cell lines (AGS, Panc1 and AsPc1). Three of the synthesized compound series exhibited potent antiproliferative activity on KRAS G12D mutated cancer cell lines with IC50 values in the low nanomolar range. They results were further confirmed for the phospho ERK and KRAS protein inhibition using western blot on dose dependent manner. Our molecules showed the results at par with the FDA approved reference drug MRTX1133.

Education and Qualifications

Ph.D. Student (Department of Interdisciplinary Oncology) January 2024- till now
University of British Columbia, Vancouver

M.Sc Biophysics (Grades obtained (in scale of 100%): 73.00% Sep 2018 - Jul 2020
All India Institute of Medical Science, New Delhi, New Delhi

Courses taken: Cell biology, Molecular Biology, Biochemistry, Bioinformatics, Clinical proteomics, Elementary crystallography, X- ray diffraction methods, Proteins and peptide synthesis, Membrane biophysics, Quantum biophysics, spectroscopic techniques

My Masters thesis work entitled “Non-gel based proteomics of axillary lymph nodes in early breast cancer: Implications for identification of protein biomarkers for guiding surgical management”. Breast cancer is the second most common cancer in women across the world. Some of the patients who present in the early stage of disease are affected by metastasis to the axillary group of lymph nodes. The first among this group that is affected is called as sentinel lymph node, and metastasis to this lymph node is crucial for the staging of cancer and thereby determining the quality of surgical intervention required. Current procedures such as Sentinel Lymph Node Biopsy (SLNB) that is used to assess lymph node metastasis is neither sensitive, nor specific, and are time-consuming and not “on-table" interventions. Therefore my objective was to identify differential pattern of protein expression between metastatic and non-metastatic sentinel lymph nodes and to identify potential biomarker candidates that can flag metastasis using Isobaric Tags for Relative and Absolute Quantitation (iTRAQ) coupled with LC-MS/MS. I successfully found the potential biomarkers that can detect lymph node metastasis in early breast cancer.

B.Sc Biomedical Sciences (Grades obtained (in scale of 10.0): Jul 2015 - Jul 2018
8.68)
University of Delhi, New Delhi

Courses taken: Biochemistry, Molecular biology, Microbiology, Biophysics, Genetics, Biotechnology, Pharmacology, Medicinal chemistry, Human Pathology, Computational biology and drug discovery

I Worked as a project trainee in University of Delhi sanctioned innovation project in the Department of Biomedical sciences, University of Delhi, India This project entitled “Design, synthesis and evaluation of anti-diabetic activity of substituted alkyl carboxylic acid derivatives as GPR agonists” involved the chemical synthesis of derivatives as GPR 40 agonists and evaluation of their anti-diabetic activity in vitro .

Achievements

- **Qualified** among the **top students** for **PhD Biophysics** at **All India Institute of Medical Sciences, New Delhi** through a **National level entrance examination** in August 2020.

- **Selected** among the **top 5 students** for **Master of Biophysics** program at **All India Institute of Medical Sciences, New Delhi** through a **national level entrance examination** in June2018.
- Qualified for the Combined entrance exam for biotechnology conducted by **Jawaharlal Nehru University**, through a national level entrance examination in May 2018.
- **Qualified** the **Masters exam for Bioinformatics** conducted by **Banaras Hindu University,** through a national level entrance examination in May 2018.
- **Qualified** the **Master exam for Central university- common entrance exam** through a national level entrance examination in June 2018.
- Secured **second position** during the academic year of 2017-2018.
- Won most **Disciplined student award** during the academic year of2017-2018

Publications

- **Pathania, S**. ***et al.*** iTRAQ proteomics of sentinel lymph nodes for identification of extracellular matrix proteins to flag metastasis in early breast cancer.***Sci Rep*** **12,** 8625 (2022). https://doi.org/10.1038/s41598 -022-12352-9

- **Pathania S** et al. Proteomics of Sentinel Lymph Nodes in Early Breast Cancer for Identification of Thymidylate Synthase as a Potential Biomarker to Flag Metastasis: A Preliminary Study. ***Cancer Manag Res*** . 2020;12:4841-4854. doi: *https://doi.org/10.2147/CMAR.S255684*

- Khan MI, Pathania S et al. (2024). MolDy: Molecular Dynamics Simulation Made Easy. *Bioinformatic* (Accepted)

Technical Skills

- **Proteomics techniques** {Biomarker identification, sample preparation for proteomics (cells, plasma, tissue), Protein quantification using BCA, 2-Dimensional gel electrophoresis, iTRAQ, mass spectrometer, Western blot, ELISA
- **Cell Biology techniques** {Cell culture, Viability assay using WST reagent, Transwell migration, wound healing, Immunofluoresnce, FACS, Microscale thermophoresis}
- **Biophysical/Biochemical Techniques** {UV-Visible spectroscopy, X-ray crystallography}
- **Chemistry techniques {** volumetric analysis **,** Viscosity measurement using Ostwald's viscometer}
- **Microbiological techniques** {Microbial identification, enumeration, streaking techniques and culture)
- **Computer skills** Software well acquainted { Quantity One- Densitometric analysis using softmax, Gene sys, Image J, SigmaPlot, Proteome discoverer}**Other Skills** {Proficiency in English; written and oral, MS Office, Zotero. Working knowledge of NCBItools
- **Bioinformatics tools** {BLAST, FASTA, Pymol}

Conferences/Workshops/Seminars attended

- Participated in **International conference on Proteomics for system integrated Bio-omics**, one health organized by **ICAR, Karnal, India** in December 2019
- **Poster presentation** at 11th **Proteomics society of India**, organized by **ICAR, Karnal, India,** 2019
- § Attended **Indo-italian Elettra Beamline User meeting and outreach program** organized by **AIIMS, New Delhi** in November 2019
- **Poster presentation in First Annual Research Day** organized by **AIIMS, New Delhi** in March 2019
- Participated in **2nd National conference** on **Understanding the Mechanism and challenges of complex disease, organized by University od Delhi** in January 2017
- Participated in **2-Day national workshop** on **Drug discovery technology- computational approaches in drug discovery and design** organized by **University of Delhi,** in January 2017

Achivement awards and extracurricular activities

- **Won best bowler award in inter-college level cricket championship,**organized by s**ocietyof Young Scientists (SYS), the**Official administrative student body**at AIIMS**, New Delhi, in March 2019
- First prize in **group dance category** in the AIIMS GOT TALENT, in January 2019
- Elected as a **class representative** during the academic year 2015-2016
- Worked as a **Publicity manager** in “Plexus” department annual fest during the academic year of 2015-2016

Synthesis and evaluation of GRPR-targeted radiopharmaceuticals for diagnosis and radioligand therapy of prostate cancer

Background: The gastrin-releasing peptide receptor (GRPR) is a G protein-coupled receptor belonging to the mammalian bombesin family. GRPR is expressed in a variety of tumor types, most significantly overexpressed in 63-100% of prostate cancer cases[1]. It is also expressed in other malignancies including breast, pancreatic, lung, colorectal, gastrinoma, endometrial, and gastrointestinal stromal cancer. Interestingly, GRPR is not expressed or present in low levels in most normal healthy organs/tissues and, therefore, it has been considered as an attractive cancer imaging maker and therapeutic target. Many radiolabeled bombesin analogs against GRPR have been evaluated in the clinic, e.g. a phase II/III trial of ^{68}Ga-RM2 and a Phase II trial of ^{177}Lu-NeoBOMB1 for prostate cancer[2,3]. However, GRPR-targeted radiopharmaceuticals suffer many hurdles in clinical and preclinical studies owing to their low in-vivo stability, lower tumor uptake, lack of internalization of antagonist-derived ligands causing faster clearance from tumors, and high pancreatic uptake. Towards addressing these critical questions, the quest for the identification of peptides with improved binding affinity along with high in vivo stability is underway.

Specific aims: (1) Design, synthesis, and evaluation of high-affinity and in vivo stable GRPR-targeted imaging agents with minimal pancreas uptake; (2) To convert the lead candidates identified in Aim 1 to radiotherapeutic agents and incorporate an albumin binder to extend their blood residence time and further improve uptake in tumor; and (3) To evaluate the treatment efficacy of lead candidates identified in Aim 2 in tumor-bearing mice.

Methods: We will design novel GRPR-targeted radioligands and systematically investigate the effects of substituting amino acids adjacent to cleavage sites with closely related unnatural amino acids. The universal metal chelator, DOTA (1,4,7,10-tetraazacyclododecane-1,4,7,10-tetraacetic acid), will be used to stably complex ^{68}Ga for imaging, or ^{177}Lu and ^{225}Ac for therapy. A cationic piperidine (Pip) linker will be used to link DOTA and the GRPR-targeting sequence. Cell-based assays will be performed to determine the binding affinity of new radioligands to GRPR. Top candidates with high GRPR binding affinity will be further evaluated for their detection sensitivity (for imaging tracers) and treatment efficacy (for therapeutic agents) in mice bearing GRPR-expressing PC-3 prostate cancer tumor xenografts. The top ^{68}Ga-labeled GRPR-targeted tracers will be converted to radiotherapeutic agents by replacing the imaging isotope ^{68}Ga with a radiotherapeutic nuclide (a β-emitter ^{177}Lu or a α-emitter ^{225}Ac). The top radiotherapeutic candidates will also be incorporated with an albumin binder to extend their blood residence time and further improve the tumor uptake and treatment efficacy. The treatment efficacy of promising ^{177}Lu or ^{225}Ac-labeled candidates will be evaluated in mice bearing GRPR-expressing PC-3 tumor xenografts.

Expected outcomes: The project is expected to generate novel and effective radioligands for diagnosis and radioligand therapy of GRPR-expressing cancer. Once translated into the clinic, these radioligands will improve cancer management and significantly reduce the morbidity and mortality of cancer.

References:

1. Verhoeven M, et al. Front Oncol 2023; 13: 1199432. doi:10.3389/fonc.2023.1199432
2. Michalski K, et al. Cancers 2021; 13: 6106. doi:10.3390/cancers13236106
3. Dalm SU, et al. J Nucl Med. 2017; 58: 293-299. doi:10.2967/jnumed.116.176636

THE UNIVERSITY OF BRITISH COLUMBIA

ACADEMIC HISTORY

ENROLMENT SERVICES
2016 - 1874 East Mall
Vancouver, BC Canada V6T 1Z1

Surname:	Given Names:	Student Number:	Date:
PATHANIA	SHEETAL	50976448	June 10, 2024

UBC Credentials

None to date

Transfer Credits

None to date

Winter Session 2023 - 2024

Doctor of Philosophy (UBC Vancouver) -
In Interdisciplinary Oncology

Term	Course	Credit Value	Course Title	% Grade	Letter Grade	Credit Rec'd	Stdg	Withdraw Date	Complete Date	Class Size Avg
2	MEDG 521	(3.0)	Molecular and Cell Biology of Cancer	Mark	Missing					
2	ONCO 510	(3.0)	Seminars in Oncology				T			
2	ONCO 649	(0.0)	Doctoral Dissertation				T			
2	PHYS 555B	(3.0)	Directed Studies in Physics	Mark	Missing					

Sessional Average for PHD:

Credits Attempted	=	Passed	Failed	Withdrawn	Audited	Incomplete
9.0	=	0.0	0.0	0.0	0.0	9.0

UBC Academic Awards
Faculty of Medicine Graduate Award

Summer Session 2024

Doctor of Philosophy (UBC Vancouver) -
In Interdisciplinary Oncology

Term	Course	Credit Value	Course Title	% Grade	Letter Grade	Credit Rec'd	Stdg	Withdraw Date	Complete Date	Class Size Avg
1	PHAR 518	(4.0)	Diagnostic Imaging and Radiopharmaceuticals			0.0	CIP			
1-2	ONCO 649	(0.0)	Doctoral Dissertation				CIP			

Sessional Average for PHD:

Credits Attempted	=	Passed	Failed	Withdrawn	Audited	Incomplete
4.0	=	0.0	0.0	0.0	0.0	4.0

********** End of Record **********

शरीरमाद्यं खलु धर्मसाधनम्

अखिल भारतीय आयुर्विज्ञान संस्थान
अन्सारी नगर, नई दिल्ली.११००२६ (भारत)
ALL INDIA INSTITUTE OF MEDICAL SCIENCES
ANSARI NAGAR, NEW DELHI - 110029 (INDIA)

OFFICE OF THE DEAN RECEIVED JUL 24 2023 GRADUATE STUDIES

Departement of Biophysics

दिनांक/ Dated :19/03/21

punitkaur@aiims.edu, 011-26593201

OFFICIAL TRANSCRIPT

This is to certify that **Ms. Sheetal Pathania** was been registered with Enrollment No: **P-2018/16178** for **M.Sc. (Biophysics)** course in Department of Biophysics from **24th September, 2018** to **31st July, 2020** at this Institute. The duration of the M.Sc. Courses is two years and the final examination are conducted only once at the end of course. As per Academic Record, her Date of Birth is **11th August, 1997.**

This is to certify that **Ms. Sheetal Pathania** has passed the **M.Sc. (Biophysics)** examination held in **August, 2020.** According to **Result Notification No. 78/2020**, Dated 27.08.2020, detailed paper-wise mark-statement of **Ms. Sheetal Pathania (Exam roll number: P-2018/16178)** is tabulated below.

Subjects	Marks Obtained	Maximum Marks
Theory		
I. Bioinformatics, Structural Bioinformatics, Molecular Modeling & Simulations, Drug discovery & CADD, Molecular Pharmacology, Protein Engineering, Proteomics, Basic Chemistry and Thermodynamics, radiation Biophysics, Metabolomics, Enzyme Kinetics, cell Biology, Cancer Biology.	56	80
II. Proteins, Protein Folding, Peptide-Design, Synthesis and Applications, Elementary Crystallography & X-ray Diffraction Methods, Elementary Spectroscopy: Principles and Applications.	65	80
III. Basic and Applied Molecular Biology, Membrane and Neuro-Biophysics, Analytical Techniques and Separation Methods.	65	80
Internal Assessment	51	60
Total	237	300
Practical		
Final	146	240
Internal Assessment	53	60
Total	199	300
GRAND TOTAL	**436**	600
OVERALL PERCENTAGE	**72.66%**	

(TOTAL MARKS OBTAINED FOUR HUNDRED AND THIRTY SIX OUT OF SIX HUNDRED)

Details of Research Work

Thesis Title:	Non-gel based proteomics of axillary lymph nodes in early breast cancer: Implications for identification of protein biomarkers for guiding surgical management
Techniques involved:	iTRAQ, mass spectrometry, 2 Differential gel electrophoresis, Cloning, PCR, Transformation, Plasmid isolation, Recombinant Protein Expression, Protein Purification using Affinity and Gel Filteration Chromatography, SDS-PAGE, Western Blotting, BCA quantification, Enzyme Activity Assay, CD Spectroscopy

20/3/21
कुल सचिव/Registrar
अ.भा.आयु.सं./A.I.I.M.S.
नई दिल्ली-110608 / New Delhi-110608

Dr. Punit Kaur
Professor and Head
Department of Biophysics, AIIMS
New Delhi-110029 (India)
डॉ. पुनीत कौर / Dr. Punit Kaur
आचार्य एवं अध्यक्ष / Professor & Head
जैवभौतिकी विभाग / Deptt. of Biophysics
अ.भा.आ.सं. / A.I.I.M.S.
अंसारी नगर, नई दिल्ली-29 / Ansari Nagar, New Delhi-29

अखिल भारतीय आयुर्विज्ञान संस्थान
अंसारी नगर, नई दिल्ली-110608
All India Institute of Medical Sciences
Ansari Nagar, New Delhi-110608

शरीरमाद्यं खलु धर्मसाधनम्

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फैक्स/Fax : 26589766, 26588663
ईमेल/Email : reg@aiims.ac.in
aiims.reg@gmail.com

No. F. 8/2018-Acad.I (P-2018/16178)

Dated : 28th Aug., 2020

CERTIFICATE

This is to certify that Ms.SHEETAL PATHANIA has passed the M.Sc (Biophysics) examination held in Aug., 2020. The marks secured by him/her are as under:-

	MARKS OBTAINED	MAXIMUM MARKS (PASS MARKS: 150)
THEORY	237	300
PRACTICAL	199	300
TOTAL	436	600

(Total Marks Obtained Four Hundred and Thirty Six out of Six Hundred)

(REGISTRAR)

University of Delhi

South Campus, New Delhi, India
Ph. +91-11-24157130 Email : dce@south.du.ac.in

037680

OFFICE OF THE DEAN
RECEIVED
AUG 25 2023
GRADUATE AND POSTDOCTORAL STUDIES

TRANSCRIPT

Ref. No.: Exam-III/TRS/ 2661

Date of Printing: 05/08/2023

SHEETAL PATHANIA has passed (CBCS) B.SC.(HONS.) BIOMEDICAL SCIENCES (Three Years Degree Course) (Six Semesters) from Shaheed Rajguru College of Applied Sciences for Women, University of Delhi, in the year May-June 2018 under Examination Roll No:15066554032. He/She has secured 8.622 out of 10 CGPA and was awarded Ist Division.

The papers offered and grade obtained are as follows:

Sem	Paper Code	Paper Name	Credit	Grade	Grade Point	Credit Point
I	32495902	Proteins and Enzymes	6	B+	7	42
I	32581101	Bioorganic Chemistry	6	B+	7	42
I	32581102	Cell and Radiation Biology	6	B+	7	42
I	72032801	ENGLISH-A	4	A+	9	36
II	32535205	MICROBIAL METABOLISM	6	O	10	60
II	32581201	Principles of Genetics	6	A	8	48
II	32581202	Human Physiology and Anatomy-I	6	A+	9	54
II	72182801	ENVIRONMENTAL SCIENCE	4	O	10	40
III	32515905	NUCLEAR & BIOMEDICAL INSTRUMENTATION	6	A	8	48
III	32581301	Biochemistry	6	A+	9	54
III	32581302	Human Physiology and Anatomy II	6	A	8	48
III	32581303	Medical Microbiology	6	A	8	48
III	32583901B	METHODS IN EPIDEMIOLOGICAL DATA ANALYSIS (EDA)	4	A+	9	36
IV	32205924	Food Microbiology and Food Safety	6	A+	9	54
IV	32581401	IMMUNOBIOLOGY	6	A+	9	54
IV	32581402	MOLECULAR BIOLOGY	6	A+	9	54
IV	32581403	MEDICINAL CHEMISTRY	6	A+	9	54

Ram Karan Jain

Assistant Registrar
(Examinations)

Typed	Verified	Checked
✓	✓	✓

University of Delhi

037681

South Campus, New Delhi, India
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Sem	Paper Code	Paper Name	Credit	Grade	Grade Point	Credit Point
IV	32583902P	MEDICAL LABORATORY DIAGNOSTICS (MLD)	4	A+	9	36
V	32581501	BIOPHYSICS (B.SC. (HONS)	6	A	8	48
V	32581502	PHARMACOLOGY	6	A+	9	54
V	32587902	GENOME ORGANIZATION AND FUNCTION	6	A+	9	54
V	32587905	MEDICAL BIOTECHNOLOGY	6	A+	9	54
VI	32581601	Human Pathology	6	A+	9	54
VI	32581602	Toxicology	6	A+	9	54
VI	32587901	COMPUTATIONAL BIOLOGY AND DRUG DISCOVERY	6	A+	9	54
VI	32587904	MEDICAL BIOCHEMISTRY	6	A+	9	54

Ram Karan Jha

Assistant Registrar
(Examinations)

Typed | Verified | Checked

a place of mind
THE UNIVERSITY OF BRITISH COLUMBIA

The University of British Columbia
Faculty of Medicine
Department of Radiology
2775 Laurel Street, 11th Floor
Vancouver, BC Canada V5Z 1M9

Telephone: 604-675-3665
E-Mail: dept.radiology@ubc.ca

June 3, 2024

Re: Reference letter for Ms. Sheetal Pathania's Four Year Doctoral Fellowship application

Dear Reveiw Committee,

It is my great pleasure to support Ms. Sheetal Pathania's application for the Four Year Doctoral Fellowship. Sheetal joined my research group in January 2024 as a PhD student in the Interdisciplinary Oncology Program.

Sheetal obtained her BSc degree with distinction in biomedical sciences in 2018 from University of Delhi, one of the top universities in India. She had an excellent academic performance with an average of 8.68/10 for all her courses and won the "most disciplined student award". At that time, she was also actively involved in a research project entitled "Design, synthesis and evaluation of anti-diabetic activity of substituted alkyl carboxylic acid derivatives as GPR agonists", and learned how to synthesize drug candidates and conduct in vitro assays.

Subsequently, Sheetal obtained her MSc degree in biophysics in 2020 from All India Institute of Medical Sciences (New Delhi), which is the number 1 medical university in India. Sheetal's MSc project was "Non-gel based proteomics of axillary lymph nodes in early breast cancer: Implications for identification of protein biomarkers for guiding surgical management". In two years, she successfully used Isobaric Tags for Relative and Absolute Quantitation (iTRAQ) coupled with LC-MS/MS to identify potential biomarkers that can be used to detect lymph node metastasis in early breast cancer. Her MSc work also led to two first-authored peer-reviewed journal articles, demonstrating her great potential for conducting medical research.

Before joining my research group, Sheetal worked as a researcher at Gangnam Severance Hospital of Yonsei University, which is one of the top three universities in South Korea. It is unusual for a foreigner to work as a researcher in a top university in South Korea, especially for a woman with only an MSc degree. This demonstrates that her ability to conduct medical research is well recognized by others. Her research project in South Korea was focused on the design, synthesis and evaluation of purine and pyrimidine based KRAS G12D inhibitors as anticancer agents. During those two years, Sheetal further solidified her techniques in the synthesis of anticancer agents and in vitro assays using cancer cell lines.

Sheetal works very hard as I often see her working in the lab during the weekends. Sheetal is also very productive. Her PhD project is focused on the development of gastrin-releasing peptide receptor (GRPR)-targeted radiopharmaceuticals for cancer diagnosis and radioligand therapy. GRPR has minimal expression in normal tissues, but is highly upregulated in various malignancies including prostate, breast and lung cancers. This specific expression pattern makes GRPR a promising target for cancer imaging

and therapy. Despite taking three elective courses in the past 5 months, Sheetal still managed to successfully synthesize five GRPR-targeted ligands, and identify one of them as a very potent GRPR binder by in vivo competition assays. In vivo PET (positron emission tomography) imaging and ex vivo biodistribution studies in tumor-bearing mice are currently being planned, and will be carried out within the next two months. Successfully completing the planned animal studies will, for sure, lead to her first manuscript. It is unusual for a graduate student to publish a first-authored peer-reviewed journal article in the first year. This further demonstrates Sheetal's excellent research productivity and problem-solving capability.

Sheetal also has excellent personal characteristics and interpersonal skills. This is demonstrated by the various achievement awards and extracurricular activities listed in her CV. Besides Sheetal, I have two more new PhD students (Shireen Jozi and Fatemeh Radnia) also starting in January 2024. Sheetal gets along very well with other lab members including those two new students. They always go to classes and work on the assignments together. Sheetal also offer help to others when needed; for example, she often perform MS characterizations for the compounds synthesized by others.

Sheetal is a talented and hard-working student who love to conduct medical research. Based on her achievements and training records, I have no doubt that she will thrive in the next 4-5 years as a PhD student. Therefore, I strongly recommend Sheetal as a receipt of the Four Year Doctoral Fellowship. Please let me know if you require further information regarding Sheetal's qualifications as an award candidate.

Sincerely,

Kuo-Shyan Lin, PhD
Professor, Department of Radiology, University of British Columbia
Distinguished Scientist, Department of Molecular Oncology, BC Cancer Research Centre
675 West 10th Ave, Rm 4-123, Vancouver, BC V5Z 1L3
E-mail: klin@bccrc.ca; Phone: 1-604-675-8208

Department of Biophysics
All India Institute of Medical Sciences
Ansari Nagar, New Delhi

Dr. Hariprasad. G (MD, PhD, MNAMS, MNAScI)
Professor & Chief Guide

Tel: +91-11-2659 4240
Fax: +91-11-2658 8663
E-mail: g.hariprasad@rediffmail.com

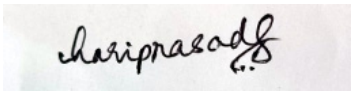
Reference Letter

It is indeed my pleasure to recommend **Sheetal Pathania** for the **PhD program** at **The University of British Columbia**. She was enrolled for MSc at our department from July 2019. I have had an opportunity of teaching and guiding her research work during this period, and I have known her since then. Through my interactions with her during this period, I have had a fair idea of her capabilities as a student and her attributes that makes her a good researcher.

She is an analytical, solution-oriented individual with a strong urge to win and succeed. She is an exceptional student and displays immense intellectual capability and has an urge to acquire more knowledge. Academically, she has a strong hold on her subject which is very much explicated in the way she goes about doing her experiments. During this period she worked on proteomics platform pertaining to 'Identification of biomarkers that can flag metastasis in early breast cancer' under my guidance. Her work has been published in peer reviewed journals. She is a keen student who makes optimal use of the theoretical classes, library and online information thereby keeping herself well informed about the proceedings at the laboratory.

Her main forte is her ability to learn quickly and improve upon the existing methodologies. She has been performing excellently in lab sessions and is prepared to stay for long hours at the lab to ensure that the tasks given to her are completed on time. I have had opportunities to interact with her at scientific meetings and seminars during which I have been able discuss about her research views, interests and ambitions. She has the zeal to take up challenges and carve a path to reach her goals. I have to say that she is a confident person with a pleasant disposition and always willing to lend assistance to her peers whenever possible. She recognizes the importance of teamwork and cooperation, and her multi-faceted personality will keep her good stead for her personal and professional aspirations.

It is but befitting that Sheetal is adding a new scientific dimension to her career by pursuing a PhD program at your university. In this pursuit, I very strongly recommend her for the program.



Hariprasad