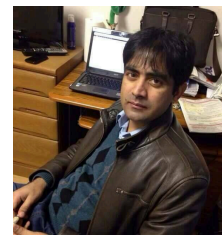


Dr. Azhar Rasul
Assistant Professor
Government College University Faisalabad

Email address: drazharrasul@gmail.com; azharrasul@gcuf.edu.pk



Short Biography: Dr. Azhar Rasul is an Assistant Professor at Faculty of Life Sciences, Government College University Faisalabad. He received MSc and M. Phil degree in Biology from Bahauddin Zakariya University, Multan, Pakistan. He obtained PhD fellowship jointly awarded by Ministry of Education (MOE), Pakistan and China Scholarship Council (CSC), China and completed his Ph.D. in Cell Biology (Chemical Cancer Biology) from Northeast Normal University, China. He later received China postdoctoral fellowship in 2012, Japanese Society for Promotion of Science (JSPS) Postdoctoral fellowship in 2013, and subsequently Tokyo Biochemical Research Foundation (TBRF) fellowship in 2015. He has published over 45 peer-reviewed research articles with cumulative impact factor over 90 and with over 800 citations. He also has published two book chapters. He has presented several invited talks at National and International level. Three PhD and fifteen MPhil students are currently working under his supervision. He has obtained several national and international research grants (The Nagai Foundation Tokyo RG and COMSTECH-TWAS RG). His lab is actively engaged in interdisciplinary research on novel tumor biomarkers, cancer-related health disparities, and identification of non-toxic anti-cancer compounds for various hallmarks of cancer (cancer stem cells, cancer cell metabolism, and tumor hypoxia) from natural sources. He is reviewer and editorial board member of several well-reputed journals.

Personal information

First name/ Surname	Azhar Rasul
Permanent Address	Chah Sheran Walla, Haider Abad (Thal), Tehsil Mankera, Distt. Bhakkar, Punjab Pakistan
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Telephone(s)	+92-321-8409546
Nationality	Pakistan
ID Card	38104-0840702-3
Passport No.	AP9807022
Current Residence	Faisalabad, Pakistan
Date of birth	01-01-1983
Gender	Male
Marital Status	Married
Children	1 (Son)

Education

Institution: Northeast Normal University, Changchun, China

Degree: PhD (Doctor of Philosophy), Major: Cell Biology (Chemical Cancer Biology)

Thesis Title: Isolation, structure elucidation, and evaluation of anti-gastric cancer activity of natural compounds from Traditional Chinese Medicinal herbs and their molecular mechanisms

Date of Graduation: 2012-07-01

Institution: Bahauddin Zakariya University, Multan, Pakistan

Degree: M. Phil (Master of Philosophy), Major: Animal Sciences

Thesis Title: Proximate analysis of female population of wild feather back fish (*Notopterus notopterus*) in relation to body size and condition factor

Date of Graduation: 2008-08-31

Institution: Bahauddin Zakariya University, Multan, Pakistan

Degree: M. Sc (Master of Science), Major: Animal Sciences

Thesis Title: Economics and Marketing of commercial food fishes of Southern Punjab Pakistan

Date of Graduation: 2005-07-31

Institution: Punjab University, Lahore, Pakistan

Degree: B. Sc (Bachelor of Science), Major: Pre-medical group

Date of Graduation: 2002-06-30

Research/Employment History

- (July, 2012-November, 2013): Post-doctoral Research Fellowship. Changchun Institute of Applied Chemistry, Chinese Academy of Sciences, Changchun, China
- (October, 2013-October, 2014): Assistant Professor, Sub-campus Bhakkar, University of Sargodha, Punjab, Pakistan
- (November, 2013-November, 2015): JSPS Post-doctoral Research Fellow at Antibiotics Lab. Chemical Biology Department, RIKEN, Japan
- (December, 2015-March, 2016): Special Postdoctoral Research (SPDR) at Chemical Biology Research Group. Chemical Biology Department, RIKEN, Japan
- (April, 2016-March, 2017): TBRF (Tokyo Biochemical Research Foundation) Postdoctoral Fellow at Chemical

Biology Research Group. Chemical Biology Department, RIKEN, Japan

- (April, 2017- Present): Assistant Professor, Faculty of Science and Technology, Government College University Faisalabad (GCUF), Pakistan

Fellowships / Awards (14)

- Awardee of HEC Pakistan Travel Grant to present a research Paper in ICGEB-NASSL "South Asian Biotechnology Conference 2018 - SABC 2018" in Colombo, Sri Lanka on March 28-30, **2018** (RS. 116,444/-)
- Awardee of International Union of Biochemistry and Molecular Biology 2018 (IUBMB), Young Scientist Program (YSP) Fellowship, **2018**.
- Awardee of 2nd Position and Prize for Poster Presentations during A Day Long International Conference: Recent Challenges and Chemical Sciences, **2017** held at Bahauddin Zakariya University, Multan, Punjab Pakistan
- Awardee of Travel grant for Young Talent Forum for the **2016** Digestive Disease Week of Guangzhou, China
- Awardee of scholarship for "Rethinking Cancer" Workshop organized by Ross Cagan; 20 – 23 November **2016**, Wiston House, UK- (No availed)
- Awardee TBRF (Tokyo Biochemical Research Foundation) Postdoctoral Fellow at RIKEN, **2015**, Japan.
- HEC approved PhD Research Supervisor since **2014**
- Awardee of JSPS (Japan Society for Promotion of Sciences) Postdoctoral Research Fellow at RIKEN, **2013**, Japan.
- Awardee of Postdoctoral Research Fellow at CIAC Chinese Academy of Sciences, **2012**, China.
- Awardee of Scholarship and Travel grant (sponsored by F. Hoffman La Roche) WIN Symposium **2012**, Paris France.
- Awardee of an incentive award on research publications during PhD studies by Central Research Laboratory of Bethune Second Hospital, Jilin University Changchun, China, **2012**.
- Awardee of an overseas PhD scholarship in China from Ministry of Pakistan and China Scholarship Council of China (PhD in Natural and Basic Sciences in China, **2008**).
- Awardee of merit scholarship by Bahauddin Zakariya University for M. Phil. Studies, **2006**.
- Awardee of an Indigenous PhD scholarship (Phase IV, **2006**) from Higher Education Commission of Pakistan (No availed).

Participation in national or international conferences

1. 11th Chinese conference on Cell Biology & Xi'an International Conference on Cell Biology 2009,
Xi'an, China
2. International Symposium on Channelopathy and New Strategies of Drug Discovery 2010,
Changchun, China
3. International Workshop on cancer Systems Biology (ICSB). 2011, Jilin University Changchun, China
4. 9th International Symposium on the Chemistry of Natural Compounds, 2011 Urumqi, China
5. 4th International cancer control congress, 2011 Seoul, Korea
6. 4th International WIN Symposium. 2012 Paris France
7. 3rd International Conference on Stem Cells and Cancer (ICSCC-2012): Proliferation, Differentiation
and Apoptosis. 2012, New Delhi, India
8. A Day Long International Conference: Recent Challenges and Chemical Sciences, December 22, 2017 held at
Bahauddin Zakariya University, Multan, Punjab Pakistan

Participation in national or international training workshop

1. 15th Hand on training on modern biotechnology techniques at NIBGE, Faisalabad on April 17-22, **2017**
2. Training course on diagnosis of viral diseases at NIAB, Faisalabad on September 17-21, **2017**
3. 2-Days Workshop on Flowcytometry: Principles, Applications and Data Analyses at Alpha Genomics Private
Limited Islamabad on November 1-2, **2017**

Technical skills and competences

- ❖ Cell Culture;
- ❖ Primary Cell Culture;
- ❖ High Through Screening;
- ❖ Flow cytometry (analysis of apoptosis, MMP, ROS, and cell cycle);
- ❖ In vitro Assays;
- ❖ Native Electrophoresis;
- ❖ SDS-PAGE and Western Blotting;
- ❖ Co- Immunoprecipitation;
- ❖ Fluorescence Microscopy;

- ❖ Stable and transient transfection;
- ❖ Transformation; Small and Large Scale Plasmid Purification;
- ❖ Immunostaining;
- ❖ Luciferase/ gene reporter assay;
- ❖ Primer designing;
- ❖ Knock-out mice handling, mice-related work such as mouse embryonic fibroblast culture and immunohistochemistry;
- ❖ Target identification techniques such as DARTS, Cellular Thermal Shift Assay (CETSA) and affinity chromatography;
- ❖ Recombinant protein expression and purification;
- ❖ Bioactive compound isolation by HPLC and library construction

Computer skills and competences

MS word, Excel, Adobe photoshop, SPSS, and EndNotes

Publications and Presentation List

Total Publications: 47;

Total Impact Factor: ~94;

Total Citations: 887

List of Published Papers

1. Ghulam Hussain, **Azhar Rasul**, Haseeb Anwar, Muhammad Umar Sohail, Aroona Razzaq, Nimra Aziz, Asghar Shabbir, Longbin Zhang, Tao Sun. Muhammad Ali. Role of plant-derived flavonoids and their mechanism attenuation in Alzheimer's and Parkinson's diseases: An update of recent data. *Molecules*. **2018**; Accepted. IF: 2.861
2. Ghulam Hussain, **Azhar Rasul**, Haseeb Anwar, Nimra Aziz, Aroona Razzaq, Wei Wei, Muhammad Ali, Jiang Li, Xiaomeng Li, Role of plant derived alkaloids and their mechanism in neurodegenerative disorders. *International Journal of Biological Sciences*. **2018**; 14(3), 341-357. IF: 3.873
3. Muhammad Zafar, Iqra Sarfraz, **Azhar Rasul***, Faiza Jabeen, Khizar Samiullah, Ghulam Hussain, and Muhammad Ali. Tubeimoside-1, triterpenoid saponin, as a potential natural cancer killer. *Natural Product Communication*. **2018**; Accepted. IF: 0.88 (*As a corresponding Author).

4. Ammara Riaz, **Azhar Rasul***, Ghulam Hussain, Muhammad Kashif Zahoor, Farhat Jabeen, Zinayyera Subhani, Tahira Younis, and Muhammad Ali. Astragalin: A bioactive phytochemical with potential therapeutic activities. *Advances in Pharmacological Sciences*. **2018**; Accepted. (***As a corresponding Author**)
5. Iqra Sarfraz, **Azhar Rasul***, Ammara Riaz, Zinayyera Subhani, Ghulam Hussain, Farhat Jabeen, Muhammad Ali. A review on phyto-pharmacology of *Oxalis corniculata*. *Life Science Journal: "Mitteilungen Klosterneuburg"*. **2018**; Accepted. IF: 0.106 (***As a corresponding Author**)
6. Iqra Sarfraz, **Azhar Rasul***, Farhat Jabeen, Muhammad Kashif Zahoor, Muhammad Arshad, Muhammad Ali, Fraxinus: a plant with versatile pharmacological and biological activities. *Evidence Based Complementary Alternative Medicine (eCAM)*. **2017**; doi.org/10.1155/2017/4269868. IF: 1.740 (***As a corresponding Author**)
7. Hui Qin, **Azhar Rasul**, Xin Li, Muqaddas Masood, Guang Yang, Na Wang, Wei Wei, Xi He, Nobumoto Watanabe, Jiang Li, Xiaomeng Li, CD147-induced cell proliferation is associated with Smad4 signal inhibition. *Experimental Cell Research*. **2017**; In Press. doi: 10.1016/j.yexcr.2017.07.003. IF: 3.546
8. Chunwa Jiang, Muqaddas Masood, **Azhar Rasul**, Wei Wei, Ya Wang, Muhammad Ali, Jiang Li, Xiaomeng Li, Altholactone inhibits constitutive NF- κ B and STAT3 activation and induces reactive oxygen species-mediated apoptosis in prostate cancer DU145 cells. *Molecules*. **2017**; 22(2), 240. doi: 10.3390/molecules22020240. IF: 2.861
9. Xiaoyan Ma, Fan Yang, Shuli Yang, **Azhar Rasul**, Ting Li, Lianlian Liu, Min Kong, Dongmei Guo, Tonghui Ma. Number and distribution of myofibroblasts and α -smooth muscle actin expression levels in fetal membranes with and without gestational complications. *Molecular Medicine Reports*. **2015**; 12(2): 2784-92. IF: 1.692.
10. Di W, Khan M, **Azhar Rasul**, Sun M, Sui Y, Zhong L, Yang L, Zhu Q, Feng L, Ma T. Isoalantolactone inhibits constitutive NF- κ B activation and induces reactive oxygen species-mediated apoptosis in osteosarcoma U2OS cells through mitochondrial dysfunction. *Oncology Reports*. **2015**; doi: 10.3892/or.2014.3368. IF: 2.662.
11. **Azhar Rasul**, Bin-Ji Zhao, Jun Liu, Bao Liu, Jia-Xin Sun, Jiang Li, Xiao-Meng Li. Molecular mechanisms of casticin action: An update on its antitumor functions. *Asian Pac J Cancer Prev*. **2014**; 15(21): 9049-9058. IF: 1.50

12. **Azhar Rasul**, Xiaoyan Shen, Bingyu Wang, Bao Liu, Xiaomeng Li, Jilin Tang. Tubeimoside-1 upregulates p21 expression and induces apoptosis and G2/M phase cell cycle arrest in human bladder cancer T24 cells. *Bangladesh Journal of Pharmacology*. **2014**; 9(4): 595-603. IF: 1.052.
13. **Azhar Rasul**, Jun Di, Faya Martin Millimouno, Mahadev Malhi, Ichiro Tsuji, Muhammad Ali, Jiang Li, Xiaomeng Li, Reactive Oxygen Species Mediate Isoalantolactone-Induced Apoptosis in Human Prostate Cancer Cells. *Molecules*, **2013**; 18(8): 9382-9396. IF: 2.861.
14. Zhenyu Chen, **Azhar Rasul**, Chaoyue Zhao, Faya Martin Millimouno, Ichiro Tsuji, Takaki Yamamura, Rehana Iqbal, Mahadev Malhi, Xiaomeng Li, Jiang Li. Antiproliferative and apoptotic effects of pinocembrin in human prostate cancer cells. *Bangladesh Journal of Pharmacology*. **2013**; 8(3): 255-262. IF: 0.616
15. Nanyang Yang, Bing Zhao, **Azhar Rasul**, Hui Qin, Jiang Li, Xiaomeng Li, PIAS1 modulated Smad2/4 complex activation is involved in zinc-induced cancer cell apoptosis. *Cell Death & Disease*. **2013**; doi: 10.1038/cddis.2013.333. IF: 5.965.
16. **Azhar Rasul**, Muhammad Khan, Muhammad Ali, Jiang Li, Xiaomeng Li, Targeting apoptosis pathways in cancer with alantolactone and isoalantolactone. *Scientific World Journal*. **2013**; doi: 10.1155/2013/248532. IF: 1.7.
17. **Azhar Rasul**, Faya Martin Millimouno, Wafa Ali Eltayb, Muhammad Ali, Jiang Li, Xiaomeng Li, Pinocembrin: a novel natural compound with versatile pharmacological and biological activities. *Biomed Research International*. **2013**; doi: 10.1155/2013/379850. IF: 2.476.
18. **Azhar Rasul**, Bo Yu, Yang Jing Bo, Muhammad Khan, Muhammad Ali, Tonghui Ma. Isoalantolactone, a sesquiterpene lactone, induces apoptosis in SGC-7901 cells via mitochondrial and phosphatidylinositol 3-kinases/Akt signaling pathways. *Archives of Pharmacal Research*. **2013**; 36(10): 1262-9. IF: 2.324
19. **Azhar Rasul**, Rui Bao, Mahadev Malhi, Bing Zhao, Ichiro Tsuji, Xiaomeng Li, Jiang Li. Induction of apoptosis by costunolide in bladder cancer cells is mediated through ROS generation and mitochondrial dysfunction. *Molecules*. **2013**; 18(2): 1418-33. IF: 2.861.
20. Wei Wei, Jun Di, **Azhar Rasul**, C Zhao, Faya Martin Millimouno, Ichiro Tsuj, Furhan Iqal, Mahadev Malhi, Xiaomeng Li, Jiang Li. Dracorhodin perchlorate induces apoptosis in bladder cancer cells through Bcl-2, Bcl-XL, survivin down-regulation and caspase-3 activation. *Bangladesh Journal of Pharmacology*. **2013**; 8(3), 276-282. IF: 1.052.
21. **Azhar Rasul**, Jinmei Liu, Ying Liu, Faya Martin Millimouno, Xiaowan Wang, Ichiro Tsuji, Takaki

- Yamamura, Jiang Li, Xiaomeng Li. Eriocalyxin B inhibits proliferation and induces apoptosis through downregulation of Bcl-2 and activation of caspase-3 in human bladder cancer cells. *Bangladesh Journal of Pharmacology*. **2013**; 8(2): 116-123. IF: 0.616
22. Yingchao Zhang, **Azhar Rasul**, Xiaomeng Li, Mahadev Malhi, Xuedong Fang, Lijuan Wang, Yu Wang. Lentivirus-mediated shRNA targeting decoy receptor 3 (DcR3) inhibits proliferation and augments apoptosis in pancreatic cancer Capan-1 cells. *African Journal of Pharmacy and Pharmacology*. **2013**; 7(5): 203-210. IF: 0.60
23. Furhan Iqbal, RM Khattak, S Ozubek, MNK Khattak, **Azhar Rasul**, Muhammad Aktas. Application of the Reverse Line Blot Assay for the Molecular Detection of *Theileria* and *Babesia* sp. in Sheep and Goat Blood Samples from Pakistan. *Iranian Journal of Parasitology*. 8(2): **2013**; 289–295. IF: 0.758
24. Min Kong, Lianlian Liu, Fei Yi, Muhammad Khan, **Azhar Rasul**, Fan Yang, Xiaoyan Ma, Tonghui Ma. Prevalence of infarct and villous clumps, and the expression of α -smooth muscle actin in the placental basal plate in severe preeclampsia. *Molecular Medicine Reports*. **2012**; 8(4): 1067-73. IF: 1.692.
25. Muhammad Khan, Yinghong Xiao, Bo Yu, Nan Wang, **Azhar Rasul**, Fei Yi, Longfei Yang, Hong Yang, Tonghui Ma. Artabotryside A, a constituent from *Descurainia sophia* (L.) induces cell death in U87 glioma cells through apoptosis and cell cycle arrest at G2/M phase. *Journal of Medicinal Plants Research*. **2012**; 6(21): 3754-3765. IF: 1.18
26. **Azhar Rasul**, Saima Parveen, Tonghui Ma. Costunolide: A novel anti-cancer sesquiterpene lactone. *Bangladesh Journal of Pharmacology*. 2012; 7(1): 6-13. IF: 0.616
27. **Azhar Rasul**, Tonghui Ma. In vitro cytotoxic screening of 300 selected Chinese medicinal herbs against human gastric adenocarcinoma SGC-7901 cells. *African Journal of Pharmacy and Pharmacology*. **2012**; 6(9): 592-600. IF: 0.65
28. Muhammad Khan, Ting Li, Muhammad Khalil Ahmad Khan, **Azhar Rasul**, Faisal Nawaz, Meiyun Sun, Yongchen Zheng, Tonghui Ma. Alantolactone induces apoptosis in HepG2 cells through GSH depletion, inhibition of STAT3 activation and mitochondrial dysfunction. *Biomed Research International*. **2013**; 2013:719858. doi: 10.1155/2013/719858. IF: 2.476.
29. Muhammad Khan, Javed Qazi, **Azhar Rasul**, Yongchen Zheng, Tonghui Ma. Evodiamine induces apoptosis in pancreatic carcinoma PANC-1 Cells via NF κ B inhibition. *Bangladesh Journal of Pharmacology*. **2013**; 8: 8-14. IF: 1.052.

30. **Azhar Rasul**, Chuan Ding, Xiaomeng Li, Muhammad Khan, Yi Fei, Muhammad Ali, Tonghui Ma, Dracorhodin perchlorate Inhibits PI3K/Akt and NF- κ B Activation, Up-regulates the Expression of p53, and Enhances Apoptosis. *Apoptosis* **2012**; 17(10): 1104-19. IF: 3.833.
31. **Azhar Rasul**, Bo Yu, Zhang Kun, Muhammad Khan, Furhan Iqbal, Tonghui Ma, Hong Yang. Magnolol, a natural compound induces apoptosis of human gastric adenocarcinoma SGC-7901 cells via the mitochondrial and PI3K/Akt signaling pathways. *International J Oncology*. **2012**; 40(4): 1153-61. IF: 3.079
32. **Azhar Rasul**, Bo Yu, Zhang Kun, Muhammad Khan, Hong Yang, Tonghui Ma. Cytotoxic effect of evodiamine in human gastric adenocarcinoma SGC-7901 cells via simultaneous induction of apoptosis and autophagy. *Oncology Report*. **2012**; 27(5): 1481-1487. IF: 2.662.
33. **Azhar Rasul**, Tonghui Ma. Evodiamine Augments TNF-Alpha-And Trail-Induced Apoptosis In Human Gastric Cancer Cells Via Inhibiting The NF-Kappa B And Pi3k/Akt. *Annals of Oncology*. **2012**; 23: 37-37. IF: 11.855
34. **Azhar Rasul**, Saima Parveen, Tonghui Ma. Costunolide: A Novel Anti-Cancer Sesquiterpene Lactone (Review). *Bangladesh Journal Pharmacology*. **2012**; 7: 6-13. IF: 1.052.
35. Muhammad khan, Fei Yi, **Azhar Rasul**, Ting Li, Nan Wang, Hongwen Gao, Rong Gao, Tonghui Ma. Alantolactone induces apoptosis in glioblastoma cells via GSH depletion, ROS generation and mitochondrial dysfunction, *IUBMB Life*. **2012**; 64(9): 783-94. IF: 3.141.
36. Muhammad Khan, Yu Bo, **Azhar Rasul**, Ali Al Shawi, Fei Yi, Hong Yang, Tonghui Ma. Jaceosidin Induces Apoptosis in U87 Glioblastoma Cells through G2/M phase Arrest. *Evid Based Complement Alternat Med*. **2012**; doi: 10.1155/2012/703034. IF: 1.740.
37. Muhammad Khan, Chuan Ding, **Azhar Rasul**, Fei Yi, Ting Li, Hongwen Gao, Rong Gao, Lili Zhong, Kun Zhang, Xuedong Fang, Tonghui Ma. Isoalantolactone Induces Reactive Oxygen Species Mediated Apoptosis in Pancreatic Carcinoma PANC-1 Cells. *International Journal Biological Sciences*. **2012**; 8(4): 533-547. IF: 3.873.
38. Muhammad Khan, Bin Zheng, Fei Yi, **Azhar Rasul**, Zhuyi Gu, Ting Li, Hongwen Gao, Javed Iqbal Qazi, Hong Yang, Tonghui Ma. Pseudolaric Acid B induces caspase-dependent and caspase-independent apoptosis in U87 glioblastoma cells. *Evid Based Complement Alternat Med*. **2012**; doi: 10.1155/2012/957568. IF: 1.740.
39. **Azhar Rasul**, Tonghui Ma, Augmentation of TRAIL-induced apoptosis by Tubeimoside-1 in human gastric

cancer cells via inhibition of PI3K/Akt, and NF- κ B signaling pathways. Abstract Published in Annal of Oncology. **2012**. IF: 11.855.

40. Jing Shen, Xiaoyan Ma, Fei Yi, **Azhar Rasul**, Tonghui Ma. Increased expression levels of vitronectin in maternal-fetal interface of placenta in early-onset severe preeclampsia. Molecular Medicine Reports. **2012**; doi: 10.3892/mmr.2012.1141. IF: 1.692.
41. **Azhar Rasul**, Runmin Song, Wei Wei, Yoshikazu Nishino, Ichiro Tsuji, Xiaomeng Li, Jiang Li, Tubeimoside-1 inhibits growth via the induction of cell cycle arrest and apoptosis in human melanoma A375 cells. Bangladesh Journal of Pharmacology, **2012**; 7 (3): 150-156. IF: 1.052.
42. RM Khattak, Shah Ali, Muhammad Jahangir, MN Khan, **Azhar Rasul**, Furhan Iqbal. Prevalence of ectoparasites in wild and domesticated grey (*Francolinus pondicerianus*) and black partridges (*Francolinus francolinus*) from Khyber Pakhtoonkhwa Province of Pakistan. Pakistan Journal of Zoology. **2012**; 44 (5), 1239-1244. IF: 0.4.
43. **Azhar Rasul**, Muhammad Khan, Bo Yu, Tonghui Ma, Hong Yang. Xanthoxyletin, a Coumarin Induces S Phase Arrest and Apoptosis in Human Gastric Adenocarcinoma SGC-7901 Cells. Asian Pac J of Cancer Prevention **2011**; 12 (5): 1219-1223. IF: 1.50.
44. **Azhar Rasul**, Bo Yu, Long-Fei Yang, Muhammad Ali, Muhammad Khan, Tonghui Ma, Hong Yang. Induction of mitochondria-mediated apoptosis in human gastric adenocarcinoma SGC-7901 cells by kuraridin and Nor-kuraridinone isolated from *Sophora flavescens*. Asian Pac J Cancer Prev. **2011**; 12(10): 2499-504. IF: 1.50.
45. Ali Al Shawi, **Azhar Rasul**, Muhammad Khan, Furhan Iqbal, Ma Tonghui. Eupatilin: A flavonoid compound isolated from the artemisia plant, induces apoptosis and G2/M phase cell cycle arrest in human melanoma A375 cells. African Journal of Pharmacy and Pharmacology. **2011**; 5(5): 582-588. IF: 1.20.
46. Muhammad Naeem, **Azhar Rasul**, Abdus Salam, Shahid Iqbal, Abir Ishtiaq, Muhammad Khalid, Mohammad Athar. Proximate analysis of female population of wild feather back fish (*Notopterus notopterus*) in relation to body size and condition factor. African Journal of Biotechnology. **2011**; 10(19): 3867-3871. IF: 1.08
47. Muhammad Khan, **Azhar Rasul**, Fei Yi, Lili Zhong, Tonghui Ma. Jaceosidin induces p53-dependent G2/M phase arrest in U87 glioblastoma cells. Asian Pac J Cancer Prev. **2011**; 12(12): 3235-3238. IF: 1.50.

Oral Presentations

Azhar Rasul, Bo Yu, Zhang Kun, Muhammad Khan, Tonghui Ma, Hong Yang, Cytotoxic effect of evodiamine in human gastric adenocarcinoma SGC-7901 cells via simultaneous induction of apoptosis and autophagy, 9th International Symposium on the Chemistry of Natural Compounds, 2011 Urumqi, Xinjiang, China (Oral Presentation).

Azhar Rasul, Reprogramming of Tumor Metabolism: Selective Target for Cancer Therapy, Young Talent Forum for the 2016 Digestive Disease Week of Guangzhou, China (Oral Presentation).

Poster Presentations

Azhar Rasul, Bo Yu, Kun Zhang, Long-Fei Yang, Muhammad Khan, Tonghui Ma, Hong Yang, Enhancement of Docetaxel Anticancer Activity by Tubeimoside-1 in Human Gastric Cancer via Mitochondrial, PI3K/Akt, and NF- κ B Signaling Pathways, 4th International Cancer Control Congress, Seoul, South Korea; 2011 (Poster Presentation).

Azhar Rasul, Tonghui Ma, Augmentation of TRAIL-induced apoptosis by Tubeimoside-1 in Human Gastric Cancer Cells via inhibition of PI3K/Akt, and NF- κ B Signaling Pathways, 4th International WIN Symposium, Paris, France; 2012 (Poster Presentation).

Book Chapters

1. **Azhar Rasul** and Tonghui Ma (2013). Natural Compounds and Their Role in Autophagic Cell Signaling Pathways, Autophagy - A Double-Edged Sword - Cell Survival or Death?, Dr. Yannick Bailly (Ed.), ISBN: 978-953-51-1062-0, InTech, DOI: 10.5772/55447.
2. Ijaz Rasul, , Farrukh Azeem, Muhammad Hussnain Siddique, Saima Muzammil, **Azhar Rasul**, Anam Munawar, Muhammad Afzal, Muhammad Amjad Ali, Habibullah Nadeem (2017). Algae biotechnology: A green light for engineered algae. “ALGAE-BASED POLYMERS, BLENDS AND COMPOSITES” to be published by “Elsevier”

List of Submitted Papers:

1. **Azhar Rasul**, Makoto Kawatani, Makoto Muroi, Yushi Futamura, Harumi Aono, Miho Tanaka, Hiroyuki Osada, Discovery and characterization of novel microtubule disrupter by MorphoBase and ChemProteoBase

Profiling. Submitted to Biochemical Journal.

2. **Azhar Rasul**, Makoto Kawatani, Makoto Muroi, Yushi Futamura, Amit Subedi, Hiroyuki Osada, Identification and characterization of novel small-molecule inhibitor of DNA topoisomerase I. Submitted to BMB Reports.
3. **Azhar Rasul**, Makoto Kawatani, Kondoh, Hiroyuki Osada, Discovery of selective inhibitors of malic enzyme 2, novel therapeutic target for cancer metabolism, by chemical array screening. Submitted to Cell Chemical Biology.
4. **Azhar Rasul**, Muhammad Ali, Hiroyuki Osada, Imperatorin: A multifunctional natural compound with potential anti-cancer, anti-oxidant and anti-inflammatory activities (Review). Submitted to International Journal of Biological Sciences.
5. **Azhar Rasul***, Ghulam Hussain, Ghazala Kaukab, Farhat Jabeen, Iqra Sarfraz, Bilal Rasool, Muhammad Ali Osthole: A Multifunctional Natural Compound with Potential Anticancer, Antioxidant and Anti-inflammatory Activities. Submitted to EXCLI Journal Ms. NO. 2017-988.
6. Maria Javed, **Azhar Rasul***, Ghulam Hussain, Farhat Jabeen, Bilal Rasool, Ammara Riaz, Ghazala Kaukab, Muhammad Ali, Harmine and its derivatives: Biological activities and therapeutic potential in human diseases. Submitted to Bangladesh Journal of Pharmacology (BJP).
7. Bushra Nageen, **Azhar Rasul***, Ghulam Hussain, Farhat Jabeen, Tahira Younis, Iqra Sarfraz, Jassia Bukhari, Muhammad Ali, Jaceosidin: A Novel Natural Flavone with Promising Anti-inflammatory and Anti-cancer Effects. Submitted

Invited Talks at National and International Conference/ Forums/Seminars

- Young Talent Forum for the 2016 Digestive Disease Week of Guangzhou, China
- Seminar at School of Life Sciences, Dalian Medical University (DMU), Dalian, China, 2016
- 1st International Conference on Emerging Trends in Zoology (1st ICETZ 2017), University of Sargodha (UOS), Sargodha, Punjab Pakistan (December 8-9, 2017)

Seminars/ Conferences/ Workshop Organized

- Chief organizer of One Day Workshop on Biosafety and Biosecurity for Young Researchers, at Department of Zoology, Government College University Faisalabad. **March 26, 2018**

Self-assessment

I have more than ten year's research experience in the field of cancer chemical biology. Four years of hard work during my PhD has let me become the person who has the ability to handle the different cellular and molecular biology techniques. Besides this, my performance has been improved as one of a basic science researcher. I think my greatest strongpoint is the excellent adaptability. I can acclimatize myself to the new circumstances in a short time and exert all my strengths towards work. I believe that the good professional ability is the foundation of achievement and the problem handling. The ability of study and the spirit of innovation guarantee my adaptability to various work environments. I also believe that this is a higher requirement for the field of the scientific research. The independent life since childhood developed my endurance and the spirit of toughness. Motility during pressure ensures my ability of facing difficulties. In addition, I am also a good cooperater and team leader. Obtaining the success is my greatest satisfaction.

Professional Contributions

- **Editor:** Peak Journal of Biotechnology
<http://www.peakjournals.org/journals/pjb/board.html>
- **Editorial Board Member:** Asian Journal of Natural & Applied Sciences (AJSC), Japan
<http://www.ajsc.leena-luna.co.jp/board.php>
- **BBE2017 as a TPC (Technical Program Committee) member:** The 2nd International Conference on Biomedical and Biological Engineering (BBE2017), Guilin, China, May 26th-28th, 2017.
<http://www.bbe2017.org/?op=committee>

Scientific Societies Memberships

- European Society for Medical Oncology (ESMO) Switzerland
- Asian Pacific Organization of Cancer Prevention (APOCP) Korea
- National Academy of Young Scientist (NAYS) Pakistan
- Asia-Pacific Chemical, Biological& Environmental Engineering Society (APCBEEs) Membership NO.: 100624, Thailand.
- An associate member of the World Academy of Sciences (WAS), 10 Vriaxidos Street, Pagkrati, Athens, Greece
- Society for Medicinal Plant and Natural Product Research (G.A.) Gesellschaft für Arzneipflanzen- und Naturstoff-Forschung e.V, Muenster, Germany

- Federation of European Biochemical Societies (FEBS), Membership Number: 01046940, UK
- Biochemical Society; Membership Number: 01046940, UK
- International Society for Infectious Diseases (ISID), USA
- Middle East Molecular Biology Society (MEMBS); Membership Number: A001759, Doha, Qatar.
- International Chemical Biology Society, USA
- Life member of Pakistan Society for Biochemistry and Molecular Biology (PSBMB), Lahore, Pakistan

Research Areas of Interest

- Cancer stem cells: new target for drug discovery
- Tumor hypoxia: a target for selective cancer therapy
- Cancer cell metabolism: novel and selective target for cancer therapy
- Development of tumor-stromal cell interactions targeting agents for tumor metastasis therapeutics
- Production of recombinant proteins---rDNA Technology

Research Projects/Grants

- **Title of the Project:** Targeting NFκB and STAT3 by small molecules

Funded By: Japan Society for Promotion of Science (JSPS), Tokyo Japan (3.0 million JPY)

Role as: Principal Investigator (PI)/Researcher

Status: Completed

- **Title of the Project:** Targeting cancer cell metabolism by small molecules

Funded By: Tokyo Biochemical Research Foundation (TBRF), Tokyo Japan (3.0 million JPY)

Role as: Principal Investigator (PI)/Researcher

Status: Completed

- **Title of the Project:** "The relationship between protein SUMO system and prostate cancer", "Screening and identification of natural compounds on SUMO pathways in prostate cancer".

Funded by: Ministry of Science and Technology (MOST), China.

Role as: Member

Status: In progress

- **Title of the Project:** Development of Potent and Selective Tumor Glycolysis Inhibitors from Natural

Products as Lead Structures.

Funded by: The Nagai Foundation Tokyo, Japan- Grant Award_NFT-R4 (600,000JPY/570,000PKRs)

Role as: Principal Investigator (PI)

Status: In progress

- **Title of the Project:** Identification and Characterization of Tumor-Stromal Cell Interactions Modulators – A Promising Novel Therapeutic Approach.

Funded by: TWAS-COMSTECH Research- Grant Award_17-180RG/PH/AS_C-FR3240300069 (8000US\$/880,000PKRs)

Role as: Principal Investigator (PI)

Status: In progress

- **Title of the Project:** Targeting the metabolic reprogramming of cancer cells by small molecule-mediated inhibition of Malic Enzymes 2 (ME2)

Funded by: The Nagai Foundation Tokyo, Japan-Grant Award_NFT-R4-2018 (400,000JPY/370,000PKRs)

Role as: Principal Investigator (PI)

Status: In progress

- **Title of the Project:** Pharmacological inhibition of Human 6 Phosphogluconate Dehydrogenase (h6PGD) as a novel strategy to combat cancer

Funded by: Pakistan Health Research Council (PHRC), Islamabad Pakistan (500,000PKRs)

Role as: Principal Investigator (PI)

Status: Submitted

- **Title of the Project:** Determining the mechanism of action of a novel human 6 phosphogluconate dehydrogenase (h6PGD) specific inhibitor that kills chemoresistant cancer cells

Funded by: Head of ICPSR – IESCO, Avenue des F.A.R – P O Box 2275 – Code 10104, Hay Ryad – Rabat, Kingdom of Morocco (10000US\$)

Role as: Principal Investigator (PI)

Status: Submitted

Supervision:PhD students (As a supervisor): **03**PhD students (As a member): **04****List of PhD Students**

Sr. No.	Name of student (Session)	Registration/ Roll No.	Thesis Title	Role As.	Status
1	Ammara Riaz (2016-2019)	2012-GCUF-01400 /3816	In vitro and In vivo evaluation of plant-derived natural Compounds against Human Triple Negative Breast Cancer	Supervisor	In progress
2	Nazia Kanwal (2017-2020)		In vitro and In vivo evaluation of mushroom-derived natural Compounds against Human liver cancer	Supervisor	In progress
3	Syed Kashif Shahid Kamran (2015-2018)	2012-GCUF-01400 /1907	Exploration and characterization of potentially effective selected plants to promote the functional recovery against mechanically induced nerve injury in mouse model	Supervisor-II	In progress
3	Nagina Rehman (2015-2018)	2015-GCUF- 1008 /	Investigation of Zinc Oxide nanoparticles (ZnO-NPs) induced toxicity in Male Sprague Dawley Rats and antagonistic effect of <i>Allium sativum</i> and <i>Camellia sinensis</i> extracts	Member	In progress
4	Mehwish (2015-2018)	2015-GCUF- 1006	Investigation of Zinc Oxide nanoparticles (ZnO-NPs) induced toxicity in Male Sprague Dawley Rats and antagonistic effect of <i>Allium sativum</i> and <i>Camellia sinensis</i> extracts	Member	In progress

List of MPhil StudentsMPhil Students (As a supervisor): **22**MPhil students (As a member): **07**

Sr. No.	Name of student (Session)	Registration/ Roll No.	Thesis Title	Role As.	Status
1	Fariha Rukhsar (2016-2018)	2014-GCUF-012108 /3837	Purification of Human 6-Phosphogluconate Dehydrogenase (h6PGD) from <i>Escherichia coli</i> and development of 6-PGD enzymatic activity assay	Supervisor	In progress
2	Salman Akram (2016-2018)	2016-GCUF-00223 /3834	Evaluation of plant extracts as supplementary feeds on gene expression of GH, IGF-1, growth performance and body composition in <i>Cirrhinus mrigala</i>	Supervisor	In progress
3	Bisma Saleem (2016-2018)	2016-GCUF-09730 /100230	Evaluation of <i>invitro</i> cytotoxic activity of Eriocalyxin B against Human Triple	Supervisor	In progress

			Negative Breast cancer (TNBC), MDA-MB231 Cells		
4	Aiza Ajaz (2016-2018)	2012-GCUF-13451 /100220	Study on cytotoxic potential of mushroom derived natural compound, Hispolon, against Human Hepatocellular Carcinoma (HepG2) cells	Supervisor	In progress
5	Savera Safdar (2016-2018)	2017-GCUF-000896 /811	Elucidation of the cytotoxic potential of methanolic extract of <i>Oxalis corniculata</i> against human hepatocellular carcinoma (HepG2) cells	Supervisor	In progress
6	Rubab Ishfaq (2016-2018)	2017-GCUF-000762 /801	Investigation of the cytotoxic effects of <i>Neurada procumbens</i> leave extract against human triple negative breast cancer (TNBC), MDA-MB231 cells	Supervisor	In progress
7	Rabia Batool (2016-2018)	2017-GCUF-000734 /821	Study on exploration of antiproliferative activity of methanolic extract of the seed of the <i>Carica papaya</i> against human liver cancer cell line	Supervisor II	In progress
8	Muhammad Mateen Tahir (2016-2018)	2017-GCUF-000892 /804	Evaluation of cytotoxicity and modes of action of the methanolic extract of <i>Ficus Benghalensis</i> plant leaves against human hepatic cancer cells	Supervisor II	In progress
9	Bushra Nageen (2016-2018)	2012-GCUF-01401 /3818	Cloning, expression and purification of Human Aldolase A (hmALDOA) protein and screening for its inhibitors by enzymatic assay	Supervisor-II	In progress
10	Maria Javed (2016-2018)	2012-GCUF 01414 /3825	Screening of methanolic extract of <i>Dalbergia sissoo</i> bark for cytotoxic effects against hepatocellular carcinoma (HepG2) cells	Supervisor-II	In progress
11	Rashid Adil (2016-2018)	2016-GCUF-010276/ 100216	Investigation of anti-cancer activity and its underlying molecular mechanism of <i>Citrullus colocynthis</i> plant extract against hepatic cancer cell line	Supervisor-II	In progress
12	Muhammad Azam (2016-2018)	2016-GCUF-00223 /3834	Evaluation of cytotoxic effect of <i>Calotropis procera</i> extract and its underlying molecular mechanism on Hepatocellular carcinoma (HepG2) cells	Supervisor-II	In progress
13	Sumaira Parveen (2016-2018)	2012-GCUF-02517	Study on the exploration of the therapeutic potential of <i>Withania somnifera</i> against peripheral nerve injury in mouse model	Supervisor-II	In progress
14	Hafiz Muhammad Mansoor	2016-GCUF- 000331	Elucidation of the therapeutic effects of <i>Neurada procumbens</i> against peripheral	Supervisor-II	In progress

	(2016-2018)		nerve injury in mouse model		
15	Aroona Razzaq (2016-2018)	2012-GCUF-02520	Investigation of the therapeutic role of <i>Strychnos Nux Vomica</i> against induced peripheral nerve injury in mouse model	Supervisor-II	In progress
16	Waseem Ahmad	2012-GCUF-02548	Evaluation of the remedial potential of <i>Foeniculum vulgare</i> against induced peripheral nerve injury in mouse model	Supervisor-II	In progress
17	Mariyam Zahid	2016-GCUF-010062	Synthesis of S-alkylated derivatives of oxadiazole by using quaternary ammonium salts	Supervisor-II	In progress
18	Ummara Rabbani	2016-GCUF-09788	Synthesis and characterization of pyridine based quaternary ammonium salts	Supervisor-II	In progress
19	Amna Shahzadi	2016-GCUF-010063	Synthesis of N-alkylated derivatives of imidazoles by using various quaternary ammonium salts	Supervisor-II	In progress
20	Nadia Afzal	2016-GCUF-09789	Synthesis of S-alkylated derivatives of 2 thiobenzimidazole by using quaternary ammonium salts	Supervisor-II	In progress
21	Iqrash Haider	2012-GCUF-06243	Computational study of boron dipyrromethene derivatives as photosensitizer	Supervisor-II	In progress
22	Adil Anwar	2012-GCUF-010077	A Quantum mechanical study of Porphyrin based dyes as photosensitizer for photodynamic therapy applications	Supervisor-II	In progress
23	Iqra Sarfraz (2016-2018)	2012-GCUF-01400 /3816	Evaluation of voltage gated sodium channel (Vgsc) gene mutation and associated enzyme modulation in Dengue vector <i>Aedes aegypti</i>	Member	In progress
24	Iqra Sadiqa (2016-2018)	2016-GCUF-09844	Prevalence and Genetics Epidemiology of Miscarriages in a Hospital Population of District Gujranwala	Member	In progress
25	Muhammad Adnan Khalid (2016-2018)	2012-GCUF-30654/ 3801	Effects of lycopene supplementation on antioxidant activity, hematology, nutrient digestibility and growth of major carps fingerlings fed canola meal-based diet	Member	In progress
26	Tahira Parveen	2011-GCUF-03656/	Effect of Citric acid supplementation on growth performance and nutrient digestibility of <i>Cyprinus Carpio</i> fingerlings fed cotton seed meal based diets	Member	In progress
27	Muhammad Sajid (2016-2018)	2014-GCUF-010847	Effects of Organophosphate toxicity of biochemical parameters of human population	Member	In progress
28	Nasira Rasheed	2016-GCUF- 09841/	Genetic epidemiology of poly cystic	Member	In progress

	(2016-2018)	100212	ovarian syndrome in District Sargodha		
29	Zakia Azad (2016-2018)	2016-GCUF- 09841/ 100212	Genetic epidemiology of poly cystic ovarian syndrome in District Nankana	Member	In progress

Higher Education Commission of Pakistan: Approved Supervisor

Teaching and course training

- Course developed:

Zoo-?- Chemical Biology (at the Dept. of Zoology, GCUF, Faisalabad)

- Courses taught:

Government College University, Faisalabad, Pakistan)

- **Zoo-704**-Advances in Recombinant DNA Technology and associated Lab- (MPhil/MS level)
- **Zoo-705**-Advances in Biotechnology and associated Lab- (MPhil/MS level)
- **Zoo-756**-Research Methodology (MSc level)
- **Zoo-301**- Principle in Animal Life and associated Lab (BS level)

(at the Dept. of Zoology, Government College University, Faisalabad, Pakistan)

Administrative Responsibilities

- ❖ In-Charge Research Lab at Department of Zoology, Government College University, Faisalabad
- ❖ In-Charge Cell Culture Lab at Department of Zoology, Government College University, Faisalabad
- ❖ Member of Internal PhD Assessment Committee at Department of Zoology, Government College University, Faisalabad
- ❖ Member of MS/PhD Thesis Scrutiny Committee at Department of Zoology, Government College University, Faisalabad Since July 26, 2017
- ❖ Member of Organizing Committee 4th International Conferences of Zoology (December 14-15, 2017), at Department of Zoology, Government College University, Faisalabad

Collaborations

- ❖ Prof. Dr. Li Xiaomeng Li, Key Laboratory of Molecular Biology, Institute of Genetics and Cytology, School of Life Sciences, Northeast Normal University (NENU), Changchun Jilin Province, China.

Email: lixm441@nenu.edu.cn

- ❖ Prof. Dr. Tong-Hui Ma, School of Basic Life Sciences, Dalian Medical University (DMU), Dalian Liaoning Province, China
- ❖ Dr. Maria Pascual López-Alberca, Associate Research Scientist, Centre for Drug Discovery, Northeastern University, 360 Huntington Avenue Boston, MA. Email: mpascualla@gmail.com
- ❖ Dr. Lai Ngit Shin, Senior Lecturer, Institute for Research in Molecular Medicine (INFORMM) Universiti Sains Malaysia (USM), 11800 USM, Penang, Malaysia. E-mail: laingitshin@usm.my; Tel: +6046534862; Fax: +6046534803
- ❖ Prof. Dr. Hiroyuki Osada, Director, Chemical Biology Research Group (CBRG), RIKEN, Wakoshi, Saitama, Japan
- ❖ Prof. Dr. Zeliha Selamoglu, Nigde Ömer Halisdemir University, Faculty of Medicine, Department of Medical Biology, Nigde, 51240 Turkey. Email: Phone: +90-388-2253123; Fax: +90-388-2252582
- ❖ Dr. Muhammad Muddassar, Assistant Professor, Email: mmuddassar@gmail.com

References

Reference No: 1. Name: Dr. Tonghui Ma Position: Dean & Professor

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Reference No: 2. Name: Dr. Muhammad Ali Position: Vice Chancellor & Professor

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Reference No: 3. Name: Dr. Ying Huang Position: Professor

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Additional information: <http://www.ncbi.nlm.nih.gov/pubmed?term=Azhar%20Rasul>;

<http://scholar.google.com.hk/citations?user=JJcEv0EAAAAJ&hl=en>