Naeem Rashid, PhD
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Date of Birth: March 10, 1962
Marital Status: Married
Nationality: Pakistani

Education:

1986	M.Sc Chemistry, Govt. College Lahore, University of the Punjab, Lahore, Pakistan
1989	M.Phil Molecular Biology, University of the Punjab, Lahore, Pakistan
1994	International Post Graduate University Diploma Course in Microbiology from IC Biotech, Osaka University, Osaka, Japan
1997	Ph.D Biotechnology from Osaka University, Osaka, Japan

Positions Held

2007-present	**Professor,** School of Biological Sciences, University of the Punjab, Quaid-e-Azam Campus, Lahore 54590, Pakistan
2004-2007	**HEC Foreign Professor,** School of Biological Sciences, University of the Punjab, Quaid-e-Azam Campus, Lahore 54590, Pakistan
1997-2004	**Researcher**, Department of Synthetic Chemistry & Biological Chemistry, Graduate School of Engineering, Kyoto University, Kyoto, Japan
1987-1994	**Lecturer**, National Centre of Excellence in Molecular Biology, Canal Bank Road, Lahore (From 1987 to 1994)

Areas of Interest:

My current research interest includes extremophiles such as hyperthermophiles and their thermostable enzymes. I am also trying to understand some of the basic principles of life in primitive microorganisms. Apart from this I am also interested in industrially important microorganisms and their enzymes, food microbiology.

International Patent:

Nasir Ahmed, **Naeem Rashid,** Muhammad Saleem Haider, and Muhammad Akhtar. Single step liquefaction and saccharification of corn starch using an acidophilic, calcium independent and hyperthermophilic pullulanase. Patent No. US 9,340,778 B2. Date of Patent: May 17, 2016.

Book Chapter:

Qamar Bashir, **Naeem Rashid** and Muhammad Akhtar (2017) Threonine degradation in hyperthermophilic organisms. In: The Handbook of Microbial Metabolismof Amino Acids. Edited by J.P.F. D'Mello. CAB International, Oxfordshire, UK. pp. 170–178.

List of Publications in Journals (corresponding author is shown by *)**:**

Sr. #	Publication	Impact Factor	Citation (Google Scholar)
122	Muhammad Arif, Qamar Bashir, Masood Ahmad Siddiqui and Naeem Rashid* (2019) Molecular characterization of a highly efficient and thermostable phosphoribosyl anthranilate isomerase from *Geobacillus thermopakistaniensis*. Protein Expr Purif. (in press).	1.291	0
121	Muhammad Sulaiman Saeed and **Naeem Rashid*** (2019) Characterization of TK1646, a highly thermostable 3´–5´ single strand specific exonuclease from *Thermococcus kodakarensis*. Int J Biol Macromol. 140:1194-1201 https://doi.org/10.1016/j.ijbiomac.2019.08.150	4.784	0
120	Abeera Shaeer, Mehwish Aslam and **Naeem Rashid*** (2019) A highly stable manganese-catalase from *Geobacillus thermopakistaniensis*: molecular cloning and characterization. Extremophiles. https://doi.org/10.1007/s00792-019-01124-5	2.046	0
119	Hira Muzammal, Qurat ul Ain, Muhammad Sulaiman Saeed and **Naeem Rashid*** (2019) Gene cloning and characterization of Tk1281, a flap endonuclease 1 from *Thermococcus*	1.448	0

	kodakarensis. Folia Microbiolgica https://doi.org/10.1007/s12223-019-00745-9.		
118	Naseema Azim, Qurratulann Afza Gardner, **Naeem Rashid**, Muhammad Akhtar (2019) Mechanistic studies on *Pyrobaculum calidifontis* porphobilinogen synthase (5-aminolevulinic acid dehydratase). *Bioorg. Chem*. **91:**103117. https://doi.org/10.1016/j.bioorg.2019.103117.	3.926	0
117	Nisar Ahmed Shakir, Tahira Bibi, Mehwish Aslam and **Naeem Rashid*** (2019) Biochemical characterization of a highly active ADP-dependent phosphofructokinase from *Thermococcus kodakarensis*. *J. Biosci. Bioeng*. https://doi.org/10.1016/j.jbiosc.2019.06.014	2.015	0
116	**Naeem Rashid*** and Mehwish Aslam (2019) An overview of twenty-five years of research on *Thermococcus kodakarensis*, a genetically versatile model organism for archaeal research. Folia Microbiologica. https://doi.org/10.1007/s12223-019-00730-2	1.311	0
115	Iqra Aroob, Nasir Ahmad, Mehwish Aslam, Abeera Shaeer, **Naeem Rashid*** (2019) A highly active α-cyclodextrin preferring cyclomaltodextrinase from *Geobacillus thermopakistaniensis*. Carbohydr Res. 481:1–8. doi: 10.1016/j.carres.2019.06.004	2.074	0
114	Sohaib Waraich, Nasir Ahmad, Usman Hameed, Saleem Haider & **Naeem Rashid** (2019) Molecular identification and characterization of lactic acid producing bacterial strains isolated from raw and traditionally processed foods of Punjab, Pakistan. Pak. J. Zoo. 51: 1145–1153. DOI: http://dx.doi.org/10.17582/journal.pjz/2019.51.3.1145.1153	0.547	0
113	Anam Tariq, Alina Gul, Majida A. Muhammad, **Naeem Rashid*** & Masood A Siddiqui (2019) Recombinant Tk0522, a carbohydrate esterase homologue from *Thermococcus kodakarensis*, does not require a signal sequence for translocation to periplasmic space in *Escherichia coli*. Biologia 74:899–904 https://doi.org/10.2478/s11756-019-00243-w	0.696	0
112	Naveed Shahzad, Iqra Hussain, Usman Shah Gilani, Asima Tayyeb, Muhammad Amir Aslam, Muhammad Khurshid, Umair Hassan, Fareeda Tasneem, Muhammd Umer & **Naeem Rashid** (2019) Merkel cell polyomavirus DNA sequences in the	3.19	0

	blood of healthy population of Pakistan. Future Microbiology https://doi.org/10.2217/fmb-2018-0314		
111	Mehwish Akram and **Naeem Rashid** (2019) Inwardly rectifying potassium channels in Drosophila regulate the sleep/wake behaviour through PDF-neurons. Pak. J. Zoo. 51: 709-715	0.547	0
110	Shahid Mahmood Chohan, **Naeem Rashid***, Muhammad Sajed and Tadayuki Imanaka (2019) Pcal_0970, an extremely thermostable L-asparaginase from *Pyrobaculum calidifontis* with no detectable glutaminase activity. Folia Microbiologica 64: 313-320. https://doi.org/10.1007/s12223-018-0656-6.	1.311	0
109	Muhammad Arif, **Naeem Rashid***, Sumera Perveen, Qamar Bashir and Muhammad Akhtar (2019) Extremely stable indole-3-glycerol-phosphate synthase from hyperthermophilic archaeon *Pyrococcus furiosus*. Extremophiles 23: 69-77. https://doi.org/10.1007/s00792-018-1061-4.	2.046	2
108	Saadia Basheer, **Naeem Rashid***, Muhammad Sohail Akram, and Muhammad Akhtar (2019) A highly stable laccase from *Bacillus subtilis* strain R5: Gene cloning and characterization. Biosci. Biotech. Biochem. 83(3):436-445 https://doi.org/10.1080/09168451.2018.1530097	1.2	0
107	Gilani US, Memoona, Rasheed A, Shahid M, Tasneem F, Arshad MI, **Rashid N**, Shahzad N (2019) The implication of CRISPR/Cas9 genome editing technology in combating human oncoviruses. J. Med. Virol. 91:1-13. doi: 10.1002/jmv.25292.	1.935	3
106	Anjum Shehzad, Nasir Ahmad, Zaheer Hussain, Muhammad S. Haider and **Naeem Rashid*** (2018) Valorization of waste foods using pullulan hydrolase from *Thermococcus kodakarensis*. Amylase 2:39-43		0
105	Iram Aziz, Tahira Bibi, **Naeem Rashid***, Riku Aono, Haruyuki Atomi* and Muhammad Akhtar (2018) A phosphofructokinase homolog from *Pyrobaculum calidifontis* displays kinase activity towards pyrimidine nucleosides and ribose 1-phosphate. J. Bacteriol. **200:** e00284-18. **(Manuscript selected for Spotlight in J. Bacteriol.)**	3.143	2
104	Habib-ur-Rehman, Masood Ahmed Siddiqui*, Abdul Qayyum, Arifa Bano and **Naeem Rashid** (2018) Gene expression in *Escherichia coli* and purification of recombinant type II pullulanase from a hyperthermophilic archaeon *Pyrobaculum calidifontis*. Pak. J. Zoo. **50:** 1381-1386. DOI:http://dx.doi.org/10.17582/journal.pjz/2018.50.4.1381.1386	0.491	5

103	Sabah Mansoor, Muhammad Tayyab*, Amna Jawad, Bushra Munir, Sehrish Firyal, Ali Raza Awan, **Naeem Rashid** and Muhammad Wasim (2018) Refolding of misfolded inclusion bodies of recombinant α-amylase:characterization of cobalt activated thermostable α-amylase from *Geobacillus* SBS-4S. Pak. J. Zoo. **50:**1147-1155.	0.491	2
102	Shahid Mahmood Chohan and **Naeem Rashid*** (2018) Gene cloning and characterization of recombinant L-Asparaginase from *Bacillus subtilis* strain R5. Biologia 73:537–543. https://doi.org/10.2478/s11756-018-0054-1	0.759	1
101	J. Guo, A. R. Coker, S. P. Wood, J. B. Cooper*, R. M. Keegan, N. Ahmad, M. A. Muhammad, **N. Rashid** and M. Akhtar (2018) Structure and function of the type III pullulan hydrolase from *Thermococcus kodakarensis. Acta Cryst.* D**74**: 305-314.	2.114	5
100	Tahira Bibi, Musadiq Ali, **Naeem Rashid***, Majida Atta Muhammad and Muhammad Akhtar (2018) Enhancement of gene expression in *Escherichia coli* and characterization of highly stable ATP-dependent glucokinase from *Pyrobaculum calidifontis.* Extremophiles 22:247-257. https://doi.org/10.1007/s00792-017-0993-4	2.346	0
99	Fatima Ahsan, Qurratulann Afza Gardner, **Naeem Rashid**, Greg J. Towers, Muhammad Akhtar* (2018) Preventing the N-terminal processing of human interferon α-2b and its chimeric derivatives expressed in *Escherichia coli*. Bioorganic Chemistry 76:294-302. doi: 10.1016/j.bioorg.2017.11.016	3.231	3
98	Iram Aziz, **Naeem Rashid***, Raza Ashraf, Masood Ahmed Siddiqui, Tadayuki Imanaka and Muhammad Akhtar (2018) Pcal_0632, a phosphorylating glyceraldehyde-3-phosphate dehydrogenase from *Pyrobaculum calidifontis.* Extremophiles 22: 121-129. https://doi.org/10.1007/s00792-017-0982-7	2.346	0
97	J. Guo, A. R. Coker, S. P. Wood, J. B. Cooper*, S. M. Chohan, **N. Rashid** and M. Akhtar (2017) Structure and function of the thermostable L-asparaginase from *Thermococcus kodakarensis.* Acta Cryst. **D73**: 889-895. https://doi.org/10.1107/S2059798317014711.	2.114	7
96	Raza Ashraf, **Naeem Rashid***, Tamotsu Kanai, Tadayuki Imanaka and Muhammad Akhtar (2017) Pcal_1311, an alcohol dehydrogenase homologue from *Pyrobaculum calidifontis*, displays NADH-dependent high aldehyde reductase activity. Extremophiles 21(6):1101-1110. DOI: 10.1007/s00792-017-	2.346	2

	0970-y. http://rdcu.be/wEN4		
95	Sumera Perveen, **Naeem Rashid,** Xiao-Feng Tang, Tadayuki Imanaka and Anastassios C. Papageorgiou***** (2017) Anthranilate phosphoribosyltransferase from the hyperthermophilic archaeon *Thermococcus kodakarensis* shows maximum activity with zinc and forms a unique dimeric structure. FEBS Open Bio **7:** 1217-1230. doi: 10.1002/2211-5463.12264.	2.143	2
94	Munir Ahmad, Qurratul Ann Afza Gardner, **Naeem Rashid,** Muhammad Akhtar* (2017) Designing structural-motifs for the preparation of acylated proinsulin and their regiospecific conversion into insulin modified at Lys^{29}. Bioorganic Chemistry **73:** 147-153.	3.231	0
93	Raza Ashraf, Majida Atta Muhammad, **Naeem Rashid*** and Muhammad Akhtar (2017) Cloning and characterization of thermostable GroEL/GroES homologues from *Geobacillus thermopakistaniensis* and their applications in protein folding. J. Biotech. **254:** 9-16. http://dx.doi.org/10.1016/j.jbiotec.2017.05.023.	2.667	0
92	Furqan Sabir, Muhammad Tayyab*, Bushra Muneer, Abu Saeed Hashmi, Ali Raza Awan, **Naeem Rashid**, Muhammad Wasim and Sehrish Firyal (2017) Characterization of recombinant thermostable phytase from *Thermotoga naphthophila*: a step for the fulfilment of domestic requirement of phytase in Pakistan. Pak. J. Zool. **49:** 1945-1951. **DOI**: http://dx.doi.org/10.17582/journal.pjz/2017.49.6.1945.1951	0.491	7
91	Majida Atta Muhammad, Samia Falak, **Naeem Rashid***, Qurra-tul-Ann Afza Gardner, Nasir Ahmad, Tadayuki Imanaka and Muhammad Akhtar (2017) *Escherichia coli* signal peptidase recognizes and cleaves archaeal signal sequence. Biochemistry (Moscow) **82:** 821-825. DOI: 10.1134/S0006297917070070	1.421	2
90	Jingxu Guo, Wenling Zhang, Alun R. Coker, Steve P. Wood, Jonathan B. Cooper*, Shazeel Ahmad, Syed F. Ali, **Naeem Rashid** and Muhummad Akhtar (2017) Structure of the family B DNA polymerase from the hyperthermophilic archaeon *Pyrobaculum calidifontis*. Acta Cryst. **D73:** 420-427. https://doi.org/10.1107/S2059798317004090.	2.114	2
89	Saadia Basheer, **Naeem Rashid***, Raza Ashraf, Muhammad Sohail Akram, Masood Ahmed Siddiqui, Tadayuki Imanaka and Muhammad Akhtar (2017) Identification of a novel copper	2.346	7

	activated and halide tolerant laccase in *Geobacillus thermopakistaniensis*. Extremophiles **21:** 563-571. DOI: 10.1007/s00792-017-0925-3		
88	Iram Aziz, **Naeem Rashid***, Raza Ashraf, Qamar Bashir, Tadayuki Imanaka and Muhammad Akhtar (2017) Pcal_0111, a highly thermostable bifunctional fructose-1,6-bisphosphate aldolase/phosphatase from *Pyrobaculum calidifontis*. Extremophiles **21:** 513-521. DOI: 10.1007/s00792-017-0921-7	2.346	3
87	N. Mills-Davies, D. Butler, E. Norton, D. Thompson, M. Sarwar, J. Guo, R. Gill, N. Azim, A. Coker, S. P. Wood, P. T. Erskine, L. Coates, J. B. Cooper*, **N. Rashid**, M. Akhtar and P. M. Shoolingin-Jordan (2017) Structural studies of substrate and product complexes of 5-aminolaevulinic acid dehydratase from humans, *Escherichia coli* and the hyperthermophile *Pyrobaculum calidifontis*. Acta Cryst. **D73**: 9–21.	2.512	10
86	Raza Ashraf, **Naeem Rashid*,** Saadia Basheer, Iram Aziz, and Muhammad Akhtar (2017) Glutathione dependent formaldehyde dehydrogenase homologue from *Bacillus subtilis* strain R5 is a propanol preferring alcohol dehydrogenase. Biochemistry (Moscow) **82:** 13–23.	1.421	2
85	Ayesha Pervaiz, Barizah Malik*, **Naeem Rashid** (2017) Enhancing soluble gene expression of α-amylase from *Bacillus licheniformis* and purification of recombinant protein. Advances in Life Sciences **7:** 5-10. DOI: 10.5923/j.als.20170701.02	0.46	0
84	Shahid Mahmood Chohan, Muhammad Atif Nisar, **Naeem Rashid***, Ghazaleh Gharib, Qamar Bashir and Masood Ahmed Siddiqui (2017) TK1656, an L-asparaginase from *Thermococcus kodakarensis*, a novel candidate for therapeutic applications. Biologia **71:** 1315–1319.	0.759	0
83	Majida A Muhammad, Samia Falak, **Naeem Rashid***, Nasir Ahmed, Qurra-tul-Ann A Gardner, Anam Tariq and Muhammad AKHTAR (2017) Complete signal peptide of Tk1884, an α-amylase from *Thermococcus kodakarensis*, is not necessary for extracellular secretion of the enzyme by *Escherichia coli*. Amylase 1: 75-81.		1
82	Sumera Perveen, **Naeem Rashid** and Anastassios C. Papageorgiou* (2016) Crystal structure of a phosphoribosyl anthranilate isomerase from the hyperthermophilic archaeon *Thermococcus kodakaraensis*. Acta Cryst. **F72:** 804–812.	0.647	2

81	Saba Riaz*, Muhammad Faisal Bashir, Saleem Haider and **Naeem Rahid** (2016) Association of genotypes with viral load and biochemical markers in HCV-infected Sindhi patients. Braz. J. Microbiol. **47:** 980–986.	0.592	9
80	Tahira Bibi, Sumera Perveen, Iram Aziz, Qamar Bashir, **Naeem Rashid***, Tadayuki Imanaka, Muhammad Akhtar (2016) Pcal_1127, a highly stable and efficient ribose-5-phosphate pyrophosphokinase from *Pyrobaculum calidifontis*. Extremophiles **20:** 821–830. DOI:10.1007/s00792-016-0869-z	2.346	5
79	Sumaira Mehboob, Nasir Ahmad, **Naeem Rashid***, Tadayuki Imanaka, Muhammad Akhtar (2016) Pcal_0768, a hyperactive 4-α-glucanotransferase from *Pyrobacculum calidifontis*. Extremophiles **20:** 559–566.	2.346	0
78	Shahzada Nadeem Abbas, Kenneth Hun Mok, **Naeem Rashid**, Yongjing Xie, Manuel Ruether, John O 'Brien, and Muhammad Akhtar* (2016) NMR studies on mechanism of isomerisation of fructose 6-phosphate to glucose 6-phosphate catalysed by phosphoglucose isomerase from *Thermococcus kodakarensis.* Bioorganic Chemistry. **66:** 41–45.	2.152	3
77	Ayesha Mazhar, Farrukh Jamil, Qamar Bashir, Munawar Saleem Ahmad, Misbah Masood, Imrana Tanvir, **Naeem Rashid**, Abdul Waheed, Muhammad Naveed Afzal, Muhammad Akram Tariq* (2016) Genetic variants in FGFR2 and TNRC9 genes are associated with breast cancer risk in Pakistani women. Mol. Med. Rep. **14:** 3443–3451. DOI: 10.3892/mmr.2016.5633	1.5	9
76	Ghazaleh Gharib, **Naeem Rashid***, Qamar Bashir, Qurra-tul-Ann Afza Gardner, Muhammad Akhtar and Tadayuki Imanaka (2016) Pcal_1699, an extremely thermostable malate dehydrogenase from hyperthermophilic archaeon *Pyrobaculum calidifontis.* Extremophiles. **20:** 57–67. 10.1007/s00792-015-0797-3.	2.346	10
75	Amina Arif, **Naeem Rashid***, Farheen Aslam, Nasir Mahmood and Muhammad Akhtar (2016) Biased expression, under the control of single promoter, of human interferon α-2b and *Escherichia coli* methionine amino peptidase genes in *E. coli*, irrespective of their distance from the promoter. Pak. J. Pharm.	0.682	2

	Sci. **29:** 375–379.		
74	Amina Arif, Qura-tul-Ann Afza Gardner, **Naeem Rashid*** and Muhammad Akhtar (2015) Production of human interferon alpha-2b in *Escherichia coli* and removal of N-terminal methionine utilizing archaeal methionine aminopeptidase. Biologia **70:** 982–987.	0.827	4
73	Nasir Ahmad, Sumaira Mehboob and **Naeem Rashid*** (2015) Starch-processing enzymes – emphasis on thermostable 4-α-glucanotransferases. Biologia **70:** 709–725.	0.827	4
72	Muhammad Tayyab, **Naeem Rashid***, Clement Angkawidjaja, Shigenori Kanaya, Muhammad Wasim, Ali Raza Awan, Sehrish Firyal, Tahir Yaqub and Masood Ahmed Siddiqui (2015) Hydrophobic interactions induced activation of a thermo-alkalophilic lipase from *Geobacillus* SBS-4S by molecular dynamics simulations. J. Chem. Soci. Pak. **37:** 1030–1032.	0.612	0
71	Masood Ahmed Siddiqui*, Habib-ur-Rehman and **Naeem Rashid** (2014) Gene Cloning and Characterization of a Type II pullulanase hydrolase from a hyperthermophilic archaeon, *Pyrobaculum calidifontis*. Pak. J. Zool. **46:**1077–1084.	0.309	5
70	Amina Arif, **Naeem Rashid***, Nasir Mahmood and Muhammad Akhtar (2014) Expression of human interferon α-2b and *Escherichia coli* methionine aminopeptidase genes in a single host using two incompatible plasmids. Pak. J. Zool. **46:** 983–987.	0.309	0
69	Masood Ahmed Siddiqui, **Naeem Rashid**, Saravanaraj Ayyampalayam, and William Whitman* (2014) Draft genome sequence of *Geobacillus thermopakistaniensis* strain MAS1. Genome Announc. **2**(3): e00559-14. pii:e00559-14. doi:10.1128/genomeA.00559-14.	1.4	10
68	Fatima Ahsan, Amina Arif, Nasir Mahmood, Qurra-tul Ann Afza Gardner, **Naeem Rashid** and Muhammad Akhtar* (2014) Characterization and bioassay of post-translationally modified interferon α-2b expressed in *Escherichia coli*. J. Biotechnol. **184:** 11–16.	3.183	12
67	Anmbreen Jamroze, Giuseppe Perugino, Anna Valenti, **Naeem Rashid,** Mosè Rossi, Muhammad Akhtar and Maria Ciaramella*	4.773	13

	(2014) The reverse gyrase form *Pyrobaculum calidifontis*, a novel extremely thermophilic DNA topoisomerase endowed with DNA unwinding and annealing activities. *J. Biol. Chem*. **289:** 3231–3243. doi: 10.1074/jbc.M113.517649.		
66	Shahzada Nadeem Abbas, **Naeem Rashid***, Iram Aziz and Muhammad Akhtar (2013) Molecular cloning and characterization of TK1111, a cupin-type phosphoglucose isomerase from *Thermococcus kodakarensis*. *Turk. J. Biochem*. **38:** 438–444.	0.23	1
65	Nasir Ahmad, **Naeem Rashid***, Saleem Haider, Mehwish Akram and Muhammad Akhtar (2014) A novel maltotriose hydrolyzing thermo-acidophilic pullulan hydrolase type III from *Thermococcus kodakarensis*. Appl. Environ. Microbiol. 80 1108-1115.	3.678	23
64	Farheen Aslam, Qurra-tul Ann Afza Gardner, Hina Zain, Muhammad Shahid Nadeem, Muhammad Ali, **Naeem Rashid** and Muhammad Akhtar* (2013) Studies on the expression and processing of human proinsulin derivatives encoded by different DNA constructs. Biochim. Biophys. Acta **1834:** 2116–2123.	3.635	8
63	Faisal Bashir, Saleem Haider, **Naeem Rashid** and Saba Riaz* (2013) Association of biochemical markers, hepatitis C virus and diabetes mellitus in Pakistani males. *Trop. J. Pharm. Res.* **12:** 845-850.	0.82	7
62	Faisal Bashir, Saleem Haider, **Naeem Rashid** and Saba Riaz* (2013) Core gene expression and association of genotypes with viral load in HCV infected patients of Punjab Pakistan. *Trop. J. Pharm. Res*. **12:** 335-341.	0.82	5
61	Nouman Rasool, **Naeem Rashid***, Qamar Bashir and Masood Ahmed Siddiqui (2013) Proteolytic inventory of *Thermococcus kodakaraensis. Afr. J. Microbiol. Res.* **7:** 3139-3150.	0.533	2
60	Barizah Malik, **Naeem Rashid***, Nasir Ahmad and Muhammad Akhtar (2013) *Escherichia coli* signal peptidase recognizes and cleaves the signal sequence of α-amylase originated from *Bacillus licheniformis. Biochemistry (Moscow)* **78:** 958-962.	1.149	5

59	Masood Ahmed Siddiqui*, **Naeem Rashid** and Habib-ur-Rehman (2013) Truncated Type II isopentenyl diphosphate isomerase from hyperthermophilic Archaeon *Thermococcus kodakaraensis* implicates the necessity of its N-terminal amino acid residues in protein thermostability. Pak. J. Pharm. Sci. **26:** 733-740.	1.103	0
58	Shahid Mahmood Chohan and **Naeem Rashid*** (2013) TK1656, a thermostable L-asparaginase from *Thermococcus kodakaraensis*, exhibiting highest ever reported enzyme activity. *J. Biosci. Bioeng.* 116: 438-443.	1.749	44
57	Muhammad Tayyab, **Naeem Rashid***, Clement Angkawidjaja, Shigenori Kanaya and Muhammd Akhtar (2013) Crystallization and X-ray diffraction analysis of thermo-alkalophilic lipase from *Geobacillus* SBS-4S. *Acta Cryst*. **F69:** 355-357.	0.51	1
56	M. Atif Nisar, **Naeem Rashid***, Qamar Bashir, Qurat-ul-Ann Afza Gardner, M. Hassan Shafiq, and Muhammad Akhtar (2013) TK1299, a highly thermostable NAD(P)H oxidase from *Thermococcus kodakaraensis* exhibiting higher enzymatic activity with NADPH. *J. Biosci. Bioeng.***116:** 39-44.	1.749	6
55	Ikram Ul Haq*, Mahmood Ali Khan, Bushra Muneer, Zahid Hussain, Sumra Afzal, Sana Majeed, **Naeem Rashid,** M. Mohsin Javed and Ishtiaq Ahmad (2012) Cloning, characterization and molecular docking of a highly thermostable β-1,4-glucosidase from *Thermotoga petrophila*. *Biotechnol. Lett*., **34:** 1703-1709.	1.636	21
54	Kausar Malik*, Khalid Pervaiz Lone, Amjad Farooq, Asmat Ullah, Shagufta Andleeb, Muhammad Ali Talpur, **Naeem Rashid**, Nakhshab Choudhary and Khadija Awan (2012) Rapeseed meal feeding effects on total proteins and lipids of Japanese Quail. *Afr. J. Microbiol. Res.***6:** 5582-5586	0.533	0
53	Muhammad Faisal Bashir, Muhammad Saleem Haider, **Naeem Rashid** and Saba Riaz* (2012) Distribution of hepatitis C virus (HCV) genotypes in different remote cities of Pakistan. *Afr. J. Microbiol. Res.***6:** 4747-4751.	0.533	7
52	Khalid Mahmood, Mateen Izhar, Nakhshab Choudhry, Ghulam Mujtaba and **Naeem Rashid*** (2012) Emergence of Extended-	0.533	7

	spectrum β-lactamase producing *Salmonella typhi* in Pakistan. *Afr. J. Microbiol. Res.***6:** 793-797.		
51	Nakhshab Choudhry, Saeed Ahmed Nagra, Tahir Shafi, Ghulam Mujtaba, Muhammad Abiodullah and **Naeem Rashid*** (2012) Lack of association of insertion/deletion polymorphism in angiotensin converting enzyme gene with nephropathy in type 2 diabetic patients in Punjabi population of Pakistan. *Afr. J. Biotech*. **11:**1484-1489.	0.573	3
50	**Naeem Rashid*,** Saira Hameed, Masood Ahmed Siddiqui and Ikram-ul-Haq (2011) Gene cloning and characterization of NADH oxidase from *Thermococcus kodakarensis*. *Afr. J. Biotech*. **10:** 17916-17924.	0.573	3
49	Muhammad Shahid Nadeem, **Naeem Rashid*,** Muzaffar Iqbal, Qurra-tul-Ann Afza Gardner and Muhammad Akhtar (2011) First cloning and characterization of aspartate aminotransferase from river buffalo (*Bubalus bubalis*). *Biologia***66:** 1202-1210.	0.617	2
48	Syed Farhat Ali, **Naeem Rashid*,** Tadayuki Imanaka and Mohammad Akhtar (2011) Family B DNA polymerase from a hyperthermophilic archaeon *Pyrobaculum calidifontis*: cloning, characterization and PCR application. *J. Biosci. Bioeng.***112:** 118-123.	1.749	4
47	**Naeem Rashid*,** Saira Akmal, and Muhammad Akhtar (2011) Gene Cloning and Characterization of TK1392, an NADH oxidase from *Thermococcus kodakaraensis* with a distinct C-terminal domain. *Turk. J. Biochem*. **36:** 107-115.	0.274	3
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Total Citations: **1641**
Total Impact Factor: **222.513**
First/Corresponding author Publications: **73**

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1) Muhammad Saleem Haider, Muhammad Tahir, Ahlam Saeed, Azad Hussain Shah, Naeem Rashid, Muhammad Arshad Javed and Javed Iqbal. Vinca minor: another host of a tomato infecting begomovirus in Pakistan. African Crop Science Conference Proceedings, **8:** 905-907 (2007).

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1)AB437282. *Bubalus bubalis* ast1 mRNA for cytosolic aspartate aminotransferase, complete cds gi|219567007|dbj|AB437282.1|[219567007]

2)AB234871. *Bubalus bubalis* bpi mRNA for proinsulin, partial cds gi|89331177|dbj|AB234871.1|[89331177]

3)FM992673. *Bacillus subtilis* csn gene for chitosanase, strain R5 gi|222112963|emb|FM992673.1|[222112963]

4)AM292303. Pedilanthus leaf curl virus-Pedilanthus [Pakistan:Multan:2004] partial CP gene for coat protein gi|219938436|emb|AM292303.1|[219938436]

5)AB306521. *Geobacillus* sp. sbs4s2 gene for 16S rRNA gi|161408108|dbj| AB306521.1|[161408108]

6)AB306520. *Geobacillus* sp. sbs4L gene for 16S rRNA gi|161408107|dbj|AB306520.1| [161408107]

7)AB306519. *Geobacillus* sp. sbs4s gene for 16S rRNA gi|161408106|dbj|AB306519.1| [161408106]

8)AB306518. *Geobacillus* sp. sbs3 gene for 16S rRNA gi|161408105|dbj| AB306518.1| [161408105]

9)AB218809. *Bacillus* sp. CMBL-Pb14 gene for 16S rRNA, partial sequence, isolate:CMBL-Pb14 gi|83627338|dbj|AB218809.1|[83627338]

10)AB218808. *Bacillus* sp. CMBL-Pb13 gene for 16S rRNA, partial sequence, isolate:CMBL-Pb13 gi|83627337|dbj|AB218808.1|[83627337]

11)AB218807. *Bacillus subtilis* gene for 16S rRNA, partial sequence, isolate:CMBL-Pb12 gi|83627336|dbj|AB218807.1|[83627336]

12)AB218806. *Bacillus* sp. CMBL-Pb11 gene for 16S rRNA, partial sequence, isolate:CMBL-Pb11 gi|83627335|dbj|AB218806.1|[83627335]

13)AB218805. *Bacillus subtilis* gene for 16S rRNA, partial sequence, isolate:CMBL-Pb10 gi|83627334|dbj|AB218805.1|[83627334]

14)AB218804. *Bacillus subtilis* gene for 16S rRNA, partial sequence, isolate:CMBL-Pb9 gi|83627333|dbj|AB218804.1|[83627333]

15) D83176. *Thermococcus kodakarensis* KOD1 Pk-rec gene, complete cds gi|6009934|dbj|D83176.2|[6009934]

16) AB257199. *Bacillus subtilis* gene for 16S rRNA, strain:R5 gi|92109227|dbj|AB257199.1|[92109227]

17) AB126242. *Thermococcus kodakaraensis* Tko1797 gene for phosphosugar mutase, complete cds gi|51870682|dbj|AB126242.1|[51870682]

18)AB126241. *Thermococcus kodakaraensis* Tko1621 gene for phosphoglucomutase, complete cds gi|51870680|dbj|AB126241.1|[51870680]

19) AB126240. Thermococcus kodakaraensis Tko1062 gene for phosphosugar mutase, complete cds gi|51870678|dbj|AB126240.1|[51870678]

20)AB126239. *Thermococcus kodakaraensis* Tko0866 gene for phosphopentomutase, complete cds gi|48958320|dbj|AB126239.1|[48958320]

21) AB092961. *Thermococcus kodakaraensisdeoC* gene for 2-deoxyribose 5-phosphate aldolase, complete cds gi|29603485|dbj|AB092961.1|[29603485]

22) AB081839. *Thermococcus kodakaraensis* gene for hypothetical protein, complete cds gi|22335734|dbj|AB081839.1|[22335734]

23) AB072372. *Thermococcus kodakaraensisTk-cgt* gene for cyclodextrin glucanotransferase, complete cds gi|17298172|dbj|AB072372.1|[17298172]

24) AB063391. *Pseudomonas* sp. KB700A KB-lip gene for lipase, complete cds gi|15553086|dbj|AB063391.1|[15553086]

25) D38650. *Thermococcus kodakaraensis* genes for 16S rRNA, 23S rRNA, complete and partial sequences gi|6683459|dbj|D38650.2|PYWKOD1[6683459]

26) AB024413. *Pseudomonas* sp. KB700A gene for 16S rRNA, complete sequence gi|5042387|dbj|AB024413.1|[5042387]

27) AB024412. *Arthrobacter* sp. SN16A gene for 16S rRNA, complete sequence gi|5033836|dbj|AB024412.1|[5033836]

28) D78364. *Pyrococcus* sp. DNA for ribose phosphate pyrophosphokinase, complete cds gi|2760288|dbj|D78364.1|[2760288]

29) D50018. *Pyrococcus* sp. Pk-tbp gene for PkTBP (TATA binding protein), complete cds gi|1507683|dbj|D50018.1|PYWPKTBP[1507683]

PhD Theses Supervised:

1) Tryptophan biosynthesis pathway in hyperthermophilic archaeon, *Thermococcus kodakarensis* (Sumera Perveen October 8, 2018)
2) Comparative Studies on Recombinant Laccases of Thermophilic (*Geobacillus* SBS-4S) and Mesophilic (*Bacillus* strain R5) origins (Saadia Basheer January 22, 2018)
3) Comparative studies on Alcohol dehydrogenases from mesophilic (*Bacillus subtilis* R5) and hyperthermophilic (*Pyrobaculum calidifontis*) origins (Raza Asharf

September 28, 2017)

4) Cloning and characterization of glyceraldehyde-3-phosphate dehydrogenase and fructose 1,6-bisphosphatase from hyperthermophilic archaeon *Pyrobaculum calidifontis* (Iram Aziz September 22, 2017)
5) Thermostable kinases from *Pyrobaculum calidifontis*: cloning and characterization (Tahira Bibi September 13, 2017)
6) Molecular cloning and characterization of two clinically important enzymes, malate dehydrogenase and aspartate aminotransferase, of thermophilic and hyperthermophilic origins (Ghazaleh Gharib 3rd September, 2016).
7) Glycosyl hydrolases from hyperthermophilic archaeon *Pyrobaculum calidifontis*: cloning and characterization (Sumaira Mehboob 1st March, 2016)
8) Optimization of Conditions for the Folding and Bioprocessing of Different Derivatives of Human Insulin (Munir Ahmad 31 Dec 2015) SBS Punjab University
9) Studies on L-asparaginases from mesophilic and thermophilic microorganisms (Shahid Mahmood Chohan 2015). Punjab Forensic Agency, Lahore.
10) Heme biosynthetic pathway in hyperthermophilic archaea (Naseema Azim 2014). Post Doctorate Fellow, SBS, Punjab University, Lahore.
11) Studies on the engineering of human interferon α2-b derivatives: chimera and conjugate (Fatima Ahsan 2014). Post Doctorate Fellow, SBS, Punjab University, Lahore.
12) Studies on reverse gyrase from hyperthermophilic archaeon Pyrobaculum calidifontis (Anmbreen Jamroze 2014). Post Doctorate Fellow, LUMS, Lahore.
13) Studies on the preparation of interferon α-2b and removal of its N-terminal methionine using methionine aminopeptidases (Amina Arif 2014). Assistant Professor, University of Central Punjab, Lahore.
14) Nuclear magnetic resonance studies on mechanism and stereochemistry of the reaction catalysed by phosphoglucose isomerase from *Thermococcus kodakaraensis* (Shahzada Nadeem Abbas 2014). Assistant Professor, Garrison University, Lahore.
15) Studies on Hepatitis C virus genes encoding structural and non-structural proteins from Pakistani isolates. (Faisal Bashir 2014).
16) **Angiotensin-I converting enzyme gene insertion/deletion polymorphism and its association with albuminuria in type 2 diabetic patients. (Nakhshab Chaudhry 2013)**
    Current position: Additional Registrar, King Edwards Medical University, Lahore

17) **Molecular characterization of virus(es) infecting hollyhock (Alcea rosea L.) samples exhibiting different symptoms. (Muhammad Zia-ur-Rehman 2012)**
    Current position: Postdoc Fellow, Institute of Agricultural Sciences, University of the Punjab, Lahore

18) **Amylolytic enzyme(s) from hyperthermophilic archaea: cloning and characterization. (Nasir Ahmad 2012)**
    Current position: Assistant Professor, Institute of Agricultural Sciences, University of the Punjab, Lahore

19) **Engineering of modified derivatives of proinsulin for the production of human insulin. (Hina Zain 2012)**
Current position: Assistant Professor, Lahore College for Women University, Lahore

20) **Cloning, expression and physico-chemical analysis of proinsulin and its derivatives. (Farheen Aslam 2012)**
Current position: Assistant Professor, Lahore College for Women University, Lahore

21) **Mechanistic and stereochemical studies on 2-amino-3-ketobutyrate CoA ligase and related enzymes. (Farrukh Jamil 2011)**
Current position: Postdoc Fellow, University of Sains, Malaysia

22) **Hydrolytic enzyme(s) from newly isolated thermophilic strain from Pakistan (Muhammad Tayyab, 2011)**
Current Position: Assistant Professor, University of Veterinary and Animal Sciences, Lahore

23) Study of DNA polymerase from a hyperthermophilic archaeon *Pyrobaculum calidifontis* (Syed Farhat Ali, 2011)
Current position: Assistant Professor, FC College University, Lahore

24) Characterization of thermostable proteases from *Thermococcus kodakaraensis* (Nauman Rasool, 2010)
Current position: Forensic Scientist, Punjab Forensic Science Agency, Lahore

25) Cloning and characterization of hydrolytic enzymes from bacterial strain R5. (Amir Jalal, 2010)
Current position: Assistant Professor, Superior University, Lahore

26) Cloning, expression and mutational analysis of human interferon α-2 gene and isolation of antiviral gene sequence. (Nasir Mahmood, 2010)
Current position: Assistant Professor, University of Health Sciences, Lahore

27) Molecular Biological studies on Buffalo (*Bubalus bubalis*) proinsulin and their application in the preparation of native and modified hormone derivatives (Hooriya Younas, 2009)
Current position: Assistant Professor, Kinnaird College for Women, Lahore

28) Studies on the production of recombinant human insulin and its precursors. (Qurat-ul-Ain Afza Gardner, 2009)
Current position: Assistant Professor, School of Biological Sciences, University of the Punjab

M. Phil Theses Supervised:

1) Molecular cloning, production and optimization of recombinant phytases from mesophilic and thermophilic sources (Rabia Mukhtar 2018)
2) Cloning and characterization of α-amylase from *Anoxibacillus* (Rabia Rafique 2018)
3) Molecular cloning and production, in Escherichia coli, of copper oxidase from *Geobacillus thermopakistaniensis* with modified signal sequence (Maryam Shakeel 2017)
4) Molecular cloning and characterization of TK0522, a probable carbohydrate esterase from hyperthermophilic archaeon *Thermococcus kodakarensis* (Aleena Gul 2016)
5) Gene cloning, expression in *Escherichia coli* and characterization of TK1401, a probable carboxylesterase/lipase from hyperthermophilic archaeon *Thermococcus kodakarensis* (Tooba Zahid 2016)
6) Gene cloning and characterization of TK1884, an α–amylase from *Thermococcus kodakarensis* (Samia Falak 2016)
7) Gene cloning, with and without signal sequence, expression in *Escherichia coli* and characterization of a thermostable pullulanase from *Thermococcus kodakarensis* (Majida Atta Muhammad 2016)
8) Gene cloning, with and without signal sequence, expression in *Escherichia coli* and characterization of pullulanase from *Pyrobaculum calidifontis* (Ayesha Pervez 2016)
9) Gene cloning and expression, in *Escherichia coli*, of a hexokinase/glucokinase homologue from hyperthermophilic archaeon *Pyrobaculum calidifontis* (Musadiq Ali 2015)
10) Cloning and expression of α-amylase from *Bacillus licheniformis*, with and without signal sequence, and characterization of the gene product. (Barizah Malik 2012)

11) Characterization of thermostable pullulanase from *Thermococcus kodakaraensis*. (Mehwish Akram 2012)

12) Gene cloning and expression, in *Escherichia coli*, of tryptophan synthase α- and β-subunit from hyperthermophilc archaeon *Pyrobaculum caladifontis*. (Sumera Perveen 2012)

13) Gene cloning and characterization of a novel NAD(P)H oxidase from *Thermococcus kodakaraensis*. (Muhammad Hassan Shafiq 2012)

14) Comparative studies on NADH oxidases from hyperthermophilic archaeon *Thermoccoccus kodakarensis*. (Muhammad Atif Nisar 2011)

15) Characterization of 4-α-glucanotransferase from *Pyrobaculum caladifontis*. (Aslam Shehzad 2010)

16) Cloning and characterization of flap-endonuclease from *Thermococcus kodakaraensis.* (Qurat-ul-Ain 2009)

17) NADH Oxidase from *Thermococcuskodakaraensis.*(Saira Hameed 2009)

18) Cloning and characterization of NADH oxidase from hyperthermophilic archaeon *Thermococcus kodakaraensis.* (Saira Akmal 2008)

19) Gene cloning, expression and purification of thermostable NADH oxidase. (Fareeha Tasleem 2008)

20) Cloning and characterization of lipase from *Bacillus subtilis* strain R5. (Mariam Zameer 2008)

21) Cloning and characterization of α–amylase from *Bacillus licheniformis*. (Alia Farooq 2007)

22) Purification and characterization of α–amylase from *Bacillus licheniformis.*(Farrah Naz 2007)

Competitive Research Project Grants:

Sr. # (as PI)	**Projects Title**	**Amount (Pak Rs.)**	**Sponsoring Agency**
1)	Characterization of thermostable DNA ligase	1,000,000/-	HEC, Pakistan
2)	Cloning and characterization of a thermostable DNA polymerase	3,046,470/-	HEC, Pakistan
3)	Production and characterization of recombinant laccase from locally isolated thermophillic *Geobacillus* strain SBS-4S	1,673,480/=	PSF, Pakistan
4)	Discovering the missing phosphofructokinase in hyperthermophilic archaeon *Pyrobacullum caladifontis*	6,824,100/-	HEC, Pakistan
(as Co-PI)			
1)	Cloning, sequencing, and expression of gene and biochemical characterization	3,261,635/-	HEC, Pakistan

	of starch hydrolyzing enzyme pullulanase from hyperthermophilic archaeon *Pyrobaculum calidifontis*		
2)	Process scale up and optimization for synthesis of thermostable industrial enzymes (TDF 02-069)	14,000,000/-	HEC Pakistan (June 2018)
3)	Characterization of immunogenic regions of Dengue Virus for potential vaccine (7136/Punjab NRPU/R&D/HEC/2017)	6,179,468/-	HEC Pakistan (July 2018)
4)	Production and characterization of recombinant DNA ligase from *Pyrobaculum calidifontis* (21-2087/SRGP/HEC/ 2018)	490,000/-	HEC Pakistan
5)	Nasir Ahmad (NRPU No.8527)		
6)	Salma Mukhtar		