

# **SIMRANJEET KAUR**

**Address:** 5843 Knight Street, V5P 2V4, Vancouver, Canada

**Contact No.:** +1-236-862-7338, **E-mail:** [skaur@bccrc.ca](mailto:skaur@bccrc.ca)

**LinkedIn:** <https://www.linkedin.com/in/simranjeet-kaur-363b9318b/>

## **EDUCATION**

**Doctor of Philosophy in Interdisciplinary Oncology** | Jan 2024 - Present

- BC Cancer Research Center, University of British Columbia, Vancouver, Canada

**Master of Pharmacy in Pharmaceutical Technology (Formulations)** | Nov 2020 - June 2022

- National Institute of Pharmaceutical Education and Research, S.A.S. Nagar, Punjab, India
- CGPA: 9.80/10.00

**Bachelor of Pharmacy** | August 2016 - Sept 2020

- University Institute of Pharmaceutical Sciences (UIPS), Panjab University, Chandigarh, India
- CGPA: 8.62/10.00

## **RESEARCH EXPERIENCE**

**Graduate Research Scholar; Dr. Joseph Lau & Dr. Kuo-Shyan Lin, Lau Lab, BC Cancer Research Center, Vancouver, Canada** | Jan 2024 - Present

- **Project Title:** Development of radiopharmaceuticals targeting neurotensin receptor 1 for PET imaging of pancreatic ductal adenocarcinoma

**Research Scholar; Dr. Arvind Kumar Bansal's Lab, NIPER, S.A.S. Nagar, India** | Nov 2020 - June 2022

- **Project Title:** Investigation of Deep Eutectic System (DESs) for the enhancement of oral bioavailability of poorly soluble and permeable drugs

## **PROFESSIONAL EXPERIENCE**

**Formulation R&D trainee; Dr. Reddy's Laboratories, IPDO, Hyderabad, India** | July 2022 – Sept 2023

- Worked in the Life Cycle Management of products at the Formulation R&D center
- Technical evaluation of product robustness issue for quality improvement
- Commercial batch monitoring to understand the probable root cause
- Experimentation at the formulation R&D center for defined issue resolution and trial report preparation
- Preparation of Troubleshooting action plan & providing solutions to plant team for issue resolution
- Monitoring of commercial batches to ensure the effectiveness of remediation
- Handling unit operations such as top spray granulation, drying, blending, tablet compression, coating, and encapsulation along with stability testing protocol preparation and sample loading, material management

## **CONFERENCES/ SEMINARS ATTENDED**

- Awarded second prize in oral presentation at UBC Radiology Clinical and Fundamental Science Research Day 2024 at Vancouver General Hospital
- Achieved second prize in presenting research work at Dissolution Research Presentation India (DRPI-2022) organized by the Society for Pharmaceutical Sciences in association with the American Association of Pharmaceutical Sciences (AAPS) and the Association of Pharmaceutical Teachers of India (APTI)
- Participated in the 10<sup>th</sup> International Conference DISSO India 2022, organized by SPDS in collaboration with AAPS
- Presented seminar on "Recent Advances and Applications of Hot Melt Extrusion as Thermal Processing Technique" guided by Prof Arvind K. Bansal | Jan 2021
- Attended virtual IPEC India webinar on "Innovations in Pharmaceutical Coating Technology- A way to avoid industry challenges"

## TECHNICAL SKILLS

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### Instrumentation skills

- Microwave peptide synthesizer (Liberty Blue)
- Spectroscopic techniques (UV-visible spectrophotometer, FTIR, PXRD, MS)
- Microscopic techniques (Polarized light microscope, Fluorescence microscope, SEM, TEM)
- Analytical techniques (HPLC, LC-MS)
- Process Analytical Technology Tools (NIR spectroscopy, Optical Coherence Tomography)
- Granulation equipment- Fluidized Bed Equipment (GPCG), Rapid Mixer Granulator (RMG)
- Drying equipment (Spray dryer/ Rotavapor/ Fluidised bed dryer)
- Compression machines (FETTE, Kambert), Automatic Capsule filling machine
- Blending machines (Double Cone blender, V-cone blender, Bin blender)
- Coating equipment (GMPC, NEO-COTA)
- Thermal methods (DSC/ TGA)
- Particle-size distribution, size analysis, and reduction (Sieve analysis equipment, Zetasizer, Homogenizer respectively)

### Computer skills

- Molecule editing (ChemDraw, PyMOL)
- Referencing tools (EndNote, Mendeley)
- Google Scholar, Indian Patent Search Engine)

## SCHOLASTIC ACHIEVEMENTS

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- Granted a fellowship of ₹12,400 per month from the Ministry of Chemicals and Fertilizers, Government of India | 2020-2022
- Secured 2<sup>nd</sup> rank in the Department of Pharmaceutics, National Institute of Pharmaceutical Education and Research, SAS Nagar | 2020-2022
- Ranked 27<sup>th</sup> in the NIPER-Joint Entrance Exam (NIPER-JEE) amongst 4000+ students | June 2020
- Stood 40<sup>th</sup> in the Graduate Pharmacy Aptitude Test (GPAT) amongst 48000+ students | January 2020
- Awarded Jaswant Singh Gill scholarship for “Four” consecutive years for meritorious academic performance (2016-2020)
- Rank holder of B. Pharm (3<sup>rd</sup> rank in 2016, 2018, 2019)
- Awarded 1<sup>st</sup> prize in a group poster presentation entitled “Dissociative identity Disorder” in B. Pharm category organized by International Brain Research Organization (IBRO)/ APRC Chandigarh Neuroscience School 2018
- Winner of the National-level Pharma Quiz competition organized by the Indian Pharmaceutical Association (IPA), the Institution’s Innovation Council with UIPS

## EXTRA-CURRICULAR ACTIVITIES

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- Placement Coordinator of Placement cell, NIPER S.A.S. Nagar | July 2021-2022
- Organizer in Alumni Meet-2018 of UIPS, Panjab University, Chandigarh
- Captain of Basketball team securing 2<sup>nd</sup> position in Basketball 2019 event, organized by Panjab University, Chandigarh

# Research Proposal

## Title: Development of radiopharmaceuticals targeting neurotensin receptor 1 for PET imaging of pancreatic ductal adenocarcinoma

**Abstract:** Pancreatic cancer is the third leading cause of cancer deaths in Canada, with a 5-year survival rate of 10%. Over 90% of cases are pancreatic ductal adenocarcinoma (PDAC), which is typically diagnosed at an inoperable stage[1]. Late-stage patients receive chemotherapy, but responses are limited. There is a critical need to advance new lines of therapy for PDAC to improve patient outcomes and quality of life. The neurotensin receptor 1 (NTSR1) is overexpressed in ~78% of PDACs, making it an attractive target for the detection and treatment of PDAC[2]. In this research, we aim to develop radiopharmaceuticals that target NTSR1 for use with positron emission tomography (PET) imaging. Additionally, the radiopharmaceuticals identified may later be repurposed for therapeutic applications.

**Background:** The neurotensin 1 receptor (NTSR1) is a G protein-coupled receptor (GPCR). Neurotensin (NT), a 13-residue neuropeptide, is the endogenous ligand for NTSR1. Most of the work to date use pharmacophores derived from the NT peptide; however, the major limitation of this approach is the metabolic lability of the endogenous ligand. NT (8-13), the minimum peptide sequence needed for binding and bioactivity, has a biological half-life of less than 2 minutes. The stabilization of the Arg<sup>8</sup>-Arg<sup>9</sup>, Pro<sup>10</sup>-Tyr<sup>11</sup>, and Tyr<sup>11</sup>-Ile<sup>12</sup> peptide bonds is crucial to ensure sufficient payload delivery. The leading peptide-based NTSR1 radiopharmaceutical, <sup>68</sup>Ga-DOTA-NT-20.3, demonstrated good tumor uptake in a PDAC xenograft mouse model and this compound will be used as a reference in this research project.

**Hypothesis & Specific Aims:** Amino acid substitution or cyclization can enhance the plasma half-life of NTSR1-targeting peptides, thereby improving the delivery of radioactive payloads to tumor sites. By stabilizing these peptides, <sup>68</sup>Ga-labeled NT derivatives are anticipated to achieve greater tumor uptake, increased retention within the tumor, and improved tumor-to-non-tumor ratios compared to <sup>68</sup>Ga-NT-20.3. The research aims to stabilize scissile peptide bonds in NTSR1 radiopharmaceuticals to improve radioactive payload delivery and to conduct preclinical imaging studies to assess target engagement and pharmacokinetics of <sup>68</sup>Ga-labeled NT derivatives in a pancreatic cancer mouse model.

**Methods:** Peptides will be synthesized using a microwave peptide synthesizer and purified via HPLC. Receptor binding assays will be performed with AsPC-1 cells using [<sup>125</sup>I]Tyr<sup>3</sup>-NT and competing ligands. Calcium release assays will measure agonistic/antagonistic properties using a calcium-sensitive dye and a microplate reader. Radiolabeling of peptides with <sup>68</sup>Ga will involve purification and quality control to ensure high purity and molar activity. In vivo stability, preclinical imaging, and biodistribution studies will be conducted on mice to assess tracer uptake and distribution.

**Expected outcomes:** We aim to identify at least 3 compounds binding to NTSR1 with IC<sub>50</sub> values <20 nM. We expect Tyr<sup>11</sup> substitutions to exhibit improved affinity with less bulky aromatic derivatives due to reduced steric hindrance. We anticipate equal or improved stability compared to NT-20.3, leading to enhanced tumor accumulation and contrast. To address potential issues with tumor retention, we may incorporate albumin binders as PK modifiers.

## References:

1. Prignon A, et al. Preclinical Evaluation of <sup>68</sup>Ga-DOTA-NT-20.3: A Promising PET Imaging Probe to Discriminate Human Pancreatic Ductal Adenocarcinoma from Pancreatitis. *Mol Pharm*. 2019; 16:2776–84.
2. Reubi JC, et al. Neurotensin receptors: A new marker for human ductal pancreatic adenocarcinoma. *Gut*. 1998; 42:546–50.

**Surname:**  
Kaur

**Given Names:**  
Simranjeet

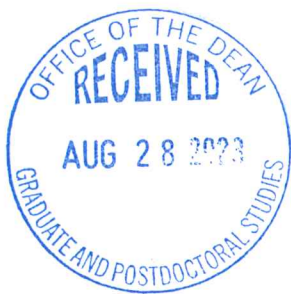
**Student Number:**  
53045688

**Date:**  
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	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			
6.0		=	0.0	0.0	0.0	0.0	6.0			
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 \*\*\*\*\*





राष्ट्रीय औषधीय शिक्षा एवं अनुसंधान संस्थान

**NATIONAL INSTITUTE OF PHARMACEUTICAL  
EDUCATION AND RESEARCH (NIPER)**

(Ministry of Chemicals & Fertilizers Govt. of India)  
Sector 67, S.A.S Nagar (Mohali) Punjab - 160062 (India)  
Tel.: +91-172-2214682-87, Website : [www.niper.gov.in](http://www.niper.gov.in)  
Fax : +91-172-2214692, 2230068

20PTFM3303

August 16, 2023

**TRANSCRIPT**

This is to certify that **Ms. Simranjeet Kaur** was a bonafide student of M. Pharm. Discipline of Pharmaceutical Technology (Formulations) of this Institute from November 2020 to June 2022.

Details of the student are as under :

- |    |                        |   |   |
|----|------------------------|---|---|
| 1. | Nationality            | : | Indian  |
| 2. | Examination Completed  | : | M. Pharm.   |
| 3. | Discipline             | : | Pharmaceutical Technology (Formulations)  |
| 4. | Date of admission      | : | November 2020   |
| 5. | Date of Completion     | : | June 2022   |
| 6. | Medium of Instructions | : | English   |
| 7. | CGPA                   | : | <b>9.80</b> on a 10-point scale<br>(A copy of result-cum Grade cards is appended) |

During her stay in the campus, her work and conduct has been found to be good. This Institute has no objection if she, applies for higher studies in University of British Columbia, Vancouver, BC, Canada.

Place: S.A.S. Nagar

Section Officer (A&E)

**Disclaimer: Only to be used for the purpose mentioned in the certificate and not for any other purpose.**





GC 0722  
राष्ट्रीय औषधीय शिक्षा एवं अनुसंधान संस्थान  
National Institute of Pharmaceutical Education and Research  
Sector - 67, S.A.S. Nagar - 160 062

RESULT - CUM GRADE CARD

Name : Simranjeet Kaur  
Semester & Discipline : I M. Pharm. Pharmaceutical Tech. (Formulations)  
Registration No. : 20PTFM3303 Date of Result : 19.07.2021

Course code	Course Name	Credits	Letter Grade
<b>Semester - I</b>	<b>Nov. 2020 – March 2021</b>		
PT-580	Regulatory Considerations for Formulation Development	1	A
MC-511	Spectral Analysis	2	A
NP-510	Separation Techniques	1	A
PE-510	Pharmaceutical Preformulation-I	1	A
PE-520	Biopharmaceutics and Pharmacokinetics	2	A
PE-530	Pharmaceutical Preformulation-II	1	A
BT-510	Biotechnology in Pharmaceutical Sciences	1	A
GE-510	Biostatistics	2	B
GE-520	Fundamentals of Intellectual Property (IP) and Technology Management	1	B
GE-511	Seminar	1	A
LG-510	General Lab Experience	3	A
Credits : 16		Total Credit Points : 154	GPA : 9.63

Remarks : To Continue

प्रकृति 9/12/21  
Section Officer (Academics & Exam)

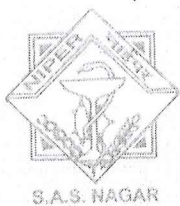
प्रकृति  
Registrar

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(For grading system please see backside)

प्रकृति अग्रवाल / Prakriti Aggarwal  
अनुभाग अधिकारी (शैक्षणिक एवं परीक्षा)  
Section Officer (Academic & Examination)  
राष्ट्रीय औषधीय शिक्षा एवं अनुसंधान संस्थान  
National Institute of Pharmaceutical Education and Research  
Sector-67, एस.एस. नगर - 160062 पंजाब, भारत  
Sector-67, S.A.S. Nagar-160062, Punjab, INDIA





S.A.S. NAGAR

GC 0970

राष्ट्रीय औषधीय शिक्षा एवं अनुसंधान संस्थान  
National Institute of Pharmaceutical Education and Research  
Sector - 67, S.A.S. Nagar - 160 062

RESULT - CUM GRADE CARD

Name : Simranjeet Kaur  
Semester & Discipline : II M. Pharm. Pharmaceutical Tech. (Formulations)  
Registration No. : 20PTFM3303 Date of Result : 12.11.2021

Course code	Course Name	Credits	Letter Grade
Semester - II	April - August 2021		
PT-620	Pharmaceutical Production Technology	1	A(-)
PT-660	Formulation Development Concepts as Applied in Industry	2	A
PT-670	Industrial Pharmaceutical Processing (Scale up and validation)	1	A
PA-630	Stability Testing	1	A
PE-620	Drug Delivery I (Controlled Drug Delivery)	2	A(-)
PE-630	Pharmaceutical Product Development-1	1	A(-)
PE-650	Drug Delivery II (Targeted Drug Delivery)	2	A
PE-660	Solid State Pharmaceutics	1	A
GE-611	Seminar	1	A
LS-610	General Lab Experience in the Area of Specialization	2	A

Credits (Sem I-II): 30 Total Credit Points : 290 CGPA : 9.67

Remarks : To Continue

Section Officer (Academic & Exam)

Registrar

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(For grading system please see page 67)

प्रकृति अग्रवाल / Prakriti Aggarwal  
अनुभाग अधिकारी (शैक्षणिक एवं परीक्षा)  
Section Officer (Academic & Examination)  
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National Institute of Pharmaceutical Education and Research  
Sector-67, एस.एस. नगर - 160062 पंजाब, भारत  
Sector-67, S.A.S. Nagar-160062, Punjab, INDIA



GC 0294

राष्ट्रीय औषधीय शिक्षा एवं अनुसंधान संस्थान  
National Institute of Pharmaceutical Education and Research  
Sector - 67, S.A.S. Nagar - 160 062

**RESULT - CUM GRADE CARD**

Name : Simranjeet Kaur  
Semester & Discipline : III M. Pharm. Pharmaceutical Tech. (Formulations)  
Registration No. : 20PTFM3303 Date of Result : 26.04.2022

Course code	Course Name	Credits	Letter Grade
Semester - III	September 2021 - January 2022		
TH-598	Synopsis	5	A -
TH-599	Presentation	3	A -

Credits (Sem I-III) :	38	Total Credit Points :	370	CGPA :	9.74
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Remarks : To Continue

प्रवृति  
Section Officer (Academics & Exam)

प्रवृति  
Registrar



प्रवृति  
प्रकृति अग्रवाल / Prakriti Aggarwal  
अनुभाग अधिकारी (शैक्षणिक एवं परीक्षा)  
Section Officer (Academic & Examination)  
राष्ट्रीय औषधीय शिक्षा एवं अनुसंधान संस्थान  
National Institute of Pharmaceutical Education and Research  
सेक्टर-67, एस.एस. नगर-160062 पंजाब, भारत  
Sector-67, S.A.S. Nagar-160062, Punjab, INDIA

(For grading system please see back side)





GC 0835  
राष्ट्रीय औषधीय शिक्षा एवं अनुसंधान संस्थान  
National Institute of Pharmaceutical Education and Research  
Sector - 67, S.A.S. Nagar - 160 062

RESULT - CUM GRADE CARD

Name : Simranjeet Kaur  
Semester & Discipline : IV M. Pharm. Pharmaceutical Tech. (Formulations)  
Registration No. : 20PTFM3303 Date of Result : 30.06.2022

Course code	Course Name	Credits	Letter Grade
Semester - IV	January - June 2022		
TH-698	Thesis	9	A
TH-699	Defence of Thesis	3	A
Credits(Sem I-IV) : 50		Total Credit Points : 490	CGPA : 9.80

Remarks : PASS

प्रमोद  
Section Officer (Academics & Exam)

निन्दर  
Registrar



प्रमोद  
प्रकृति अग्रवाल / Prakriti Aggarwal  
अनुभाग अधिकारी (शैक्षणिक एवं परीक्षा)  
Section Officer (Academic & Examination)  
राष्ट्रीय औषधीय शिक्षा एवं अनुसंधान संस्थान  
National Institute of Pharmaceutical Education and Research  
सेक्टर - 67, एस.एस. नगर - 160062 पंजाब, भारत  
Sector-67, S.A.S. Nagar-160062, Punjab, INDIA

(For grading system please see back side)

# Grading System

Prepared by

Checked by

Letter Grade	Grade Point	Performance	CGPA Conversion Formula
A	10	Outstanding	<p>Grade Point Average (GPA)=TCP/TCH = <math>\frac{G1C1+G2C2+G3C3+ \dots}{C1 + C2 + C3 + \dots}</math></p> <p>Where, G1, G2, G3 etc. stand for the Grade Points obtained in specified courses C1, C2, C3 etc. stand for Credits of the respective courses</p> <p>TCP stands for Sum of Credit Points scored in all courses of a semester TCH stands for Sum of Total Credits of a semester</p>
A(-)	9	Excellent	
B	8	Very Good	
B(-)	7	Good	
C	6	Average	
C(-)	5	Below Average	
D	4	Marginal	
E	2	Poor	
F	0	Very Poor	
I	-	Incomplete Grade	
NP	-	Audit Pass	<p>Cumulative Grade Point Average (CGPA) = <math>\frac{TCP1+TCP2+TCP3+TCP4}{TCH1+TCH2+TCH3+TCH4}</math></p> <p>Where, TCP1 stand for Total Credit Point for Semester-1, TCP2 stands for Total Credit Points for Semester-2 and so on. TCH1 stands for Total Credits for Semester-1, TCH2, Total Credits for Semester-2 and so on.</p> <p>GPA and CGPA will be calculated up to 2<sup>nd</sup> decimal place</p> <p>Formula for conversion of CGPA into percentage of marks :</p> <p>CGPA = X Formula = <math>5 \times X + 30 = \%</math> Calculation of GPA/CGPA <math>5X + 30\% = \%</math>age</p>
NE	-	Audit Fail	
W	-	Withdrawal	
X	-	Continuation (only for major projects)	
S	-	Satisfactory Completion	
Z	-	Non-completion	

Note : For calculating CGPA only those courses (including projects) are taken into account in which the student has been awarded A,B,C,D,E, or F grade.

VERIFIED

# राष्ट्रीय औषधीय शिक्षा एवं अनुसंधान संस्थान

(राष्ट्रीय औषधीय शिक्षा एवं अनुसंधान संस्थान अधिनियम 1998 के तहत संसद द्वारा स्थापित)

एस. ए. एस. नगर, पंजाब, भारत

अभिषद की अनुशंसा पर

फार्मसी निष्णात

की उपाधि

सिमरनजीत कौर

को, जिन्होंने इस उपाधि की अवाप्ति हेतु विनियम विहित अपेक्षाओं को सन् 2022 में सफलतापूर्वक पूरा कर लिया है, एतद् द्वारा प्रदान करता है।

10 अंकीय मापक्रम में इनका सी. जी. पी. ए. 9.80 है।

भारतीय गणराज्य के अंतर्गत एस. ए. एस. नगर में आज, दिनांक 7 जनवरी 2023, को संस्थान की मुद्रा अंकित यह उपाधि दी गई।

## National Institute of Pharmaceutical Education and Research

(Established by the Parliament under National Institute of Pharmaceutical Education and Research Act, 1998)

S.A.S. Nagar, Punjab, India

Upon the recommendation of the Senate hereby confers the degree of

Master of Pharmacy

on

Simranjeet Kaur

who has successfully completed in the year 2022 the requirements prescribed under the regulations for the award of this degree

with a cumulative grade point average of 9.80 on a 10 point scale.

Given this day, the 7th January 2023, under the seal of the Institute at S.A.S. Nagar in the Republic of India.

प्रकृति

प्रकृति अग्रवाल / Prakriti Aggarwal

अनुभाग अधिकारी (शैक्षणिक एवं परीक्षा)

Section Officer (Academic & Examination)

राष्ट्रीय औषधीय शिक्षा एवं अनुसंधान संस्थान

National Institute of Pharmaceutical Education and Research

सेक्टर-67, एस.एस. नगर-160062 पंजाब, भारत

Sector-67, S.A.S. Nagar-160062, Punjab, INDIA

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Registrar

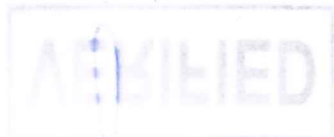
Dean



Director

Chairman, Board of Governors

Certificate No. 13C/4207/22



Prepared by: Refi

Checked by: Antar

Verified by: [Signature]



प्रकृति अग्रवाल / Prakriti Aggarwal  
अनुभाग अधिकारी (शैक्षणिक एवं परीक्षा)  
Section Officer (Academic & Examination)  
राष्ट्रीय औषधीय शिक्षा एवं अनुसंधान संस्थान  
National Institute of Pharmaceutical Education and Research  
सैक्टर-67, एस.ए.एस. नगर-160062 पंजाब, भारत  
Sector-67, S.A.S. Nagar-160062, Punjab, INDIA

गोपनीय / CONFIDENTIAL

प्रतिलिपि / Transcript of Ms. Simranjeet

The University of British Columbia,  
Graduate and Postdoctoral Studies  
170-6371 Crescent Road, Vancouver, BC  
Canada V6T 1Z2  
Email: [sharonr@bcgsc.ca](mailto:sharonr@bcgsc.ca)



P

SIGNATURE

EMS



TRACKING NUMBER EP771420985IN

N° DE REPERAGE

CPC-IMXL12535KB

2023-08-24 20:13

43-074-298 (13-10)



Del FD:Fertilizer Factory Hargal SD<140126>



EP771420985IN  
FOM SP.DOC CHANDIGARH SECTOR 67 SD <160062>  
Counter No :1,17/08/2023,11:53

Amt:1,392.40(Cash)

Wt:35gms

INCOILVER, CANADA



## Panjab University

Application No.: 2065107432

**ATTESTED PHOTOCOPIES OF CERTIFICATES/VERIFICATIONS**

Name..... Simranjeet Kaur ..... Father's Name : Sh. .... Jaswant Singh .....  
 Mother's Name : Smt. .... Jasveer Kaur ..... Regd. No. .... 40316000026 .....

Sr. No.	Roll No.	Name of examination	Year/Session
1	139	Bachelor of Pharmacy (B. PHARMA) - Semester 1	Dec-2016 Grade Card
2	238	Bachelor of Pharmacy (B. PHARMA) - Semester 2	May-2017 Grade Card
3	334	Bachelor of Pharmacy (B. PHARMA) - Semester 3	Dec-2017 Grade Card
4	436	Bachelor of Pharmacy (B. PHARMA) - Semester 4	May-2018 Grade Card
5	533	Bachelor of Pharmacy (B. PHARMA) - Semester 5	Dec-2018 Grade Card
6	631	Bachelor of Pharmacy (B. PHARMA) - Semester 6	May-2019 Grade Card
7	733	Bachelor of Pharmacy (B. PHARMA) - Semester 7	Dec-2019 Grade Card
8	833	Bachelor of Pharmacy (B. PHARMA) - Semester 8	Sep-2020 Grade Card
9	833	Bachelor of Pharmacy (B. PHARMA) - Semester 8	Sep-2020 Degree

**Note: These documents have been directly dispatched by our office.**

The enclosed photocopies of Certificates, duly attested, are being sent on the request made by.....

Simranjeet Kaur ( Ref No. )

CHANDIGARH

Dated..... 29-Sep-2023 .....

Assistant Registrar (Certificates)

for Controller of Examinations

Email Id: arcert@pu.ac.in



Sr. No. 2K17/ 053356

Roll No 139  
Regd. No 40316000026

# Panjab University

## RESULT-CUM-DETAILED MARKS CERTIFICATE

Bachelor of Pharmacy 1<sup>st</sup> Semester Examination December 2016

Faculty of Pharmaceutical Sciences

Name of Candidate : SIMRANJEET KAUR  
 Father's Name : Shri JASWANT SINGH  
 Mother's Name : Smt. JASVEER KAUR

### Detail of Marks

Paper	Subject		Credits	Grade
1.	Organic Chemistry-I [PHARM-1011]	Written & Int. Ass.	03	A
	Organic Chemistry Practical-I [PHARM-1111]	Practical & Int. Ass.	03	A
2.	Pharmaceutical Technology-I [PHARM-1021] (General and Dispensing Pharmacy)	Written & Int. Ass.	03	A+
	Pharmaceutical Technology Practical-I [PHARM-1121] (General & Dispensing Pharmacy)	Practical & Int. Ass.	03	A+
3.	Pharmacognosy-I [PHARM-1031]	Written & Int. Ass.	03	A+
	Pharmacognosy Practical-I [PHARM-1131]	Practical & Int. Ass.	02	A+
4.	Remedial Mathematics [PHARM-1051 (M)]	Written & Int. Ass.	03	A+
	Or	Written & Int. Ass.	-	-
	Remedial Biology [PHARM-1051 (B)] Remedial Biology Practical [PHARM-1151 (B)]	Practical & Int. Ass.	-	-
5.	Computer Science and Applications [PHARM-1061]	Written & Int. Ass.	02	A+
	Computer Science Practical [PHARM-1161]	Practical & Int. Ass.	01	O+
Total Credits & marks (if passed)			23	

Result:

S.G.P.A...

7.83

Earned Credits...23

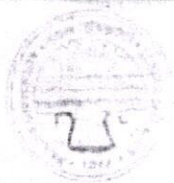
Attest

Assistant Registrar (Certificates)  
 Panjab University  
 Chandigarh

CHANDIGARH  
 April 10, 2017

Controller of Examinations





# Panjab University

## RESULT-CUM-DETAILED MARKS CERTIFICATE

BACHELOR OF PHARMACY SECOND SEMESTER EXAMINATION MAY, 2017  
FACULTY OF PHARMACEUTICAL SCIENCES

Name of Candidate : SIMRANJEET KAUR

Father's Name : Shri JASWANT SINGH

Mother's Name : Smt. JASVEER KAUR

Detail of Marks				
Paper	Subject		Credits Earned	Grade
1.	Organic Chemistry-II [PHARM-2011]	Written & Int. Ass.	03	A+
	Organic Chemistry Practical-II [PHARM-2111]	Practical & Int. Ass.	02	O
2.	Pharmaceutical Analysis-I [PHARM-2012]	Written & Int. Ass.	03	A+
	Pharmaceutical Analysis Practical-I [PHARM-2112]	Practical & Int. Ass.	03	O
3.	Physical Pharmaceutics-I [PHARM-2021]	Written & Int. Ass.	03	O+
	Physical Pharmaceutics Practical-I [PHARM-2121]	Practical & Int. Ass.	03	A+
4.	Anatomy, Physiology and Health Education-I (APHE-I, Cell Biology) [PHARM-2041]	Written & Int. Ass.	03	O+
	Anatomy, Physiology and Health Education Practical-I (APHE-I) [PHARM-2141]	Practical & Int. Ass.	03	O
5.	Pharmaceutical Statistics [PHARM-2071]	Written & Int. Ass.	03	A+

Result:

1. S.G.P.A...8.77

C.G.P.A...8.33

Earned Credits...26

Attested

Assistant Registrar (Certificates)  
Panjab University  
Chandigarh

CHANDIGARH  
August 31, 2017

Controller of Examinations



Sr. No.: 2K 18/0142160



Roll No. 334

Regd. No. 40316000026

# Panjab University

## RESULT-CUM-DETAILED MARKS CERTIFICATE

**BACHELOR OF PHARMACY Third Semester (Credit Based) Examination, Dec 2017.**  
**FACULTY OF PHARMACEUTICAL SCIENCES**

Name of Candidate : **SIMRANJEET KAUR**  
 Father's Name : **Shri. JASWANT SINGH**  
 Mother's Name : **Smt. JASVEER KAUR**

### Detail of Marks

Paper	Subject		Credits Earned	Grade
1.	Chemistry of Natural Products and including Heterocyclic Compounds [PHARM-3011]	Written & Int. Ass.	03	A+
	Chemistry of Natural Products and Heterocyclic Practical [PHARM-3111]	Practical & Int. Ass.	02	A+
2.	Medicinal Chemistry-I [PHARM-3012]	Written & Int. Ass.	02	O
	Medicinal Chemistry Practical-I [PHARM-3112]	Practical & Int. Ass.	01	O+
3.	Physical Pharmaceutics-II [PHARM-3021]	Written & Int. Ass.	03	O
	Physical Pharmaceutics Practical-II [PHARM-3121]	Practical & Int. Ass.	02	O+
4.	Pharmaceutical Microbiology [PHARM-3022]	Written & Int. Ass.	02	O
	Pharmaceutical Microbiology Practical-I [PHARM-3122]	Practical & Int. Ass.	02	A
5.	Pharmacognosy-II [PHARM-3031]	Written & Int. Ass.	03	A+
	Pharmacognosy Practical-II [PHARM-3131]	Practical & Int. Ass.	02	O
6.	Anatomy, Physiology and Health Education-II (APHE-II) [Pharm-3041]	Written & Int. Ass.	03	O+
	Anatomy, Physiology and Health Education Practical-II (APHE-II) [Pharm-3141]	Practical & Int. Ass.	02	A+

Result:  
 1. S.G.P.A -8.70

Earned Credits 27

CHANDIGARH  
 May 07, 2018

*Attested*  
 Assistant Registrar (Certificates)  
 Panjab University  
 Chandigarh

*Barish*  
 Controller of Examinations



Sr. No.: 2K 18/ 0800237



Roll No. 436

Regd. No. 40316000026

# Panjab University

## RESULT-CUM-DETAILED MARKS CERTIFICATE

**BACHELOR OF PHARMACY Fourth Semester (Credit Based) Examination May, 2018**  
**FACULTY OF PHARMACEUTICAL SCIENCES**

Name of Candidate : SIMRANJEET KAUR  
 Father's Name : Shri. JASWANT SINGH  
 Mother's Name : Smt. JASVEER KAUR

Detail of Marks				
Paper	Subject		Credits Earned	Grade
1.	Physical Chemistry [PHARM-4011]	Written & Int. Ass.	02	O
	Physical Chemistry Practical [PHARM-4111]	Practical & Int. Ass.	02	A+
2.	Pharmaceutical Technology-II [PHARM-4021]	Written & Int. Ass.	02	A+
	Pharmaceutical Technology Practical-II [PHARM-4121]	Practical & Int. Ass.	02	A+
3.	Principles of Pharmaceutical Operations [PHARM-4022]	Written & Int. Ass.	02	O+
	Pharmaceutical Operations Practical [PHARM-4122]	Practical & Int. Ass.	02	O+
4.	Pharmacognosy-III [PHARM-4031]	Written & Int. Ass.	03	A+
	Pharmacognosy Practical-III [PHARM-4131]	Practical & Int. Ass.	02	A+
5.	Pharmacology-I [PHARM-4041]	Written & Int. Ass.	03	O
	Pharmacology Practical-I [PHARM-4141]	Practical & Int. Ass.	02	O
6.	Environmental Studies [PHARM-4081]	Written & Int. Ass.	03	O

Result:

I. S.G.P.A 8.72

C.G.P.A. 8.71

Earned Credits 25

Attested

Assistant Registrar (Certificate)  
 Panjab University  
 Chandigarh

CHANDIGARH  
 August 08, 2018

Controller of Examinations



Sr. No.: 2K 18/ 0800331



Roll No. 533  
Regd. No. 40316000026

# Panjab University

## RESULT-CUM-DETAILED MARKS CERTIFICATE

BACHELOR OF PHARMACY Fifth Semester (Credit Based) Examination Dec, 2018  
FACULTY OF PHARMACEUTICAL SCIENCES

Name of Candidate : SIMRANJEET KAUR  
Father's Name : Shri. JASWANT SINGH  
Mother's Name : Smt. JASVEER KAUR

Detail of Marks				
Paper	Subject		Credits Earned	Grade
1.	Medicinal Chemistry-II [PHARM-5011]	{ Written & Int. Ass.	3	O
2.	Biochemistry [PHARM-5012]	{ Written & Int. Ass.	3	A+
	Biochemistry Practical [PHARM-5112]	{ Practical & Int. Ass.	2	A
3.	Pharmaceutical Technology-III [PHARM-5021]	{ Written & Int. Ass.	3	A+
	Pharmaceutical Technology Practical-III [PHARM-5121]	{ Practical & Int. Ass.	3	A+
4.	Biological Pharmacy and Biotechnology [PHARM-5022]	{ Written & Int. Ass.	3	A+
	Biological Pharmacy and Biotechnology Practical [PHARM-5122]	{ Practical & Int. Ass.	3	A+
5.	Pharmacology-II [PHARM-5041]	{ Written & Int. Ass.	3	A+
	Pharmacology Practical-II [PHARM-5141]	{ Practical & Int. Ass.	2	O

Result:

1. S.G.P.A- 8.12

Earned Credits-25

Attested

Assistant Registrar (Certificates)  
Panjab University  
Chandigarh

CHANDIGARH  
February 26, 2019

Controller of Examinations



Sr. No.: 2K 18/ 0800294



Roll No. 631

Regd. No. 40316000026

# Panjab University

## RESULT-CUM-DETAILED MARKS CERTIFICATE

### BACHELOR OF PHARMACY Sixth Semester (Credit Based) Examination May, 2019 FACULTY OF PHARMACEUTICAL SCIENCES

Name of Candidate : SIMRANJEET KAUR  
Father's Name : Shri. JASWANT SINGH  
Mother's Name : Smt. JASVEER KAUR

Detail of Marks				
Paper	Subject		Credits Earned	Grade
1.	Pharmaceutical Analysis -II [PHARM-6011]	Written & Int. Ass.	3	O
	Pharmaceutical Analysis Practical -II [PHARM-6111]	Practical & Int. Ass.	2	O+
2.	Medicinal Chemistry-III [PHARM-6012]	Written & Int. Ass.	3	O
	Medicinal Chemistry Practical-III [PHARM-6112]	Practical & Int. Ass.	2	O
3.	Cosmetology [PHARM-6021]	Written & Int. Ass.	3	O+
	Cosmetology Practical [PHARM-6121]	Practical & Int. Ass.	2	A+
4.	Pharmaceutical Jurisprudence [PHARM-6022]	Written & Int. Ass.	2	O
5.	Pharmacognosy-IV [PHARM-6031]	Written & Int. Ass.	3	A+
	Pharmacognosy Practical-IV [PHARM-6131]	Practical & Int. Ass.	3	O
6.	Pharmacology-III [PHARM-6041]	Written & Int. Ass.	3	A+
	Pharmacology Practical-III [PHARM-6141]	Practical & Int. Ass.	2	O

Result:

1. S.G.P.A 8.89

C.G.P.A. 8.53

Earned Credits 28

Attested

Assistant Registrar (Certificates)  
Panjab University  
Chandigarh

CHANDIGARH  
September 16, 2019

Controller of Examinations



Sr No 2K19/ 0089664

Roll No. : 733  
Regd. No : 40316000020

# Panjab University

## RESULT-CUM-DETAILED MARKS CERTIFICATE

### BACHELOR OF PHARMACY 7<sup>th</sup> Semester Examination December 2019 FACULTY OF PHARMACEUTICAL SCIENCES

Name of Candidate : SIMRANJEET KAUR  
Father's Name : Shri JASWANT SINGH  
Mother's Name : Smt JASVEER KAUR

Detail of Marks			
Sr. No.	Subject	Credits Earned	Grade
THEORY			
1.	Pharmaceutical Analysis -III [PHARM-7011]	3	O
2.	Pharmaceutical Technology-IV [PHARM-7021]	2	O
3.	Pharmacokinetics and Biopharmaceutics-I [PHARM-7022]	2	O
4.	Pharmacognosy-V [PHARM-7031]	3	O
5.	Pharmacology-IV [PHARM-7041]	3	A+
PRACTICAL			
6.	Pharmaceutical Analysis Practical-III [PHARM-7111]	3	A+
7.	Pharmaceutical Technology Practical-IV [PHARM-7121]	3	O
8.	Pharmacognosy Practical-V [PHARM-7131]	2	A+
9.	Pharmacology Practical -IV [PHARM-7141]	2	O

#### RESULT:

I. S.G.P.A. 8.74

Earned Credits 23

Attested

Assistant Registrar (Certificates)  
Panjab University  
Chandigarh

CHANDIGARH  
July 16, 2020

Controller of Examinations





Roll No. : 833  
Regd. No : 40316000026

Sl. No. 2K19/ 0089701

# Panjab University

## RESULT-CUM-DETAILED MARKS CERTIFICATE

BACHELOR OF PHARMACY 8<sup>th</sup> Semester Examination September 2020

FACULTY OF PHARMACEUTICAL SCIENCES

Name of Candidate : SIMRANJEET KAUR  
Father's Name : Shri JASWANT SINGH  
Mother's Name : Smt JASVEER KAUR

Detail of Marks			
Sr. No.	Subject	Credits Earned	Grade
	<b>THEORY</b>		
1.	Medicinal Chemistry-IV [PHARM-8011]	04	O+
2.	Pharmaceutical Technology-V [PHARM-8021]	02	O+
3.	Pharmacokinetics and Biopharmaceutics-II [PHARM-8022]	02	O
4.	Clinical Pharmacy [PHARM-8023]	03	O+
5.	Pharmacognosy- VI [PHARM-8031]	03	A+
	<b>PRACTICAL</b>		
5.	Medicinal Chemistry Practical -IV [PHARM-8111]	03	O
6.	Pharmacokinetics, Biopharmaceutics and Clinical Pharmacy Practical [PHARM-8121]	03	A+
7.	Pharmacognosy Practical - VI [PHARM-8131]	03	O

Result:  
1. S.G.P.A-9.13

C.G.P.A.- 8.62

Earned Credits: 200

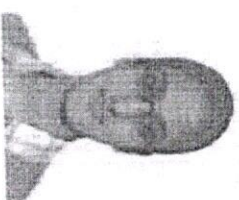
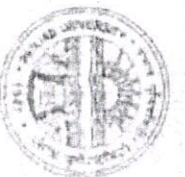
Attested

Assistant Registrar (Certificates)  
Panjab University  
Chandigarh

CHANDIGARH  
October 15, 2020

Controller of Examinations





# Parul University

## Bachelor of Pharmacy

(Faculty of Pharmaceutical Sciences)

Certified that Simranjeet Kaur son/daughter of Shri Jaswant Singh and Smt. Jasveer Kaur and of the University Institute of Pharmaceutical Sciences, P.U., Chandigarh has obtained the degree in Bachelor of Pharmacy of this University having passed the examination for the said degree held in September, 2020 with CGPA of 8.62 out of 10 point scale.

Given under the seal of the University



Arshdeep  
Assistant Registrar (Certificates)  
Parul University  
Chandigarh

Rkumar

Vice Chancellor

Manish

Chancellor

Controller of Examinations

Dr.

Yash

Registrar

Chandigarh, October 15, 2020



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

May 14, 2024

**Re: Letter of support for Ms. Simranjeet Kaur for UBC Four Year Doctoral Fellowship**

Dear Awards Committee,

This letter supports Ms. Simranjeet Kaur's application for UBC's Four Year Doctoral Fellowship (4YF) program. Simranjeet is a first-year PhD student in the Interdisciplinary Oncology Program (IOP), and she is co-supervised by Dr. Kuo-Shyan Lin, Professor of Radiology, and myself.

Simranjeet completed her Bachelor's Degree in Pharmacy at the University Institute of Pharmaceutical Sciences, Panjab University, India. Thereafter, Ms. Kaur completed her Masters of Pharmacy at the National Institute of Pharmaceutical Education and Research, S.A.S Nagar, India. Simranjeet has continually demonstrated scholastic excellence, ranking in the top 1% of her peers. She was awarded a national fellowship to support her graduate studies. For her MSc thesis project, Simranjeet studied the use of deep eutectic solvents to improve the oral bioavailability of drugs with poor solubility and/or permeability. She received pharmacological training in drug formulation and animal experimentation (e.g., dissolution profile, stability assessment, sterile injections, blood sampling, metabolite analyses, etc.).

For her PhD project, Simranjeet is developing radiopharmaceutical agents targeting neurotensin 1 receptor (NTSR1), a protein that is overexpressed in pancreatic cancers. Simranjeet has shown an extremely high level of commitment and dedication to her work. Although Simranjeet has only been a PhD student for four months, she has successfully developed a series of peptide radiopharmaceuticals that show good binding affinity for NTSR1 *in vitro*, and uptake in cancer xenograft models *in vivo*. Since NTSR1 is implicated in cancer progression and metastasis of cancer, this is an important target to visualize *in vivo*. Simranjeet has been selected to give an oral presentation to summarize her findings at the Department of Radiology Clinical and Fundamental Research Day later this month.

Simranjeet is a smart, motivated, driven student who showed great skill at learning and applying lab techniques, from chemistry to preclinical imaging, with a thorough understanding of the underlying science. She was a top student in her undergraduate cohort, and it clearly shows on a day-to-day basis in the lab. She grasps new concepts quickly, easily, and is extremely resourceful. Her interpersonal skills are exceptional, and she is always willing to help her fellow students with their projects and experiments. She has shown a high level of maturity, and her communication skills are excellent.

The fields of nuclear chemistry, radiochemistry, medical physics, and nuclear medicine have extensively dominated by men for decades, with inadequate representation from women and underrepresented minorities. Dr. Lin and I were thrilled when Ms. Kaur decided to join our research groups. We believe strongly that Ms. Kaur will succeed in the IOP program and is a deserving candidate for the UBC 4YF program.

Please let me know if you have any questions or require further information.

Sincerely,

**Joseph Lau, PhD**

Assistant Professor, Department of Radiology, University of British Columbia Scientist,  
Scientist, Department of Integrative Oncology, BC Cancer Research Institute

675 West 10<sup>th</sup> Ave, Rm 5-108, Vancouver, BC V5Z 1L3

E-mail: [jlau@bccrc.ca](mailto:jlau@bccrc.ca); Phone: 1-604-675-8026

Website: <https://www.bccrc.ca/dept/io/labs/lau-lab>





राष्ट्रीय औषधीय शिक्षा एवं अनुसंधान संस्थान

**NATIONAL INSTITUTE OF PHARMACEUTICAL  
EDUCATION AND RESEARCH (NIPER)**

(Ministry of Chemicals & Fertilizers, Govt. of India)

SECTOR 67, S.A.S. NAGAR (MOHALI) - 160 062, PUNJAB (INDIA)

+91-(0) 172-2214682-87 Extn. 2126, 2292126 (Direct), Fax : +91-(0) 172-2214692

E-mail: akbansal@niper.ac.in

bansalarvind@yahoo.com

Web : www.niper.gov.in

**Prof. Arvind K. Bansal**

Professor and Head

DEPTT. OF PHARMACEUTICS

**To whomsoever it may concern**

It is great pleasure to recommend Simranjeet Kaur for admissibility to the Ph.D. program at your esteemed University. I have known Simranjeet Kaur since 2020, when she joined the National Institute of Pharmaceutical Education and Research for her postgraduate program. I have closely interacted with her as she offered courses offered by me. This includes pharmaceutical pre-formulation, regulatory considerations for formulation development, solid-state pharmaceuticals and formulation development concepts as applied in Industry. During the lectures she used to participate in discussions and her dedication towards learning new concepts is reflected in her academic record where she scored a CGPA of 9.80 on a scale of 10.

Simranjeet completed a research project over a period of one year on "*Deep Eutectic System (DES) as a drug delivery system for enhancement of oral bioavailability of poorly soluble drug*" under my supervision. I have witnessed her work efficiency, critical thinking abilities, and inquisitiveness regarding various findings. She also displayed excellent academic traits and the ability to learn and apply theoretical concepts in the laboratory. Her presentation and communication skills were highly commendable.

She is a determined, insightful, and sharp student, who exhibited a remarkable aptitude for formulation development. During her research project, Simranjeet demonstrated an excellent grip on concepts of solid-state pharmaceuticals and analytical knowledge. She used to have engaging discussions with her seniors and acted as a good team player. She got placed at one of the India's top pharmaceutical industries - Dr. Reddy's Laboratories, which was well deserved.

She secured the second rank in Dissolution Research Presentation India (DRPI-2022) organized by Society for Pharmaceutical Dissolution Science, in association with American Association of Pharmaceutical Scientists (AAPS) and Association of Pharmaceutical Teachers of India (APTI). During the DRPI event, she displayed an exceptional performance, bringing pride to Department of Pharmaceutics, NIPER with her remarkable skills.

Simranjeet's personal strengths are just as impressive as her intellectual accomplishments. She was an active and outgoing person who used to initiate group activity rolling. She is very open and receptive to feedback meaning she is always ready to learn and grow - a quality which would continue to serve her in the doctorate program and beyond.

Alongside her coursework and research, she also took the responsible role of placement coordinator for the Department of Pharmaceutical Technology (Formulations) and ensured the smooth running of placement drive. Beyond her academic talents, Simranjeet embodies essential professional values like integrity, dedication, and diligence. I am confident that she would be an excellent fit for the doctorate program at your university.

Simranjeet has my highest recommendation for the Ph.D. program at the University of British Columbia. If you need more information, please do not hesitate to contact me if you need any further elaboration.

  
Aug 21, 2023

Arvind Kumar Bansal, PhD