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### Research Publications:

1. Muhammad Usman Ashraf, Kanzal Iman, Farhan Khalid, Muhammad Salman Hafiz, Talha Shafi, Momal Rafi, Nida Javaid, Rashid Hussain, Fayyaz Ahmad, Syed Shahzad ul Hussan, Shaper Mirza, Muhammad Shafiq, **Samia Afzal**. Evolution of Efficacious Pan-Genotypic HCV Therapies. *Medicinal Research Reviews*, 2019, 39:1091–1136 (IF=12.944)
2. Sadia Butt, Muhammad Idrees, Irshad Ur Rehman, Haji Akbar, Muhammad Shahid, **Samia Afzal**, Saima Younas and Iram Amin. Mixed genotype infection with Hepatitis C Virus. *Emerging Infectious Diseases* 2011; 17(8) 1565-1567. (IF 6.883).
3. Muhammad Usman Ashraf, Hafiz Muhammad Salman, Muhammad Farhan Khalid, Muhammad Haider Farooq Khan, Saima Anwar, **Samia Afzal**. CRISPR-Cas13a mediated targeting of hepatitis C virus internal-ribosomal entry site (IRES) as an effective antiviral strategy. *Biomedicine & Pharmacotherapy* 2021, 136 (IF=6.529).
4. <sup>†</sup>Zuzana Macek Jilkova, <sup>†</sup>**Samia Afzal**, et al. Progression of fibrosis in patients with chronic viral hepatitis is associated with IL-17+ neutrophils. *Liver International*, 2016, 36(8):1116-24. (IF=5.828).
5. **Samia Afzal**, Muhammad Idrees, Mazhar Hussain. De Novo modeling of Envelope 2 protein of HCV isolated from Pakistani patient and epitopes prediction for vaccine development. *Journal of Translational Medicine*, 2014, 12:115 (IF=5.531).
6. **Samia Afzal\***, Muhammad Hassan et al. Breast Cancer; Discovery of Novel Diagnostic Biomarkers, Drug Resistance, and Therapeutic Implications. *Frontiers in Molecular Biosciences*, 2022, 9:783450 (IF=5.246).
7. Rabia Nawaz, Sadia Zahid, M Idrees, Shazia Rafique, M Shahid, Ammara Ahad, Iram Amin, Iqra Almas, **Samia Afzal\***. HCV-induced regulatory alterations of IL-1 $\beta$ , IL-6, TNF- $\alpha$ , and IFN- $\gamma$  operative, leading liver en-route to non-alcoholic steatohepatitis. *Inflammation Research*, 2017, 66(6):477-486. (IF=4.575)
8. Ayma Aftab, **Samia Afzal\***, Zahida Qamar, Muhammad Idrees. Early detection of MDR Mycobacterium tuberculosis mutations in Pakistan. *Scientific Reports*, 2021, 11:16736. (IF=4.2).
9. **Samia Afzal\***, Khadija Fiaz, et al. Interrelated Oncogenic Viruses and Breast Cancer. *Frontiers in Molecular Biosciences*, 2022, 9:781111 (IF=5.246).
10. Zuzana Macek Jilkova, Komal Saleem, **Samia Afzal**, Thomas Decaens. Predictive Factors for Hepatocellular Carcinoma Development after Direct-Acting Antiviral Treatment of HCV. *Livers*, 2021, 1, 313–321.

11. **Samia Afzal**, Muhammad Idrees, et al. Mutations in the E2-PePHD region of hepatitis C virus genotype-3a and correlation with response to interferon and ribavirin combination therapy in Pakistani patients. *Virology Journal*. 2010, 7:377 (IF=4.099).
12. **Samia Afzal**, Muhammad Idrees, et al. Role of Serine (75 & 277) E2 gene of HCV 1a in interferon resistance: A sequence alignment approach. *Virology Journal* 2011, 8:71 (IF=4.099).
13. **Samia Afzal**, Muhammad Idrees. Envelope protein 2 phosphorylation sites: a possible site for resistance to HCV interferon therapy. *Journal of Viral Hepatitis* 2012, 19: (IF=3.728).
14. Madiha Akram, Muhammad Idrees, Abrar Hussain, **Samia Afzal**, et al. Characterization of Hepatitis C Virus genotype 3a Hypervariable region 1 in patients achieved rapid virological response to alpha interferon and Ribavirin Combination therapy. *Virology Journal* 2011; 8:253 (IF=4.099).
15. Shazia Rafique, Muhammad Idrees\*, Muhammad Ilyas, Abrar Hussain, Muhammad Ali, Liaqat Ali, Sadia Butt, **Samia Afzal**, Irshad Ur Rehman and Sana Saleem. Positional effect of phosphorylation sites 266 and 267 in the cytoplasmic domain of the E2 protein of hepatitis C virus 3a genotype: Interferon Resistance analysis via Sequence Alignment. *Virology Journal* 2011, 8:204 (IF=4.099).
16. Zareen Fatima, Muhammad Idrees, Mohammad A Bajwa, Zarfshan Tahir, Obaid Ullah, Muhammad Q Zia, Abrar Hussain, Madiha Akram, Bushra Khubaib, **Samia Afzal**. Serotype and genotype analysis of dengue virus by sequencing followed by phylogenetic analysis using samples from three mini outbreaks-2007-2009 in Pakistan. *BMC Microbiology* 2011, **11**:200 (IF=3.605)
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19. Sadia Butt, Idrees Khan, Haji Akbar, Irshad Ur Rehman, Zunaira Awan, Muhammad Shahid, **Samia Afzal**, et al. The changing epidemiology pattern and frequency distribution of hepatitis C virus in Pakistan. *Infection, genetics, evolution* 2010, 10(5); 595-600. (IF=3.342).
20. Madiha Akram, Muhammad Idrees, Shamail Zafar, Abrar Hussain, Sadia Butt, **Samia Afzal**, et al. Effects of Host and virus related factors on Interferon- $\alpha$ +ribavirin and Pegylated-interferon+ribavirin treatment outcomes in Chronic Hepatitis C patients. *Virology Journal* 2011, 8:234 (IF=4.099).
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22. Liaqat Ali, Muhammad Idrees, Muhammad Ali, Irshad ur Rehman, Abrar Hussain, Zunaira Awan, **Samia Afzal**, et al. An overview of treatment response rates to various anti-viral drugs in Pakistani Hepatitis B Virus infected patients. *Virology Journal*. 2011, 8:20 (IF=4.099).
23. Muhammad Shahid, Muhammad Idrees, **Samia Afzal** et al. Blood-based gene expression profile of oxidative stress and antioxidant genes for identifying surrogate markers of liver tissue injury in patients infected with Hepatitis C Virus infection. *Archives of Virology*, 2020, 165:809–822 (IF=2.574).

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25. Bushra Khubaib, Sana Saleem, Muhammad Idrees, **Samia Afzal**, Muhammad Waseem. The genotype CC of IL-28B SNP rs12979860 is significantly associated with a sustained virological response in chronic HCV-infected Pakistani patients. *Journal of Digestive Diseases* 2015; 16:293-298 (IF=2.325).
26. Musab bin Umair, Fujimura Nao Akusa, Hadia Kashif, Seerat-e-Fatima, Fatima Butt, Marium Azhar, Iqra Munir, Muhammad Ahmed, Wajeeha Khalil, Hafz Sharyar, Shazia Rafque, Muhammad Shahid, **\*Samia Afzal**. Viruses as tools in gene therapy, vaccine development, and cancer treatment. *Archives of Virology*, 2022, (IF=2.574).
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32. Irshad-ur Rehman, Muhammad Idrees, Muhammad Ali, Liaqat Ali, Sadia Butt, Abrar Hussain, Haji Akbar and **Samia Afzal**. Hepatitis C virus genotype 3a with phylogenetically distinct origin is circulating in Pakistan. *Genetic Vaccines and Therapy*, 2011, 9:2 (IF=2.10).
33. Muhammad Munam Mustafa Bukhari, Iqra Mir, Muhammad Idrees, **Samia Afzal**, & Muhammad Shahid. Role of MicroRNAs in Establishing Latency of Human Immunodeficiency Virus. *Critical Reviews in Eukaryotic Gene Expression*. 2020, 30(4):337–348 (IF=1.807)
34. Sheeza Ali, **\*Samia Afzal** et al. (2020) Paradoxical Role of Dengue Virus Envelope Protein Domain III Antibodies in Dengue Virus Infection. *Critical Reviews in Eukaryotic Gene Expression*. 30(3):199 – 206. (IF=1.807)
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37. Mahrukh Shaheen, **\*Samia Afzal** et al. A review on the association of IL28B polymorphism with clearance of Hepatitis C Virus. *Critical Reviews in Eukaryotic Gene Expression*.2020, 30(3):223–229 (IF=1.807)
38. Muhammad Idrees, Irshad ur Rehman, Sobia Manzoor, Haji Akbar, Sadia Butt, **Samia Afzal**, et al., "Evaluation of three different HCV Typing Methods for detection of Mixed Genotype Infections. *Journal of Digestive Diseases* 2011; 12; 199–203. (IF=2.325).
39. Muhammad Ali, **Samia Afzal**, Asad Zia, Ahmed Hassan, Ali Talha Khalil, Muhammad Ovais, Zabta Khan Shinwari, Muhammad Idrees. A systematic review of treatment response rates in Pakistani hepatitis C virus patients; current prospects and future challenges, *Medicine* 2016; 95:50(e5327) (IF=1.889).
40. Muhammad Hassan, Ali Hassan, Muhammad Farooq, **Samia Afzal\*** et al. Dengue Vaccines: Ongoing Challenges and Current Status in the Advancement of Different Candidates. *Critical ReviewsTM in Eukaryotic Gene Expression*, 2021, 31(5):7–19 (IF=1.807).
41. Khadija Zahid, Sana Shakoor, Hina Afzal Sajid, **\*Samia Afzal** et al. Advancements in developing an effective and preventive dengue vaccine. *Future Virology*, 2020;15(2), 127–138. (IF=1.831).
42. Ali Hassan, Afraz Saeed, **\*Samia Afzal** et al. Applications and hazards associated with carbon nanotubes in biomedical sciences. *Inorganic and Nano-Metal Chemistry* 2020 50:9, 741-752 (IF=1.716)
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46. Muhammad Shahid, Iram Amin, **\*Samia Afzal** et al. Prevalence and Molecular Detection of Dengue Virus in 2013 Outbreak in KPK and Punjab, Pakistan. *Pakistan journal of Zoology*2017; 49(3) 1119-1122. (IF=0.831)
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53. Aadil Sultan, Mohsin Ahmad Khan\*, Nadeem Ahmed, Muhammad Hassan, Rashid Bhatti, Hafsa Naeem, Muhammad Islam Khan, Saad Tahir, **Samia Afzal\*** and Ahmad Ali Shahid. Gene Multimerization in Expression Vector: A Potential Strategy for Enhanced Protein Expression in *E. coli*. *Pakistan Journal of Zoology*.2022; DOI: <https://dx.doi.org/10.17582/journal.pjz/20211112071133> (IF=0.831).
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