

Ahmad Ud Din

Postdoctoral fellow

Plants for Human Health Institute, Department of Food, Bioprocessing and Nutrition Sciences North Carolina State University, 600 Laureate Way, Kannapolis, NC 28081.

Contact #: +*****

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Research interests

I focused on the analysis of microbial consortia and relate them with different diseases such as cardiovascular disease (Atherosclerosis, diabetes) and colon cancer. In-line with my research interest I have published research and review articles in peer reviewed well known journals. I am focus on colon cancer, atherosclerosis, diabetes and TMAO while using probiotics in mice models and cell lines as well as some other related projects on the gut microbiome continues. Research keywords includes Probiotics, Bifidobacterium, Lactobacillus Gut Microbiome, CVD, Diabetes, Colitis, Atherosclerosis, miRNA, Drugs, Antibiotic Resistance, Nutrients, Metabolism, and Metabolites (TMAO, Colibactin, SCFA, Imidazole Propionate, AHL; AhR).

Academic Education

Degree	Year	Institution	Website	Marks/CGPA
Ph.D. Microbiology	2019	Chongqing University, China	www.cqu.edu.cn	<u>83.7/100</u>
M.Phil. Microbiology	2015	Hazara University, KP Pakistan	www.hu.edu.pk	3.7/4
M.Sc. Biology	2011	Gomal University D I Khan Pakistan	www.gu.edu.pk	69.83/100
B.Sc. Biological Science	2009	UST Bannu KP Pakistan	www.ustb.edu.pk	63.83/100

Experience (Teaching/Research)

Job Title	Duration	Institution	Responsibilities
Postdoctoral Fellow	2023---Now	NC State North Carolina	Research
Postdoctoral Fellow	2022-2023	University of Maryland, Baltimore, Maryland	Research
Scientific Researcher	2019-2022	Southwest Medical University Luzhou, Sichuan China.	Teaching, Research, Research Grant writing (NSFC China).
Lecturer	2014-2015.	Al Quran Becon School and College Mansehra KP, Pakistan	Teaching biology to High School (SSC) and College student (F.Sc).
Lecturer	2014-2015	Alharam Institute of Medical Sciences (AIMS) Mansehra KP,	Teaching

1. Amin Ullah, **Ahmad Ud Din**, Wen Ding, Zheng Shi, Sadaf Pervaz, Bairong Shen*. A narrative review: CXC Chemokines influence immune surveillance in obesity-related diseases: Type 2 diabetes and nonalcoholic fatty liver disease (2023). **Reviews in Endocrine and Metabolic Disorder IF=9.5** Doi: 10.1007/s11154-023-09800-w
2. Ke Sheng, **Ahmad Ud Din**, Bairong Shen*, Translational informatics for human microbiota: data resources, models and applications (2023). **Briefings in Bioinformatics IF=13.9**
Doi: [10.1093/bib/bbad168](https://doi.org/10.1093/bib/bbad168)
3. Jin Xu, Chuankang Tang, **Ahmad Ud Din**, Yu Lu, Xiaoyu Ma, Tao Zhang, Jiaqi Wu, Du Zuoqin, Pei Luo, Jianbo Wu. Oligosaccharides of Polygonatum Cyrtonema Hua ameliorates dextran sulfate sodium-induced colitis and regulates the gut microbiota (2023). **Biomedicine & Pharmacotherapy. IF=7.4** DOI: 10.1016/j.biopha.2023.114562
4. Ling Xue, Yinglong Ding, Qiong Qin, Linsheng Liu, Xiaoliang Ding, Yi Zhou, Kun Liu, Rajeev K. Singla, Ke Shen, **Ahmad Ud Din**, Yan Zhang, Zhenya Shen*, Bairong Shen* and Liyan Miao. Assessment of the impact of intravenous antibiotics treatment on gut microbiota in patients: Clinical data from pre-and post-cardiac surgery. (2023) **Frontiers in Cellular and Infection Microbiology. 10.3389/fcimb.2022.1043971 (IF=6.07)**
5. **Ahmad Ud Din**, Waqar Ahmad, Taj Malook Khan, Jun Wang and Jianbo Wu*. Metagenomic Analysis of Liquor Starter Culture Revealed Beneficial Microbes' Presence. (2022) [10.3390/foods12010025](https://doi.org/10.3390/foods12010025) **Foods (IF=5.5)**
6. Mahpar Zafara, Sadia Alam, Maimoon Sabir, Nusrat Saba, **Ahmad Ud Din**, Rafiq Ahmad, Muhammad Rafiullah Khan, Ali Muhammad, Kenan Sinan Dayisoyle*. Isolation, characterization, bacteriocin production and biological potential of Bifidobacteria of ruminants. [10.1016/j.ab.2022.114926](https://doi.org/10.1016/j.ab.2022.114926) (2022) **Analytical Biochemistry (IF=3.2)**
7. Asma Sadiq, Jadoon Khan*, Irfan....Imtiaz Ali Khan, **Ahmad Ud Din**, Ijaz Ali Arshad Farid, Muddaser Shah, Mohamed Abdel-Daim, Ghadeer M. Albadrani. Seroprevalence of anti-tTg-IgA among symptomized celiac disease patients and their co-relation with Rotavirus infection (2022). [10.1155/2022/6972624](https://doi.org/10.1155/2022/6972624) **Biomed Research International (IF= 3.24)**.
8. Tariq Shah, Luming Ding, **Ahmad Ud Din**, Faiz-ul Hassan, Haiyan Wei, Xianju Wang, Liangqin Yang, Muhammad Ishaq, Niaz Ali, Yougui Fang. Differential Faecal Microbiome in Yaks Fed on Natural Grazing pasture and Feedlot (2022). **Frontiers in Veterinary Science**. DOI: 10.3389/fvets.2022.791245 **IF= 3.4**
9. S. hafi A. Umar Shinge, Daifang Zhang, **Ahmad Ud Din**, Yong Mei Nie, Feng Xu Yu. Emerging Piezo1 signaling in inflammation and atherosclerosis; a potential therapeutic target. (2022). **International Journal of Biological Sciences**. 10.7150/ijbs.63819 **IF=10.7**
10. Maryam Mazhar, **Ahmad Ud Din (1st co-author)**, Hamid Ali, Guoqiang Yang, Wei Ren, Li Wang, Xiaohui Fan, Sijin Yang. Implication of Ferroptosis in Aging. (2021) **Cell Death Discovery**. 10.1038/s41420-021-00553-6 **IF= 7.1. Citation=5**
11. Faiz-ul Hassan, Muhammad Adeel Arshad, Muhammad Saif-ur Rehman, Sharon Ann Huws, Yanfen Cheng and **Ahmad Ud Din***. Gut microbiome colonization and development in farm animals: Strategies, prospects and opportunities. (2021) **Animal Nutrition**. [10.1016/j.aninu.2021.03.004](https://doi.org/10.1016/j.aninu.2021.03.004) **IF=6.3 Citation=1**

12. Ishaq Muhammad, Ashiq Khan, Ali Sher Bacha, Anum Hanif, Wencan Ke, Tariq Shah, Fuhou Li, Anum Ali Ahmad, **Ahmad Ud Din**, Zitong Ding *, Xusheng Guo *. Microbiota Targeted Interventions of Probiotic *Lactobacillus* as an Anti-Ageing Approach. (2021) **MDPI Antioxidants**. <https://doi.org/10.3390/antiox10121930> **IF=7.6**
13. Muhammad Farrukh Nisar, **Ahmad Ud Din**, Kamal Niaz, Shaukat Hussain, Munawar, ...and Ahmad Farooq. Ultraviolet Radiation A (UVA): Modulates the Production of Nitric Oxide (NO) to Combat COVID-19 Production of Nitric Oxide (NO) Coronavirus Disease. (Book Chapter) 2021. Bentham Science Publishers Pte. Ltd. Singapore.
14. Kun Zhang, Xian Qin, Juhui Qiu, Tong Sun, Kai Qu, **Ahmad Ud Din**, Wenhua Yan, Tianhan Li, Yidan Chen, Wei Gu, Xiancai Rao, Guixue Wang*. *Desulfovibrio desulfuricans* Aggravates Atherosclerosis by Enhancing Intestinal Permeability and endothelial TLR4/NF-κB pathway in Apoe Mice. (2021) **Genes and Disease**. **IF=7.1**. DOI: [10.1016/j.gendis.2021.09.007](https://doi.org/10.1016/j.gendis.2021.09.007)
15. Noor Bahadar, Hanif Ullah, Salah Adlat, Rajiv Kumar Sah, May Zun Zaw Myint, Zin Mar Oo, Fatoumata Binta Bah, Farooq Hayel Nagi, Hsu Htoo, **Ahmad Ud Din**, Xuechao Feng, Yaowu Zheng*. Analyzing differentially expressed Genes and Pathways of Bex2-deficient mouse lung via RNA-seq. (2021) **Turkish Journal of Biology**. **IF=1.5** DOI :10.3906/biy-2104-4
16. **Ahmad Ud Din**, Maryam Mazhar, Muhammad Wasim, Waqar Ahmad, Asma Bibi, Adil Hassan, Niaz Ali, Wang Gang, Gao Qian, Razi Ullah, Tariq Shah, Mehraj Ullah, Israr Khan, Muhammad Farrukh Nisar & Jianbo Wu* SARS-CoV-2 Microbiome Dysbiosis Linked Disorders and Possible Probiotics Role. (2020). **Biomedicine & Pharmacotherapy**. **IF=7.4 Citation=47**
[10.1016/j.biopha.2020.110947](https://doi.org/10.1016/j.biopha.2020.110947)
17. **Ahmad Ud Din**, Adil Hassan, Yuan Zhu, Kun Zhang, Yi Wang, Tianhan Li, Yang Wang, Guixue Wang*. **Journal of Nutritional Biochemistry** (2020). Inhibitory Effect of *Bifidobacterium Bifidum* ATCC 29521 on Colitis and its Mechanism [10.1016/j.jnutbio.2020.108353](https://doi.org/10.1016/j.jnutbio.2020.108353) **IF=6.04 Citation=26**
18. Adil Hassan, **Ahmad Ud Din** (1st co-author), Yuan Zhu, Kun Zhang, Tianhan Li, Yi Wang, Shangcheng Xu, Haike Lei, Xian Yu & Guixue Wang*. Anti-atherosclerotic effects of *Lactobacillus plantarum* ATCC 14917 in ApoE^{-/-} mice through modulation of proinflammatory cytokines and oxidative stress. **Applied Microbiology and Biotechnology** (2020). **IF=5.5** [10.1007/s00253-020-10693-x](https://doi.org/10.1007/s00253-020-10693-x) **Citation=6**
19. Ouyang Li, Huijian Zhang, Wenjing Wang, Yuxin Liang, Wenbi Chen, **Ahmad Ud Din**, Li Li Yingshun Zhou*. Complete genome sequence and probiotic properties of *Lactococcus petauri* LZys1 isolated from healthy human gut. **Journal of Medical Microbiology** <https://doi.org/10.1099/jmm.0.001397> . **IF=2.4**
20. **Ahmad Ud Din**, Adil Hassan, Yuan Zhu, Tiye Ying, Hans Gregersen and Guixue Wang*. Amelioration of TMAO Through Probiotics and its Potential Role in Atherosclerosis **Applied Microbiology and Biotechnology** (2019) [10.1007/s00253-019-10142-4](https://doi.org/10.1007/s00253-019-10142-4) **IF=4.8 Citation=17**
21. Adil Hassan, **Ahmad Ud Din**, Yuan Zhu, Kun Zhang, Tianhan Li, Yi Wang, Yang Luo, Guixue Wang* 2019. Updates In Understanding the Hypocholesterolemia Effect Of Probiotics On Atherosclerosis. **Applied Microbiology and Biotechnology**. (2019) [10.1007/s00253-019-09927-4](https://doi.org/10.1007/s00253-019-09927-4) **IF=4.8 Citation=14**
22. Yuan Zhu, Tianhan Li, **Ahmad Ud Din**, Adil Hassan, Yeqi Wang & Guixue Wang*. Beneficial effects of *Enterococcus faecalis* in hypercholesterolemic mice on cholesterol transportation and gut microbiota. **Applied Microbiology and Biotechnology**. (2019) **IF=4.8 Citation=16**
[10.1007/s00253-019-09681-7](https://doi.org/10.1007/s00253-019-09681-7)

23. Tian-hao Liu; Chen-yang Zhang; **Ahmad Ud Din**; Ning Li; Qian Wang; Jing-ze Yu; Zhen-yuan Xu; Chen-xi Li; Xiao-mei Zhang; Jia-li Yuan; Li-guo Chen; Zhong-shan Yang*. Bacterial association and comparison between lung and intestine in rats. **Bioscience Reports.** (2019) **IF=3.87** [10.1042/BSR20191570](https://doi.org/10.1042/BSR20191570) **Citation=1**
24. Xiangjin Yana, Jing Zeng, Xinyao Li, Zhikun Zhang, **Ahmad Ud Din**, Kelei Zhao & Yingshun Zhou High incidence and characteristic of PRRSV and resistant bacterial Co-Infection in pig farms. **Microbial Pathogenesis** (2020). [10.1016/j.micpath.2020.104536](https://doi.org/10.1016/j.micpath.2020.104536). **IF=3.8**
25. Niyaz Ali, Yinfu Lin, Zhen Qing, Dan Xiao, **Ahmad Ud Din**, Izhar Ali, Tengxiang Lian, Baoshan Chen and Ronghui Wen. The Role of Agriculture in the Dissemination of Class1 Integrons, Antimicrobial Resistance, and Diversity of Their Gene Cassettes in Southern China. **Genes.** (2020). [10.3390/genes11091014](https://doi.org/10.3390/genes11091014)). **IF=4.1 Citation=1**
26. Kun Zhang, Da Sun*, Chuanren Duan*, Hang Chen, **Ahmad Ud Din**, Xiangjun Kong, Xian Qin & Baoyun Zhang. Application of a Faecalibacterium 16S rDNA genetic marker for species identification of dog fecal waste. **Environmental Science and Pollution** (2020). **IF=5.1** [10.1007/s11356-020-09369-w](https://doi.org/10.1007/s11356-020-09369-w)
27. Manlin Ding, Jiao Shi, **Ahmad Ud Din**, Yao Liu, Feiyang Zhang, Xiangjin Yan, Qin Li, JiaWei Bai, Wenbi Chen, Yingshun Zhou. Co-infections of two carbapenemase-producing Enterobacter hormaechei clinical strains isolated from the same diabetes individual in China. **Journal of Medical Microbiology.** **IF=2.4** [10.1099/jmm.0.001316](https://doi.org/10.1099/jmm.0.001316)

Conferences/Seminars/Workshops/Talks

- a) **Postdoc Talks for a General Audience 2-2-23** (Thursday February 2nd 3:00pm HSF3 Room 6020 University of Maryland Baltimore. Talk Title "**Role of gut microbiota in human health**".
- b) **1st One Day International Conference on Genomics of Beneficial Microbes**" (20th of December 2021). National Agricultural Research Center (NARC), Islamabad Pakistan. Talk Title: "**Gut microbiome, probiotics and miRNA**".
- c) **Mammalian Microbiome Seminar** November 12th – 13th, 2020. Speaker. Title of Talk "**Gut microbiome, probiotics and miRNA**".
- d) **Microbial Ecology & Evolution MEE Virtual** 12-14 August 2020. (<https://www.meevirtual.org/scientific-programme/>).
- e) **China Gut Festival 2019**, Beijing Etrong International Exhibition & Convention Center, Beijing, China (June 4-6, 2019).
- f) **The 13th National Atherosclerosis Disease Academic Conference China** (October 16-18, 2015).
- g) **2nd National Conference on Current Approaches in Microbiology** Nathia Gali, Abbottabad, Pakistan (June 27-28, 2013).

Research Projects

- Evaluation of selected probiotics strains in mice model of colitis
- *E.Coli* aggravation of atherosclerosis through LPS using ApoE mice (Writing paper).
- Gut microbes and diabetes association (Start soon).
- Selected probiotics in DSS colitis models; focus on miRNA and metabolites (Ongoing).

Honors and Achievements

- An awardee of the Chinese Government Scholarship for Ph.D. Program (2015-2019).
- Received laptop and accessories from Prime Minister of Pakistan.
- Scholarship holder of fee reimbursement Scheme for less developed areas.

Experimental and Statistical Skills

- PCR (qPCR, qRT-PCR)
- DNA & RNA Extraction
- Mice handling (ApoE and C57BL mice)
- GraphPad Prism and Image J
- Histological analysis of H&E Stain images
- Oil Red Staining
- Confocal Microscopy
- 16s Microbial Diversity using Cloud Platform (Major bio-China) and its interpretation.
- Western Blot
- ELISA
- R Language (Basic)

Languages

Pashto, Urdu, English, Chinese.

Student Supervision/Teaching

- Supervised several foreign PhD Students for my former PhD supervisor of Chongqing University.
- Had assigned PhD student for Co-Supervision by previous workstation PI.
- Taught course of “Association Between Dysbiotic Gut and Cardiovascular Disease” to Master student at Southwest Medical University Luzhou Sichuan. Speak Chinese with English for better communication with students.

Editorial Contribution and Reviews

- Active Reviewer in several journals such as Frontiers in Microbiology, mBio, mSystems, mSphere MDPI Molecules, FEEMs Microbes, Current Research in Nutrition and Food Science Journal, and Journal of Medical Microbiology.
- [Review Editor](#) in Frontiers in Nutrition Section Nutrition and Microbes; Frontiers in Microbiology, Section Food Microbiology.
- Youth Editorial Board Member of Advanced Gut & Microbiome Research Journal

ResearchGate:

https://www.researchgate.net/profile/Ahmad_Ud_Din3

GoogleScholar:

<https://scholar.google.com/citations?user=cExKlxsAAAJ&hl=en>