

BIO-DATA

1. Name and full correspondence address

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3. Institution

CSIR- National Institute for Interdisciplinary Science and Technology, Thiruvananthapuram

4. Date of Birth

26.02.1990

5. Gender (M/F/T)

F

6. Category Gen/SC/ST/OBC

Gen

7. Whether differently abled (Yes/No)

No

8. Academic Qualification (Undergraduate Onwards)

	Degree	Year	Subject	University/Institution	% of marks
1.	Bachelor of Technology	2011	Biotechnology	National Institute of Technology, Warangal	92.3
2.	Master of Science	2013	Molecular life sciences	Jacobs University Bremen Germany	96
3.	Doctor of Philosophy	2015	Biochemical engineering	Jacobs University Bremen Germany	-

9. Ph.D thesis title, Guide's Name, Institute/Organization/University, Year of Award.

Title- Antibiotic permeation through membrane proteins, Prof. Dr. Mathias Winterhalter, Jacobs University Bremen Germany, 2015.

10. Work experience (in chronological order).

	Positions held	Name of the institute	From	To	Pay scale
1.	Scientist	CSIR- National Institute for Interdisciplinary Science and Technology	3/08/2021	-	Rs. 67,700 in level-11 (Rs 67,700- 208700)
2.	DBT Har-Gobind Khorana Innovative Young Biotechnologist Awardee	CSIR- National Institute for Interdisciplinary Science and Technology	1/03/2019	2/08/2021	Rs 9 lakhs/annum
3.	DBT BioCARE fellow	CSIR- National Institute for Interdisciplinary Science and Technology, Trivandrum	29/08/2018	28/02/2019	Rs 6 lakhs/annum
		National Centre for Biological Sciences Bangalore	02/2018	05/2018	
4.	Post-Doctoral fellow	Jacobs University Bremen, Germany	05/2015	07/2016	43,000 euros per annum
5.	Teaching assistant	Jacobs University Bremen Germany	02/2015	03/2015	390 euros per month
6.	Student assistant	Jacobs University Bremen Germany	09/2014	11/2014	330 euros per month

11. Professional Recognition/ Award/ Prize/ Certificate, Fellowship received by the applicant.

	Name of the award	Awarding agency	Year
1.	DST-INSPIRE Faculty award	Department of Science and Technology	2020
2.	DBT Innovative Young Biotechnologist Award	Department of Biotechnology	2018
3.	DBT Biotechnology Career Advancement and Re-orientation Programme	Department of Biotechnology	2016
4.	Member of the President's List of the Academic Year	Jacobs University Bremen	2012-2013
5.	Working internships in science and engineering (WISE)	DAAD	2010
6.	Academic Scholarship	National Institute of Technology Warangal	2009-2010

12. Publications (*List of papers published in SCI Journals, in year wise descending order*).

	Author (s)	Title	Name of Journal	Volume	Page	Year
1.	Nair, K. S., Raj. N. B., Nampoothiri. M., Mohanan, G., Acosta-Gutiérrez, S., Bajaj, H* (*as corresponding author)	Curved membrane structures induced by native lipids in giant vesicles	Journal of Colloid and Interface Science	611	397-407	2021

2.	Susmitha, A., Bajaj, H., Nampoothiri K M.	The divergent roles of sortase in the biology of Gram-positive bacteria.	The Cell Surface	7	100055	2021
3.	Mohanam, G., Nair, K. S., Nampoothiri, K. M., Bajaj, H*. (* as corresponding author)	Engineering Bio-Mimicking Functional Vesicles with Multiple Compartments for Quantifying Molecular Transport.	Chemical Science (IF: 9.8)	11	4669–4679	2020
4.	Susmitha, A., Nampoothiri, K. M., Bajaj, H.	Insights into the Biochemical and Functional Characterization of Sortase E Transpeptidase of <i>Corynebacterium Glutamicum</i> .	Biochemical Journal (IF 4.33)	476	3835–3847.	2019
5.	Puthumadathil, N., Jayasree, P., Santhosh Kumar, K., Nampoothiri, K. M., Bajaj, H., Mahendran, K. R.	Detecting the Structural Assembly Pathway of Human Antimicrobial Peptide Pores at Single-Channel Level.	Biomaterial Science (IF : 6.2)	7	3226–3237.	2019
6.	Ghai, I., Bajaj, H., Arun Bafna, J., El Damrany Hussein, H. A., Winterhalter, M., and Wagner, R.	Ampicillin permeation across OmpF, the major outer-membrane channel in <i>Escherichia coli</i> .	Journal of Biological Chemistry (IF: 5.1)	293	7030–7037	2018
7.	Bajaj, H., Gutiérrez, S. A., Bodrenko, I., Mallocci, G., Scorciapino, M. A., Winterhalter, M and Ceccarelli, M.	Bacterial Outer Membrane Porins as Electrostatic Nanosieves: Exploring Transport Rules of Small Polar Molecules.	ACS Nano (IF: 15.8)	11	5465-5473	2017
8.	Bajaj, H., Scorciapino, M. A., Moynie, L., Page, M. G. P., Naismith, J. H., Ceccarelli, M., and Winterhalter, M.	Molecular Basis of Filtering Carbapenems by Porins from β -Lactam-resistant Clinical Strains of <i>Escherichia coli</i> .	Journal of Biological Chemistry (IF: 5.1)	291	2837-47	2016
9.	Cama, J.*, Bajaj, H.*, Pagliara, S., Maier, T., Braun, Y., Winterhalter, M., and Keyser, U. F.	Quantification of Fluoroquinolone Uptake through the Outer Membrane Channel OmpF of <i>Escherichia coli</i>	Journal of the American Chemical Society (IF: 15.4)	137	13836-43	2015
10.	Bodrenko, I., Bajaj, H., Ruggerone, P., Winterhalter, M., and Ceccarelli, M.	Analysis of fast channel blockage: revealing substrate binding in the microsecond range.	Analyst (IF: 4.6)	140	4820–7	2015
11.	Weichbrodt, C., Bajaj, H., Baaken,	Antibiotic translocation through porins studied in	Analyst (IF: 4.6)	140	4874–81	2015

	G., Wang, J., Guinot, S., Kreir, M., Behrends, J. C., Winterhalter, M., and Fertig, N.	planar lipid bilayers using parallel platforms.				
12.	Song, W., Bajaj, H., Nasrallah, C., Jiang, H., Winterhalter, M., Colletier, J.-P., and Xu, Y.	Understanding Voltage Gating of <i>Providencia stuartii</i> Porins at Atomic Level.	PLoS Computational Biology (IF:4.4)	11	e1004255	2015
13.	Singh, P. R., Bajaj, H., Benz, R., Winterhalter, M., and Mahendran, K. R.	Transport across the outer membrane porin of mycolic acid containing actinomycetales: <i>Nocardia farcinica</i>	Biochimica et Biophysica Acta-Biomembrane (IF:3.7)	1848	654–661	2015
14.	Bajaj, H., Tran, Q.-T., Mahendran, K. R., Nasrallah, C., Colletier, J.-P., Davin-Regli, A., Bolla, J.-M., Pagès, J.-M., and Winterhalter, M.	Antibiotic uptake through membrane channels: role of <i>Providencia stuartii</i> OmpPst1 porin in carbapenem resistance	Biochemistry (IF: 3.15)	51	10244–9	2012

13. Detail of patents.

None

14. Books/Reports/Chapters/General articles etc.

None

15. Any other Information (maximum 500 words)

Conferences:

1. 462. WE Heraeus Seminar, July 2010, Jacobs University Bremen, Germany (Poster).
2. North German Biophysical meeting, January 2012, Research Center Borstel, Germany, (Poster).
3. Annual Meeting of the German Biophysical Society, September 2012, Göttingen, Germany (Poster).
4. North German Biophysical meeting, January 2013, Research Center Borstel, Germany, (Poster).
5. 541. WE Heraeus Seminar, July- August 2013, Jacobs University Bremen, Germany (**Talk**).
6. Biophysical Society 58th Annual Meeting, February 2014, San Francisco, USA. (Poster)

7. Summer Workshop: Translocation Meeting, July 2014, Jacobs University Bremen, Germany, **(Talk)**.
8. Faraday Discussion 177: Temporally and Spatially Resolved Molecular Science, January 2015 Bangalore, India (Poster).
9. XVII. Linz Winter Workshop: Advances in Single-Molecule Research for Biology & Nanoscience, February 2015, Linz, Austria **(Invited Talk)**.
10. Marie-Curie Action ITN workshop: Translocation, May 2015, Cagliari, Italy **(Talk)**.
11. Translocation Workshop: Molecular basis of antibiotic permeability in Gram-negative bacteria, July 2015, Jacobs University Bremen, Germany **(Talk)**.
12. Annual meeting of the Indian Biophysical Society: Molecules in living cells- Mechanistic basis of function, February 2016, Bangalore, India **(Talk)**.
13. New Horizons in Biotechnology: Quantification of drugs across bio-mimicking vesicles, Trivandrum, November 2019, India **(Invited Talk)**.
14. MaxSynBio Symposium: Engineering bacterial membrane mimicking minimal cells, November 2020, India **(Mini Talk)**