Prof. Naeem Rashid, PhD
School of Biological Sciences, University of the Punjab,
Quaid-e-Azam Campus, Lahore 54590, Pakistan
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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 (Equivalence # 8-50/HEC/A&A/2010/7700)
1997-2004	Post-Doctorate, Kyoto University, Kyoto, Japan

Positions Held

Present Position	**Visiting Professor,** School of Biological Sciences, University of the Punjab, Quaid-e-Azam Campus, Lahore 54590, Pakistan
2016-2022	**Director General**, School of Biological Sciences, University of the Punjab, Quaid-e-Azam Campus, Lahore 54590, Pakistan
2007-2022	**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.

Editorship/Advisory Board:

1) Biologia (Published by Springer)
https://www.springer.com/journal/11756/editors
2) Amylase (Published by degruyter)
https://www.degruyter.com/journal/key/amylase/html?lang=en

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 Chapters:

1) Muhammad Sajed, Sabeel un Naeem and **Naeem Rashid*** (2022) L-Asparaginases from hyperthermophilic archaea and their applications. In: Microbial Extremozymes, Edited by Mohammed Kuddus, Academic Press. pp 177–184. doi.org/10.1016/B978-0-12-822945-3.00022-1.
2) Mehwish Aslam and **Naeem Rashid*** (2022) Bioenergy production in extremophiles. In: Microbial Extremozymes, Edited by Mohammed Kuddus, Academic Press. pp 231–246. doi.org/10.1016/B978-0-12-822945-3.00014-2.
3) Salma Mukhtar, **Naeem Rashid,** Muhammad Farhan Ul Haque and Kauser Abdulla Malik (2022) Metagenomic approach for the isolation of novel extremophiles. In: Microbial Extremozymes, Edited by Mohammed Kuddus, Academic Press. pp 55–

66. doi.org/10.1016/B978-0-12-822945-3.00010-5.

4) Muhammad Sohail Akram, **Naeem Rashid**, and Saadia Basheer (2021) Physiological and molecular basis of plants tolerance to linear halogenated hydrocarbons. In: Handbook of Bioremediation, Edited by Mirza Hasanuzzaman and Majeti Narasimha Vara Prasad, Academic Press. pp 591–602. https://doi.org/10.1016/B978-0-12-819382-2.00037-5
5) Qamar Bashir and **Naeem Rashid*** (2020) NMR as a tool for exploring protein interactions and dynamics. In: Applications of NMR Spectroscopy. Edited by A. Rahman. Bentham Science, Sharjah, United Arab Emirates. pp 121–140. DOI: 10.2174/9789811439971120080008
6) Qamar Bashir, **Naeem Rashid*** and Muhammad Akhtar (2017) Threonine degradation in hyperthermophilic organisms. In: The Handbook of Microbial Metabolism of Amino Acids. Edited by J.P.F. D'Mello. CAB International, Oxfordshire, UK. pp. 170–178. DOI : 10.1079/9781780647234.0170.

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

Sr. #	Publication	Citation (Google Scholar)	Impact Factor (2022)	H-Index of the Journal	HJRS Category
170	Ayesha Sania, Muhammad Sajed, **Naeem Rashid*** (2024) Looking into the thermostable archaeal L-asparaginases. Biologia (submitted).		1.653	45	X (Clay)
169	Sabah Mansoor, Sehrish Firyal, Ali Raza Awan, **Naeem Rashid**, Muhammad Azam, Muhammad Wasim, Shagufta Saeed, Muhammad Tayyab (2024) Nasir Ahmad, Abu Saeed Hashmi, Biological evaluation of locally characterized recombinant thermostable α-amylase in poultry birds. Xi'an Shiyou Daxue Xuebao (Ziran Kexue Ban)/Journal of Xi'an Shiyou University, Natural Sciences Edition. (accepted)		0.197	16	X (Null)
168	Arshia Nazir, Muhammad Irfan, Naeem Rashid, Muhammad Sajjad (2024) Optimized production, purification and biochemical characterization of a novel glycerophosphodiesterase from a hyperthermophilic archaeon *Pyrococcus abyssi*. Process Biochem. (submitted).		3.7	174	W (Bronze)

167	Ayesha Sania, Majida Atta Muhammad, Muhammad Sajed, Nasir Ahmad, Mehwish Aslam, Xiao-Feng Tang and **Naeem Rashid*** (2024) Engineering Tk1656, a highly active L-asparaginase from *Thermococcus kodakarensis*, for enhanced activity and stability. Int. J. Biol. Macromol. (submitted)		7.7	166	W (Gold)
166	Abeera Shaeer, Iqra Aroob, Mehwish Aslam, Naseema Azim, and **Naeem Rashid*** (2024) Investigating recombinant manganese-catalases from *Geobacillus thermopakistaniensis* for sustainable and eco-friendly textile processing. Int J Environ Sci Technol. (Submitted)		3.519	93	W (Bronze)
165	Hafiz Muhammad Khalid, Najam us Sahar Sadaf Zaidi, **Naeem Rashid**, Muhammad Tahir (2024) Development of an immunodiagnostic assay for the detection of Sugarcane mosaic virus Turk J Biol. (accepted)		0.443	47	X (Clay)
164	Amina Maqsood, Nisar Ahmed Shakir, Mehwish Aslam, Moazur Rahman, **Naeem Rashid*** (2024) Structural and Functional investigations of Pcal_0606, a bifunctional phosphoglucose/ phosphomannose isomerase from *Pyrobaculum calidifontis*. Int. J. Biol. Macromol. https://doi.org/10.1016/j.ijbiomac.2024.135127		7.7	166	W (Gold)
163	Ayesha Sania, Majida Atta Muhammad, Muhammad Sajed, Naseema Azim, Nasir Ahmad, Mehwish Aslam and **Naeem Rashid*** (2024) Structural and functional analyses of an L-asparaginase from *Geobacillus thermopakistaniensis*. Int. J. Biol. Macromol. **263:** 130438. doi.org/10.1016/j.ijbiomac.2024.130438.		8.2	166	W (Gold)
162	Arshia Nazir, Mohsin Shad, **Naeem Rashid,** Naseema Azim, Muhammad Sajjad (2024) Recombinant production and characterization of a metal ion-independent Lysophospholipase from a hyperthermophilic archaeon *Pyrococcus abyssi* DSM25543. Int J Biol Macromol. 129345. doi: 10.1016/j.ijbiomac.2024.129345.		8.025	166	W (Gold)

161	Hafiz Muhammad Khalid, Najam us Sahar Sadaf Zaidi, Naeem Rashid, Muhammad Tahir * (2024) Development of polyclonal antibodies against the recombinant protein of Barley yellow dwarf virus. Asian J Agric & Biol. 2024(1): 2023127. DOI: 10.35495/ajab.2023.127		0.28	13	X (Null)
160	Iqra Aroob, Nasir Ahmad, Mehwish Aslam, Abeera Shaeer, and **Naeem Rashid*** (2024) Ethylenediaminetetraacetic acid enhances structural stability and thermotolerance of recombinant cyclomaltodextrinase from *Geobacillus thermopakistaniensis* at higher temperatures. Biologia **79:** 191–198. doi.org/10.1007/s11756-023-01542-z		1.653	45	X (Clay)
159	Qamar Abbas, Majida Atta Muhammad, Nisar Ahmad Shakir, Mehwish Aslam, and **Naeem Rashid*** (2023) Molecular cloning and characterization of Pcal_0039, an ATP-/NAD^+-independent DNA ligase from hyperthermophilic archaeon *Pyrobaculum calidifontis*. Int. J. Biol. Macromol. **253:** 126711 doi.org/10.1016/j.ijbiomac.2023.126711		8.025	166	W (Gold)
158	Majida Atta Muhammad, Nasir Ahmad, Mohsina Akhter, **Naeem Rashid*** (2023) Structural and functional analyses of Pcal_0917, an α-glucosidase from hyperthermophilic archaeon *Pyrobaculum calidifontis*. Int. J. Biol. Macromol. **244:**125446. doi.org/10.1016/j.ijbiomac.2023.125446.		8.025	166	W (Gold)
157	Shazeel Ahmad, Syed Farhat Ali, Saima Iftikhar, and **Naeem Rashid*** (2023) Engineering a DNA polymerase from *Pyrobaculum calidifontis* for improved activity, processivity and extension rate. Int. J. Biol. Macromol. **233:** 123545. doi: 10.1016/j.ijbiomac.2023.123545.		8.025	166	W (Gold)
156	Sumaira Mehboob, Tuba Ahmad, Ramzan Ali, Nasir Ahmad, Hamama Islam Butt, Shahzad Bashir, **Naeem Rashid** (2023) Molecular cloning and production of recombinant Pcal_0672, a family GH57 glycoside hydrolase from *Pyrobaculum calidifontis*. Biologia https://doi.org/10.1007/s11756-023-01338-1		1.653	45	X (Clay)

155	Iqra Aroob, Asifa Maqbool, Nasir Ahmad, Mehwish Aslam, Abeera Shaeer and **Naeem Rashid*** (2022) Pcal_0976, a pullulanase homologue from *Pyrobaculum calidifontis*, displays a glycoside hydrolase activity but no pullulanase activity. Biologia https://doi.org/10.1007/s11756-022-01309-y.	0	1.653	45	X (Clay)
154	Nisar Ahmed Shakir[+], Mehwish Aslam[+], Tahira Bibi, Samia Falak, **Naeem Rashid*** (2022) Structural and functional analyses of a highly thermoactive ATP-dependent hexokinase from *Pyrobaculum calidifontis*. Carbohydr Res. doi.org/10.1016/j.carres.2022.108711	0	2.975	143	X (Honorable Mention)
153	Syed Farhat Ali, Kashif Maseh, Shazeel Ahmad, and **Naeem Rashid** (2022) Cost-effective, high-yield production of *Pyrobaculum calidifontis* DNA polymerase for PCR application. Prep. Biochem. Biotechnol. https://doi.org/10.1080/10826068.2022.2137731	0	3.14	35	X (Null)
152	Muhammad Sajed, Samia Falak, Majida Atta Muhammad, Nasir Ahmad, **Naeem Rashid*** (2022) A plant-type L-asparaginase from *Pyrobaculum calidifontis* undergoes temperature dependent autocleavage. Biologia. DOI:10.1007/s11756-022-01215-3	0	1.653	45	X (Clay)
151	Syed Nasim Abbas, Mehwish Aslam, Hafiza Zumra Fatima, Muhammad Arshad Javed, **Naeem Rashid*** (2022) Pcal_2031, a RecA/Rad51 homologue from *Pyrobaculum calidifontis,* complements the ultraviolet light sensitivity of *Escherichia coli.* Biologia. https://doi.org/10.1007/s11756-022-01187-4	0	1.653	45	X (Clay)
150	Abeera Shaeer, Mehwish Aslam, Iqra Aroob, **Naeem Rashid*** (2022) Role of C-terminal domain in a manganese-catalase from *Geobacillus thermopakistaniensis.* J. Biosci. Bioeng. https://doi.org/10.1016/j.jbiosc.2022.06.010	0	3.185	121	X (Clay)
149	Muhammad Sajed, Nasir Ahmad**, Naeem Rashid*** (2022) Temperature dependent autocleavage and applications of an L-asparaginase from *Thermococcus kodakarensis*	1	2.893	49	

	for acrylamide mitigation in food items. 3 Biotech. 12:129. DOI: 10.1007/s13205-022-03197-0.				
148	Samia Falak, Muhammad Sulaiman Saeed, **Naeem Rashid*** (2022) Molecular cloning, expression in *Escherichia coli* and structural-functional analysis of a pyruvate kinase from *Pyrobaculum calidifontis*. Int. J. Biol. Macromol. 209: 1410–1421. https://doi.org/10.1016/j.ijbiomac.2022.04.144.	2	8.025	166	W (Gold)
147	Samia Falak, Muhammad Sajed and **Naeem Rashid*** (2022) Strategies to enhance soluble production of heterologous proteins in *Escherichia coli*. Biologia 77: 893–905 DOI: 10.1007/s11756-021-00994-5	4	1.653	45	X (Clay)
146	Iqra Aroob, Maryam Javed, Nasir Ahmad, Mehwish Aslam, and **Naeem Rashid*** (2021) Investigating the role of carbohydrate binding module 34 in cyclomaltodextrinase from *Geobacillus thermopakistaniensis*: structural and functional analyses. 3 Biotech. 12: 25. DOI: 10.1007/s13205-021-03089-9	1	2.893	49	
145	Abeera Shaeer, Mehwish Aslam, Farhan Aziz, Iqra Aroob and **Naeem Rashid*** (2021) Looking into a highly thermostable and efficient recombinant manganese-catalase from *Geobacillus thermopakistaniensis.* J. Biosci. Bioeng. 133: 25-32. doi.org/10.1016/j.jbiosc.2021.09.012.	1	3.185	121	X (Clay)
144	Shazeel Ahmad, Syed Farhat Ali, Naseema Azim, **Naeem Rashid*** (2021) Studies on enhancement of production of recombinant DNA polymerase originated from *Pyrobaculum calidifontis*. Biologia 76, 3579–3586. DOI : 10.1007/s11756-021-00887-7	1	1.653	45	X (Clay)
143	Iqra Aroob, Nasir Ahmad, **Naeem Rashid*** (2021) Cyclodextrin-preferring glycoside hydrolases: properties and applications. Amylase 2021; 5: 23–37.	3			
142	M. Farhan ul Haque, S. Sadia Bukhari, Rabia Ejaz, Faheem uz Zaman, K. Rajan Sreejith, **Naeem Rashid**, Muhammad Umer and Naveed Shahzad (2021) A novel RdRp-based colorimetric RT-LAMP assay for rapid and sensitive detection of SARS-CoV-2 in clinical and	12	6.286	136	W (Bronze)

	sewage samples from Pakistan. Virus Res. 10.1016/j.virusres.2021.198484				
141	Abeera Shaeer, Mehwish Aslam and **Naeem Rashid*** (2021) Structural and functional analyses of a novel manganese-catalase from *Bacillus subtilis* R5. Int. J. Biol. Macromol. 80: 222-233. doi: 10.1016/j.ijbiomac.2021.03.074.	4	8.025	166	W (Gold)
140	Khadija Rafiq, Muhammad Sohail Akram, Muhammad Shahid, Uzma Qaisar and **Naeem Rashid*** (2021) *Staphylococcus sciuri* SAT-17 improved the growth of salt stressed maize (*zea mays* l.) By modulated expression of stress responsive genes and anti-oxidative defence mechanisms. Pak. J. Agri. Sci., **57:** 1331-1338 DOI: 10.21162/PAKJAS/21.9936	1	0.856	26	Y (Null)
139	Amina Arif, **Naeem Rashid*** and Muhammad Akhtar (2021) Removal of N-terminal methionine of human interferon α-2b by co-producing with *Pyrococcus furiosus* methionine aminopeptidase in *Escherichia coli.* Biologia. 76:1843–1848 DOI: 10.1007/s11756-021-00728-7	0	1.653	45	X (Clay)
138	Nisar Ahmad Shakir, Mehwish Aslam and **Naeem Rashid*** (2021) ADP-dependent glucose/glucosamine kinase from *Thermococcus kodakarensis*: cloning and characterization. Int. J. Biol. Macromol. **173:** 168−179. https://doi.org/10.1016/j.ijbiomac.2021.01.019	3	8.025	166	W (Gold)
137	Huma Naz, Sheeren Gul, Qamar Bashir, **Naeem Rashid** and H. Naveed Shahzad (2021) *Thermococcus kodakarensis*-derived L-asparaginase: a candidate for the treatment of glioblastoma. Biologia.**76**:1305–1314. doi.org/10.2478/s11756-021-00678-0.	2	1.653	45	X (Clay)
136	Khurram Jahangir Toor, Nasir Ahmad, Majida Atta Muhammad and **Naeem Rashid*** (2020) TK-PUL, a pullulan hydrolase type III from *Thermococcus kodakarensis*, a potential candidate for simultaneous liquefaction and saccharification of starch. Amylase **4:** 45−55. https://doi.org/10.1515/amylase-2020-0004.	0			
135	Muhammad Sulaiman Saeed, Masood Ahmed Siddiqui and **Naeem Rashid*** (2021) Effect of Y50H and S187G substitutions on thermostability	0	2.025	94	X (Null)

	and exonuclease activity of TK1646 from *Thermococcus kodakarensis.* Protein Expr. Purif. **179:** 105799 https://doi.org/10.1016/j.pep.2020.105799				
134	Huma Naz, Qamar Bashir, **Naeem Rashid** and Hafiz Naveed Shahzad (2021) Isocitrate dehydrogenase 1 gene variants analysis of glioma patients from Pakistan. Ann. Hum. Genet. 85: 73−79. DOI: 10.1111/ahg.12409.	0	2.18	79	X (Clay)
133	Sadaf Ashraf, Kanwal Nisa, Samar Ali, **Naeem Rashid** and Masood Ahmad Siddiqui (2022) Gene cloning and characterization of Pcal_0222, an α-amylase from *Pyrobaculum calidifontis*. Pak. J. Zoo. 54: 537–542. DOI: https://dx.doi.org/10.17582/journal.pjz/20200917190928.	0	0.687	29	X (Null)
132	Sabeel un Naeem, Nasir Ahmad and **Naeem Rashid*** (2020) Pcal_0842, a highly thermostable glycosidase from *Pyrobaculum calidifontis* displays both α-1,4- and β-1,4 glycosidic cleavage activities. Int. J. Biol. Macromol. **165B:**1745-1754. https://doi.org/10.1016/j.ijbiomac.2020.10.012	5	8.025	166	W (Gold)
131	Sumaira Mehboob, Nasir Ahmad, Sajida Munir, Ramzan Ali, Hooria Younas, **Naeem Rashid*** (2020) Gene cloning, expression enhancement in *Escherichia coli* and biochemical characterization of a highly thermostable amylomaltase from *Pyrobaculum calidifontis.* Int. J. Biol. Macromol. **165A:**645-653. https://doi.org/10.1016/j.ijbiomac.2020.09.071	10	8.025	166	W (Gold)
130	Anam Iftikhar, Azka Asifa, Asma Manzoor, Muhammad Azeem, Ghulam Sarwar, **Naeem Rashid,** Uzma Qaisar* (2020) Mutation in pvcABCD operon of Pseudomonas aeruginosa modulates MexEF-OprN efflux system and hence resistance to chloramphenicol and ciprofloxacin. Microb. Pathog. **149:** 104491. https://doi.org/10.1016/j.micpath.2020.104491	9	3.848	89	W (Honorable Mention)
129	Ghazaleh Gharib, Shahid Mahmood Chohan, **Naeem Rashid***, Muhammad Akhtar (2020) Heterologous gene expression and characterization of recombinant aspartate aminotransferase from *Geobacillus thermopakistaniensis*. Protein Expression and Purification. **175:** 105709.	1	2.025	94	X (Null)

	https://doi.org/10.1016/j.pep.2020.105709				
128	Khadija Rafiq, Muhammad Sohail Akram, Muhammad Shahid, Uzma Qaisar, and **Naeem Rashid*** (2020) Enhancement of salt tolerance in maize (Zea mays L.) using locally isolated *Bacillus* sp. SR-2-1/1. Biologia **75:**1425–1436. doi.org/10.2478/s11756-020-00435-9	18	1.653	45	X (Clay)
127	Kanwal Nisa, Sadaf Ashraf, Masood Ahmed Siddiqui*, Naila Taj, Habib-Ur-Rehman, Arifa Bano and **Naeem Rashid** (2020) Purification and Characterization of a Thermostable Pyruvate Ferredoxin Oxidoreductase/Pyruvate Decarboxylase from *Thermococcus kodakaraensis* Pak. J. Zool. **52:** 1149-1156. DOI: https://dx.doi.org/10.17582/journal.pjz/20191018081056	3	0.687	29	X (Null)
126	Shahid Mahmood Chohan, Muhammad Sajed, Sabeel un Naeem, and **Naeem Rashid*** (2020) Heterologous gene expression and characterization of TK2246, a highly active and thermostable plant type L-asparaginase from *Thermococcus kodakarensis.* Int. J. Biol. Macromol. **147:** 131–137. DOI: 10.1016/j.ijbiomac.2020.01.012	14	8.025	166	W (Gold)
125	Sitara Nasar, **Naeem Rashid** and Saima Iftikhar* (2020) Dengue proteins with their role in pathogenesis, and strategies for developing an effective anti-dengue treatment: A Review. J. Med. Virol. **92:** 941–955. doi: 10.1002/jmv.25646	31	20.693	145	W (Platinum)
124	Anam Tariq, Alina Gul, Majida Atta Muhammad, Samia Falak and **Naeem Rashid*** (2020) *Escherichia coli* signal peptidases cleave the signal sequence of TK0522, a carbohydrate esterase from hyperthermophilic archaeon *Thermococcus kodakarensis.* Pak. J. Zoo. 52: 789-792. DOI: https://dx.doi.org/10.17582/journal.pjz/20191109101144	0	0.687	29	X (Null)
123	Muhammad Arif, Qamar Bashir, Masood Ahmad Siddiqui and **Naeem Rashid*** (2020) Molecular characterization of a highly efficient and thermostable phosphoribosyl anthranilate isomerase from *Geobacillus thermopakistaniensis*. Protein Expr Purif.	1	2.025	94	X (Null)

	166:105523. https://doi.org/10.1016/j.pep.2019.105523				
122	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	2	8.025	166	W (Gold)
121	Abeera Shaeer, Mehwish Aslam and **Naeem Rashid*** (2019) A highly stable manganese-catalase from *Geobacillus thermopakistaniensis*: molecular cloning and characterization. Extremophiles 23:707–718. https://doi.org/10.1007/s00792-019-01124-5	10	3.035	92	X (Clay)
120	Hira Muzammal, Qurat ul Ain, Muhammad Sulaiman Saeed and **Naeem Rashid*** (2019) Gene cloning and characterization of Tk1281, a flap endonuclease 1 from *Thermococcus kodakarensis*. Folia Microbiolgica 65: 407-415. https://doi.org/10.1007/s12223-019-00745-9.	1	2.629	56	X (Honorable Mention)
119	Naseema Azim, Qurratulann Afza Gardner, **Naeem Rashid**, Muhammad Akhtar* (2019) Mechanistic studies on *Pyrobaculum calidifontis* porphobilinogen synthase (5-aminolevulinic acid dehydratase). *Bioorganic Chem*. **91:**103117. https://doi.org/10.1016/j.bioorg.2019.103117.	0	5.305	75	W (Bronze)
118	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*. 129: 6-15. https://doi.org/10.1016/j.jbiosc.2019.06.014	1	3.185	121	X (Clay)
117	**Naeem Rashid*** and Mehwish Aslam (2020) An overview of twenty-five years of research on *Thermococcus kodakarensis*, a genetically versatile model organism for archaeal research. Folia Microbiologica. 65: 67-78. https://doi.org/10.1007/s12223-019-00730-2	2	2.629	56	X (honorable Mention)
116	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.	6	2.975	143	X (Honorable Mention)

	doi: 10.1016/j.carres.2019.06.004				
115	Sohaib Afzaal, Usman Hameed, Ahmad Nasir, **Naeem Rashid**, Muhammad Saleem Haider (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	4	0.687	29	X (Null)
114	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	1	1.653	45	X (Clay)
113	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 blood of healthy population of Pakistan. Future Microbiology **14:**599-608. https://doi.org/10.2217/fmb-2018-0314	3	3.553	96	X (Clay)
112	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	0.687	29	X (Null)
111	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.	26	2.629	56	X (honorable Mention)
110	Muhammad Arif, **Naeem Rashid***, Sumera Perveen, Qamar Bashir and Muhammad Akhtar (2019) Extremely stable indole-3-glycerol-	9	3.035	92	X (Clay)

	phosphate synthase from hyperthermophilic archaeon *Pyrococcus furiosus*. Extremophiles 23: 69-77. https://doi.org/10.1007/s00792-018-1061-4.				
109	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	6	2.337	130	X (Clay)
108	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.	8	20.693	145	W (Platinum)
107	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	1			
106	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.)**	9	3.476	265	W (Bronze)
105	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	11	0.687	29	X (Null)
104	Sabah Mansoor, Muhammad Tayyab*, Amna Jawad, Bushra Munir, Sehrish Firyal, Ali Raza Awan, **Naeem Rashid** and Muhammad Wasim	6	0.687	29	X (Null)

	(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.				
103	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	5	1.653	45	X (Clay)
102	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.	16	5.699	148	W (Silver)
101	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	4	3.035	92	X (Clay)
100	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	6	5.307	75	W (Bronze)
99	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	1	3.035	92	X (Clay)
98	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.*	32	5.699	148	W (Silver)

	Acta Cryst. **D73**: 889-895. https://doi.org/10.1107/S2059798317014711.				
97	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/s00792-017-0970-y. http://rdcu.be/wEN4	2	3.035	92	X (Clay)
96	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.	8	2.792	41	X (Clay)
95	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.	2	5.307	75	W (Bronze)
94	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. Biotechnol. **254:** 9-16. http://dx.doi.org/10.1016/j.jbiotec.2017.05.023.	6	3.595	171	W (Bronze)
93	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/2017.49.6.1	10	0.687	29	X (Null)

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92	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	3	2.824	89	X (Clay)
91	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.	5	5.699	148	W (Silver)
90	Saadia Basheer, **Naeem Rashid***, Raza Ashraf, Muhammad Sohail Akram, Masood Ahmed Siddiqui, Tadayuki Imanaka and Muhammad Akhtar (2017) Identification of a novel copper activated and halide tolerant laccase in *Geobacillus thermopakistaniensis*. Extremophiles **21:** 563-571. DOI: 10.1007/s00792-017-0925-3	16	3.035	92	X (Clay)
89	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	4	3.035	92	X (Clay)
88	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.	25	5.699	148	W (Silver)

87	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.	3	2.824	89	X (Clay)
86	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		10	
85	Shahid Mahmood Chohan, Muhammad Atif Nisar, **Naeem Rashid***, Ghazaleh Gharib, Qamar Bashir and Masood Ahmed Siddiqui (2016) TK1656, an L-asparaginase from *Thermococcus kodakarensis*, a novel candidate for therapeutic applications. Biologia **71:** 1315–1319. https://doi.org/10.1515/biolog-2016-0168	7	1.653	45	X (Clay)
84	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.	2			
83	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.	3	1.072	148	X (Null)
82	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.	9	2.214	79	X (Null)
81	Tahira Bibi, Sumera Perveen, Iram Aziz, Qamar	8	3.035	92	X (Clay)

	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				
80	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.	7	3.035	92	X (Clay)
79	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.	6	5.307	75	W (Bronze)
78	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	11	3.423	77	X (Clay)
77	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.	20	3.035	92	X (Clay)
76	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	2	0.863	45	Y (Null)

	the promoter. Pak. J. Pharm. Sci. **29:** 375–379.				
75	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.	8	1.653	45	X (Clay)
74	Nasir Ahmad, Sumaira Mehboob and **Naeem Rashid*** (2015) Starch-processing enzymes – emphasis on thermostable 4-α-glucanotransferases. Biologia **70:** 709–725.	15	1.653	45	X (Clay)
73	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	0.698	26	Y (Null)
72	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.	9	0.687	29	X (Null)
71	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	0.687	29	X (Null)
70	Nakhshab Choudhry*, Sadia Mahmood, Muhammad Fahim ul Haq, Shama Akram, Sana Sarmad, Riffat Mehboob, **Naeem Rashid** (2014) Association of angiotensin-I converting enzyme with angiotensin-I converting enzyme gene insertion/deletion polymorphism in type 2 diabetic patients of Pakistan. HealthMED 8:1248-1253.				

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.	17	1.4	0.3	Y (Null)
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.	15	3.595	171	W (Bronze)
67	Anmbreen Jamroze, Giuseppe Perugino, Anna Valenti, **Naeem Rashid,** Mosè Rossi, Muhammad Akhtar and Maria Ciaramella* (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.	21	5.486	544	W (Gold)
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.	1	0.401	19	Y (Null)
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.	41	5.005	355	W (Silver)
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	11	3.036	182	W (Bronze)

	1834: 2116–2123.				
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.	11	0.533	44	Y (Null)
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.	5	0.533	44	Y (Null)
61	Nouman Rasool, **Naeem Rashid***, Qamar Bashir and Masood Ahmed Siddiqui (2013) Proteolytic inventory of *Thermococcus kodakaraensis. Afr. J. Microbiol. Res.* **7:** 3139-3150.	2	0.533	8	
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.	8	2.824	89	X (Clay)
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.	0	0.684	45	Y (Null)
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. DOI: 10.1016/j.jbiosc.2013.04.005	67	3.185	121	X (Clay)
57	Muhammad Tayyab, **Naeem Rashid***, Clement Angkawidjaja, Shigenori Kanaya and Muhammd	1	1.056	148	X (Null)

	Akhtar (2013) Crystallization and X-ray diffraction analysis of thermo-alkalophilic lipase from *Geobacillus* SBS-4S. *Acta Cryst*. **F69:** 355-357.				
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	3.185	121	X (Clay)
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.	26	2.461	114	X (Clay)
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	2	0.533	8	
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52	Khalid Mahmood, Mateen Izhar, Nakhshab Choudhry, Ghulam Mujtaba and **Naeem Rashid*** (2012) Emergence of Extended-spectrum β-lactamase producing *Salmonella typhi* in Pakistan. *Afr. J. Microbiol. Res.* **6:** 793-797.	9	0.533	8	
51	Nakhshab Choudhry, Saeed Ahmed Nagra, Tahir Shafi, Ghulam Mujtaba, Muhammad Abiodullah	8	0.573	?	

	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.				
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.	4	0.573	?	
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.	5	1.653	45	X (Clay)
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.	9	3.185	121	X (Clay)
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.	3	0.274	19	Y (Null)
46	Nouman Rasool, **Naeem Rashid*,** Muhammad Arshad Javed and M. Saleem Haider (2011) Requirement of pro-peptide in proper folding of subtilisin-like serine protease TK0076. *Pak. J. Bot.***43:** 2059-2065.	2	0.972	67	X (Clay)
45	M. Saleem Haider*, Shahid Afghan, Haroon Riaz, M. Tahir, M. Arshad Javed, **Naeem Rashid** and Javed Iqbal (2011) Identification of two Sugarcane mosaicvirus (SCMV) variants from naturally	22	0.972	67	X (Clay)

	infected sugarcane crop in Pakistan. *Pak. J. Bot.***43:** 1157-1162.				
44	Muhammad Tayyab, **Naeem Rashid***, and Muhammd Akhtar (2011) Isolation and identification of lipase producing thermophilic *Geobacillus* sp. SBS-4S: cloning and characterization of the lipase. *J. Biosci. Bioeng.***111:** 272-278.	69	3.185	121	X (Clay)
43	Muhammad Tayyab, **Naeem Rashid***, Clement Angkawidjaja, Shigenori Kanaya and Muhammd Akhtar (2011) Highly active metallocarboxypeptidase from newly isolated *Geobacillus* strain SBS-4S: cloning and characterization. *J. Biosci. Bioeng.***111:** 259-265.	10	3.185	121	X (Clay)
42	Amir Jalal, **Naeem Rashid*,** Nasir Ahmed, Saima Iftikhar and Muhammad Akhtar (2011) *Escherichia coli* signal peptidase recognizes and cleaves the signal sequence of xylanase from a newly isolated *Bacillus subtilis* strain R5. *Biochemistry (Moscow)* **76:** 347-349.	10	2.824	89	X (Clay)
41	Farrukh Jamil, **Naeem Rashid***, Qurra-tul-Ann Afza Gardner and Muhammad Akhtar (2011) Gene cloning and characterization of glycine oxidase from newly isolated *Bacillus subtilis* strain R5. *Biologia* **66:**1-7.	1	1.653	45	X (Clay)
40	Hooria Younas, Qurra-tul-Ann Afza Gardner, **Naeem Rashid,** J. Neville Wright and Muhammad Akhtar* (2011) Conformational transmission in proinsulin and its derivatives: A study using H/D exchange. *Int. J. Mass Spectrom.***302:** 36-43.	2	1.986	120	X (Clay)
39	Farrukh Jamil, Qurra-tul-Ann Afza Gardner, Qamar Bashir, **Naeem Rashid** and Muhammad Akhtar* (2010) Mechanistic and stereochemical studies of glycine oxidase from *Bacillus subtilis* strain R5. *Biochemistry* **49:** 7377-7383.	10	3.162	269	W (Bronze)

38	**Naeem Rashid***, Masood Ahmed Siddiqui, M. Saleem Haider, and M. Arshad Javed (2010) Crystallization of Fructose 1,6-bisphosphatase from the Hyperthermophilic Archaeon *Thermococcus kodakaraensis*. *Pak. J. Bot.* **42:** 2313-2316.	0	1.101	67	X (Clay)
37	Nouman Rasool, **Naeem Rashid***, Saima Iftikhar and Muhammad Akhtar (2010) N-terminal deletion of Tk1689, a subtilisin-like serine protease from *Thermococcus kodakaraensis*, copes with its cytotoxicity in *Escherichia coli*. *J. Biosci. Bioeng.* **110:** 381-385.	16	3.185	121	X (Clay)
36	**Naeem Rashid***, Nasir Ahmed, M. Saleem Haider, and Ikram ul Haque (2010) Effective solubilization and single-step purification of *Bacillus licheniformis* α-amylase from insoluble aggregates. *Folia Microbiologic*a **55:** 133-136.	6	2.629	56	X (honorable Mention)
35	A. Bowyer, H. Mikolajek, J.W. Stuart, S.P. Wood, Farrukh Jamil, **Naeem Rashid**, Muhammad Akhtar, and J.B. Cooper* (2009) Structure and function of the L-threonine dehydrogenase (TkTDH) from the hyperthermophilic archaeon *Thermococcus kodakaraensis*. *J. Struct. Biol.***168:** 294-304.	31	3.324	156	W (Bronze)
34	**Naeem Rashid*,** Alia, Ikram-ul-Haque, and Muhammad Akhtar (2009) Insoluble but enzymatically active α-amylase from *Bacillus licheniformis*. *Biologia* **64:** 660-663.	10	1.653	45	X (Clay)
33	Qamar Bashir, **Naeem Rashid***, Farrukh Jamil, Tadayuki Imanaka and Muhammad Akhtar (2009) Highly thermostable L-threonine dehydrogenase from the hyperthermophilic archaeon *Thermococcus kodakaraensis*. *J. Biochem*. **146:** 95-102.	24	3.241	124	X (Clay)
32	Qurra-tul-Ann Afza Gardner, Hooria Younas, **Naeem Rashid,** J. Neville Wright and Muhammad	5	4.125	182	W (Bronze)

	Akhtar* (2009) Inventory of 'slow exchanging' hydrogen atoms in human proinsulin and its derivatives: observations on the mass spectrometric analysis of deuterio-proteins in D_2O. *Biochim. Biophys. Acta* **1794:** 1224-1233.				
31	Azad Hussain Shah*, **Naeem Rashid**, Muhammad Saleem Haider, Faiza Saleem, Muhammad Tahir and Javed Iqbal (2009) An efficient, short and cost effective regeneration system for transformation studies of sugar cane (*Saccharum officarium* L). *Pak. J. Bot.* **41:** 609-614.	23	1.101	67	X (Clay)
30	Amir Jalal, **Naeem Rashid***, Nouman Rasool, and Muhammad Akhtar (2009) Gene cloning and characterization of a xylanase from a newly isolated *Bacillus subtilis* strain R5. *J. Biosci. Bioeng.***107:**360-365.	67	3.185	121	X (Clay)
29	M. Saleem Haider*, Muhammad Tahir, Ahlam Saeed, Shakeel Ahmed, Rashida Parveen and **Naeem Rashid** (2008) First report of a begomovirus infecting the ornamental plant *Vinca minor* L. *Australas. Plant Dis. Notes* **3:** 150–151.	7	0.3	17	X (Null)
28	**Naeem Rashid*,** Hiroyuki Imanaka and Tadayuki Imanaka (2008) An archaeal 2-deoxyribose 5-phosphate aldolase that exhibits closer homology to bacteria rather than archaea. *J. Chem. Soc. Pak.* **30:** 740-749.	2	0.698	26	Y (Null)
27	A. Bowyer, H. Mikolajek, J. N. Wright, A. Coker, P. T. Erskine, Jhon B. Cooper*, Qamar Bashir, **Naeem Rashid**, Farrukh Jamil and Muhammad Akhtar (2008) Crystallization and preliminary X-ray diffraction analysis of L-threonine dehydrogenase (TDH) from the hyperthermophilic archaeon *Thermococcus kodakaraensis*. *Acta Cryst.* **F64**: 828-830.	4	1.073	142	X (Null)
26	**Naeem Rashid*** and Tadayuki Imanaka (2008)	19	0.698	26	Y (Null)

	Efficient degradation of grease using microorganisms. *J. Chem. Soc. Pak.* **30:** 612-617.				
25	Qamar Bashir, **Naeem Rashid** and Muhammad Akhtar* (2006) Mechanism and substrate stereochemistry of 2-amino-3-oxobutyrate CoA ligase: implications for 5-aminolevulinate synthase and related enzymes. *Chem. Commun.* 48: 5065-5067.	9	6.065	348	W (Silver)
24	Muhammad Tahir, Muhammad Saleem Haider*, Azad Hussain Shah, **Naeem Rashid**, and Faiza Saleem (2006) First report of bipartite begomovirus associated with leaf curl disease of *Duranta repus* in Pakistan. *J. Plant Path.***88:** 337.	22	2.643	55	X (Clay)
23	**Naeem Rashid*,** Azad Hussain Shah, Muhammad Saleem Haider, and Javed Iqbal (2006) Thermostable Cyclodextrin Glucanotransferases. *Pak. J. Sci. Ind. Res.***49:** 58-64.	0	0.3	6	Y (Null)
22	Toshihiko Akiba, Noriyuki Ishii, **Naeem Rashid,** Masaaki Morikawa, Tadayuki Imanaka and Kazuaki Harata* (2005) Structure of RadB recombinase from a hyperthermophilic archaeon, *Thermococcus kodakaraensis* KOD1: an implication for the formation of a near-7-fold helical assembly. *Nucleic Acids Res*. **33:** 3412-3423.	16	19.16	607	W (Silver)
21	Shahid Afghan*, Muhammad Saleem Haider, Azad Hussain Shah, **Naeem Rashid**, Javed Iqbal, Muhammad Tahir and Muhammad Akhtar. (2005) Detection of genetic diversity among sugarcane (*Saccharum* sp*.)* genotypes using Random Amplified Polymorphic DNA markers. *Sugar Cane Int*. **23:** 17-21.	19		21	
20	**Naeem Rashid**, Tamotsu Kanai, Haruyuki Atomi, and Tadayuki Imanaka* (2004) Among multiple phosphomannomutase orthologues, only one	37	3.476	265	W (Bronze)

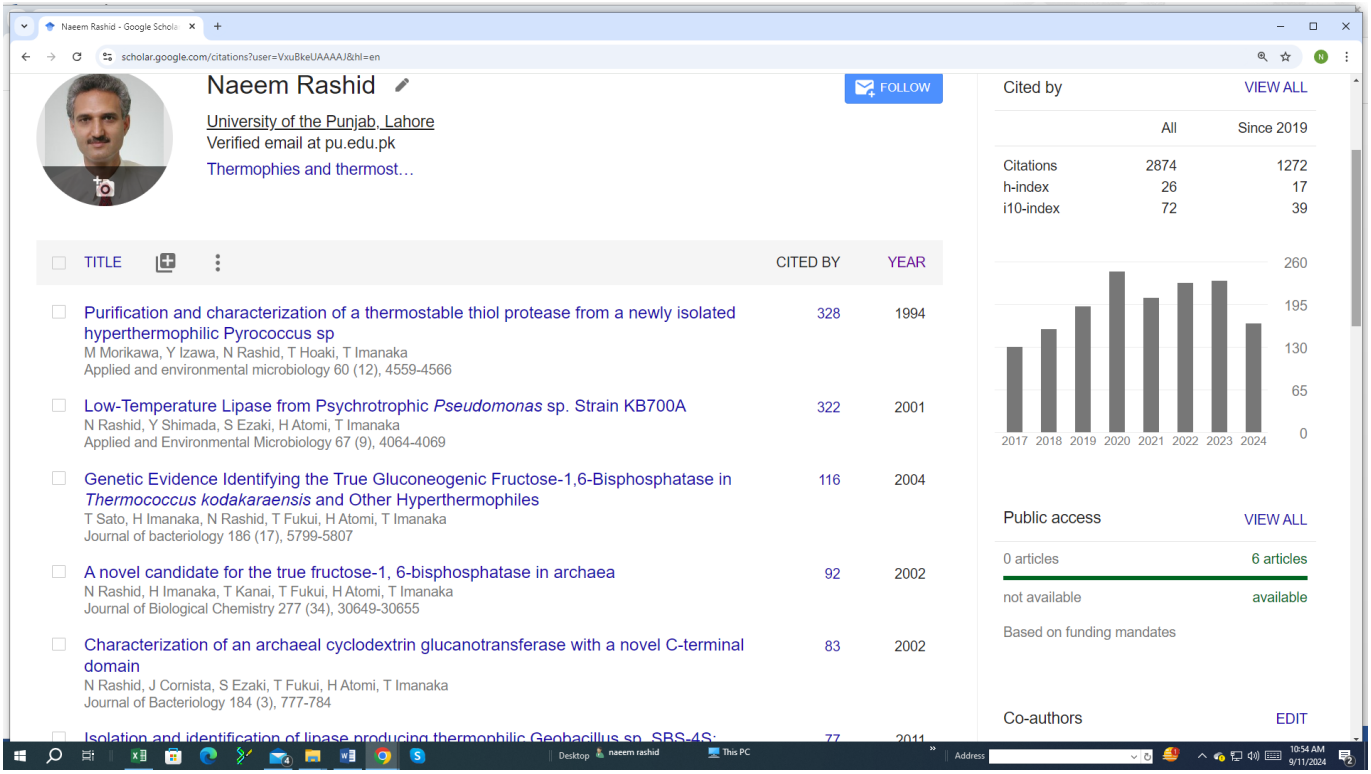
	gene encodes a protein with phosphoglucomutase and phosphomannomutase activities in *Thermococcus kodakaraensis*. *J. Bacteriol.* **186:**6070-6076.				
19	Takaaki Sato, Hiroyuki Imanaka, **Naeem Rashid,** Toshiaki Fukui, Haruyuki Atomi, and Tadayuki Imanaka* (2004) Genetic evidence identifying the true gluconeogenic fructose-1,6-bisphosphatase in (hyper)thermophiles. *J. Bacteriol*.**186:** 5799-5807.	120	3.476	265	W (Bronze)
18	**Naeem Rashid**, Hiroyuki Imanaka, Toshiaki Fukui, Haruyuki Atomi, and Tadayuki Imanaka* (2004) Presence of a novel phosphopentomutase and a 2-deoxyribose 5-phosphate aldolase reveals a metabolic link between pentoses and central carbon metabolism in the hyperthermophilic archaeon *Thermococcus kodakaraensis*. *J. Bacteriol.***186:** 4185-4191.	60	3.476	265	W (Bronze)
17	Takeshi Kanamori, **Naeem Rashid**, Masaaki Morikawa, Haruyuki Atomi, and Tadayuki Imanaka* (2002) *Oleomonas sagaranensis* gen. nov., represents a novel genus in the α-Proteobacteria. *FEMS Microbiol. Lett*. **217:** 255-261.	34	2.82	158	X (Clay)
16	**Naeem Rashid**, Hiroyuki Imanaka, Tamotsu Kanai, Toshiaki Fukui, Haruyuki Atomi, and Tadayuki Imanaka* (2002) A novel candidate for the true fructose 1,6-bisphosphatase in archaea. *J. Biol. Chem*. **277:** 30649-30655.	89	3.595	544	W (Gold)
15	**Naeem Rashid**, Joel Cornista, Satoshi Ezaki, Toshiaki Fukui, Haruyuki Atomi and Tadayuki Imanaka* (2002) Characterization of an archaeal cyclodextrin glucanotransferase with a novel C-terminal domain. *J. Bacteriol.* **184:**777-784.	78	3.476	265	W (Bronze)
14	**Naeem Rashid**, Yuji Shimada, Satoshi Ezaki, Haruyuki Atomi and Tadayuki Imanaka* (2001) Low-temperature lipase from a psychrotrophic	310	5.005	355	W (Silver)

	Pseudomonas sp. strain KB700A. *Appl. Environ. Microbiol*. **67:** 4064-4069.				
13	**Naeem Rashid**, Masaaki Morikawa, Shigenori Kanaya, Haruyuki Atomi, and Tadayuki Imanaka* (2001) RecA/Rad51 homologue from *Thermococcus kodakaraensis* KOD1. *Method Enzymol*. **334:** 261-270.	27	1.682	177	Y (Null)
12	Kazuaki Harata, Noriyuki Ishii, **Naeem Rashid**, Masaaki Morikawa, and Tadayuki Imanaka* (2000) Crystallization and preliminary X-Ray study of *Pk*-REC from hyperthermophilic archaeon, *Pyrococcus kodakaraensis* KOD1. *Acta Cryst.* **D56:**648-649.	4	5.699	142	W (Silver)
11	**Naeem Rashid**, Hiroshi Kikuchi, Satoshi Ezaki, Haruyuki Atomi and Tadayuki Imanaka* (1999) Isolation and characterization of psychrotrophs from subterranean environments. *J. Biosci. Bioeng.***87:** 746-751.	18	3.185	121	X (Clay)
10	**Naeem Rashid**, Masaaki Morikawa, Shigenori Kanaya, Haruyuki Atomi and Tadayuki Imanaka* (1999) A unique DNase activity shares the active site with ATPase activity of RecA/Rad51 homologue (*Pk*-REC) from a hyperthermophilic archaeon. *FEBS Lett.* **445:** 111-114.	13	3.864	275	W (Bronze)
9	Fouad Al-Momani*, **Naeem Rashid** and Sheikh Riazuddin (1998) Occurrence and distribution of crown gall disease in some plants of Pakistan. *Bangl. J. Bot.* **27:** 47-50.	1	0.339	20	Y (Null)
8	**Naeem Rashid,** Masaaki Morikawa, and Tadayuki Imanaka* (1997) Gene cloning and characterization of recombinant ribose phosphate pyrophosphokinase from a hyperthermophilic archaeon. *J. Biosci. Bioeng.* **83:** 412-418.	13	3.185	121	X (Clay)
7	**Naeem Rashid,** Masaaki Morikawa, Keisuke Nagahisa, Shigenori Kanaya, and Tadayuki Imanaka* (1997) Characterization of a	34	19.16	607	W (Platinum)

	RecA/RAD51 homologue from the hyperthermophilic archaeon *Pyrococcus* sp. KOD1. *Nucleic Acids Res*. **25:** 719-726.				
6	**Naeem Rashid** (1997) A hyperthermophilic archaeon speaks. *Tanpakushitsu Kakusan Koso. Protein, Nucleic Acid and Enzyme* **42:** 1903-1907.	0	0.14	214	
5	**Naeem Rashid,** Masaaki Morikawa, and Tadayuki Imanaka* (1996) A RecA/RAD51 homologue from a hyperthermophilic archaeon retains the major RecA domain only. *Mol. Genet. Genomics* **253:** 397-400.	44	2.98	129	X (Clay)
4	**Naeem Rashid,** Masaaki Morikawa, and Tadayuki Imanaka* (1995) An abnormally acidic TATA-binding protein from a hyperthermophilic archaeon. *Gene* **166:** 139-143.	34	3.688	188	W (Honorable Mention)
3	Masaaki Morikawa, Yoshifumi Izawa, **Naeem Rashid,** Toshihiro Hoaki, and Tadayuki Imanaka* (1994) Purification and characterization of a thermostable thiol protease from a newly isolated hyperthermophilic *Pyrococcus* sp. *Appl. Environ. Microbiol*. **60:** 4559-4566.	324	5.005	355	W (Silver)
2	**Naeem Rashid*,** Masaaki Morikawa, and Tadayuki Imanaka (1994) Cloning and analysis of 16S-rRNA gene and transcription factor (TF) IID gene from a hyperthermophilic archaeon strain KOD1. *Annu. Rep. ICBiotech*. **17:** 255-270.	0	0		
1	**Naeem Rashid,** Fouad al-Momani* and Sheikh Riazuddin (1994) Isolation and characterization of *Agrobacterium* isolates from plant tumors collected from different regions of Pakistan. *Pak. J. Agri. Res.***15:** 266-271.	0	0.609	7	Y (Null)

HJRS W Category: **50**
HJRS X Category: **86**
Total Citations: **2874**
Total Impact Factor: **539.37**

First/Corresponding author Publications: 102



Publications in Proceedings:

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).

2) Haruyuki Atomi, Takaaki Sato, Hiroyuki Imanaka, Wakao Fukuda, **Naeem Rashid**, Toshiaki Fukui and Tadayuki Imanaka. Biochemical and genetic analyses on enzymes involved in central carbon metabolism in the hyperthermophilic archaeon, *Thermococcus kodakaraensis*. Proceedings of the International Symposium on Extremophiles and Their Applications. Tokyo University, Tokyo, Japan. November-December 2005.

3) Toshiaki Fukui, **Naeem Rashid**, Hiroyuki Imanaka, Tamotsu Kanai, Haruyuki Atomi, and Tadayuki Imanaka. Genome analysis of *Thermococcus kodakaraensis* KOD1 and isolation of novel fructose 1,6-bisphosphtase. Proceedings of the 15th Annual Meeting of Japan Society of Archaea, Hamamatsu, Shizuoka, Japan. July 2002.

4) Naeem Rashid, Haruyuki Atomi and Tadayuki Imanaka. (2000) Subterranean environment: a promising source for the isolation of psychrotrophs. Proceedings of the Fifth International Symposium on Environmental Biotechnology, Kyoto, Japan. July 9-13, 2000.

Presentations in Conferences:

1. **Naeem Rashid**. Genomics: Other side of the picture. Plenary lecture in 50th Annual Convention and Scientific Meeting and the 8th Asia-Pacific Biotechnology Congress. Manila, Phillipines. July 21-24, 2021.
2. **Naeem Rashid**, Muhammad Tayyab, Muhammad Akhtar, and Shigenori Kanaya. Isolation and identification of a novel thermophilic bacterial strain from Pakistan and its industrial applications. 64th Annual Meeting of the Society of Biotechnology Japan. Kobe, Japan. October 2012.

3. **Naeem Rashid**, Haruyuki Atomi, and Tadayuki Imanaka. Nucleosides metabolism in *Thermococcus kodakaraensis*. International Symposium on Glycoproteins in Health and Disease. Lahore, Pakistan. May 27-29, 2008.

4. **Naeem Rashid**, Haruyuki Atomi, and Tadayuki Imanaka. Psychrotrophs from subterranean environment. 28thPakistan Congress of Zoology (International). Faisalabad, Pakistan. March 18-20, 2008.

5. **Naeem Rashid**, Haruyuki Atomi, and Tadayuki Imanaka. In a different tone. 18th Fedreration of Asian and Oceanian Biochemists and Molecular Biologist Symposium on Genomics and Proteomics in Health and Agriculture. Lahore, Pakistan. November 2005.

6. **Naeem Rashid**. Determining the function of unidentified genes from *Thermococcus kodakaraensis*. JSPS-B symposium on New Waves in Microbial Biotechnology for the Tropics. Bangkok, Thailand. March 2005.

7. Qamar Bashir, Nouman Rasool, Amir Jalal, **Naeem Rashid** and Mohammad Akhtar. Cloning, expression and purification of L-threonine dehydrogenase from *Thermococcus kodakaraensis*. 18th Fedreration of Asian and Oceanian Biochemists and Molecular Biologist Symposium on Genomics and Proteomics in Health and Agriculture. Lahore, Pakistan. November 2005.

8. Nasir Mahmood, **Naeem Rashid**, Mohammad Akhtar, Naseer Ahmed, Mohammad Younas, Nouman Rasool, Amir Jalal and Qamar Bashir. Molecular cloning, sequencing and expression of human interferon □-2b gene isolated from blood leukocytes. 18th Fedreration of Asian and Oceanian Biochemists and Molecular Biologist Symposium on Genomics and Proteomics in Health and Agriculture. Lahore, Pakistan. November 2005.

9. Amir Jalal, Nouman Rasool, **Naeem Rashid**, Qamar Bashir, M. Altaf Khan and Nasir Mahmood. A novel bacterial strain: cloning and characterization of a hydrolytic

enzyme. 18th Fedreration of Asian and Oceanian Biochemists and Molecular Biologist Symposium on Genomics and Proteomics in Health and Agriculture. Lahore, Pakistan. November 2005.

10. Takeshi Kanamori, **Naeem Rashid**, Masaaki Morikawa, Haruyuki Atomi, and Tadayuki Imanaka. Purification and characterization of a bacterial urea carboxylase from Oleomonas sagaranensis strain HD1. Japanese-German Biochemistry Meeting, Marburg, Germany. September 2003.

11. **Naeem Rashid**, Hiroyuki Imanaka, Tamotsu Kanai, Toshiaki Fukui, Haruyuki Atomi, and Tadayuki Imanaka. A novel candidate for the true fructose 1,6-bisphosphatase in archaea. The 2002 Annual Meeting of the Society for Biotechnology, Japan. Osaka, Japan. October 2002.

12. Hiroyuki Imanaka, **Naeem Rashid**, Tamotsu Kanai, Toshiaki Fukui, Haruyuki Atomi, and Tadayuki Imanaka. A novel candidate for the true fructose 1,6-bisphosphatase in archaea. The 4th International Congress on Extremophiles. Naples, Italy. September 2002.

13. Takeshi Kanamori, **Naeem Rashid**, Masaaki Morikawa, Haruyuki Atomi, and Tadayuki Imanaka. Identification and characterization of an oil degrading bacterium strain HD1. The 2002 Annual Meeting of the Society for Biotechnology, Japan. Osaka, Japan. October 2002.

14. Tadayuki Imanaka, **Naeem Rashid**, and Haruyuki Atomi. An archaeal cyclodextrin glucanotransferase with a structurally novel C-terminal domain necessary for glucanotransferase activity. The First Symposium on the Alpha-Amylase Family. Smolenice Castle, Slovakia. October 2001.

15. **Naeem Rashid**, Joel Cornista, Satoshi Ezaki, Haruyuki Atomi and Tadayuki Imanaka. Gene cloning and characterization of a cyclodextrin glucanotransferase from a hyperthermophilic archaeon *Thermococcus kodakaraensis* KOD1. The 2001 Annual Meeting of Japan Society for Bioscience, Biotechnology, and Agrochemistry. Kyoto, Japan. March 2001.

16. Haruyuki Atomi, Akito Kadotani, **Naeem Rashid**, and Tadayuki Imanaka. Studies on structurally novel biotin dependent carboxylase. The 2000 Annual Meeting of the Society for Biotechnology, Japan. Sapporo, Japan. August 2000.

17. **Naeem Rashid**, Haruyuki Atomi, and Tadayuki Imanaka. Gene Cloning and Characterization of a Lipase from a Psychrophilic Pseudomonas sp. KB700A. The 2000 Annual Meeting of the Society for Biotechnology, Japan. Sapporo, Japan. August 2000.

18. **Naeem Rashid**, Haruyuki Atomi and Tadayuki Imanaka. (2000) Subterranean environment: a promising source for the isolation of psychrotrophs. Fifth International Symposium on Environmental Biotechnology. Kyoto, Japan. July 2000.

19. **Naeem Rashid** and Tadayuki Imanaka. A Novel Method for Rapid and Efficient Biodegradation of Grease. Fifth International Symposium on Environmental Biotechnology. Kyoto, Japan. July 2000.

20. Haruyuki Atomi, **Naeem Rashid**, Hiroshi Kikuchi, Satoshi Ezaki, and Tadayuki Imanaka. Isolation and identification of Psychrophiles from deep under-ground samples. The 1999 Annual Meeting of Japan Society for Bioscience, Biotechnology, and Agrochemistry. Fukuoka, Japan. March 1999.

21. Haruyuki Atomi, Hiroshi Kikuchi, **Naeem Rashid**, Satoshi Ezaki, and Tadayuki Imanaka. Search and utilization of subterranean microorganisms: isolation and characterization of low temperature bacterium SN16A. The 1998 Annual Meeting of Japan Society for Bioscience, Biotechnology, and Agrochemistry. Nagoya, Japan. March-April 1998.

22. **Naeem Rashid**, Haruyuki Atomi, and Tadayuki Imanaka. Isolation and Characterization of Psychrotrophic Microorganisms from Subterranean Environment. The 1998 Annual Meeting of the Society for Biotechnology, Japan. Hiroshima, Japan. July 1998.

23. **Naeem Rashid**, Masaaki Morikawa, and Tadayuki Imanaka. Gene cloning and characterization of a RecA/RAD51 homologue from the hyperthermophilic archaeon *Pyrococcus* sp. KOD1. The 1996 Annual Meeting of the Society for Biotechnology, Japan. Nagoya, Japan. August 1996.

24. **Naeem Rashid**, Masaaki Morikawa, and Tadayuki Imanaka. Gene cloning and characterization of transcription factor IID from *Pyrococcus* sp. KOD1. The 1995 Annual Meeting of the Society for Biotechnology, Japan.

25. **Naeem Rashid**, Masaaki Morikawa, and Tadayuki Imanaka. Isolation and characterization of a novel anaerobic hyperthermophilic archaeon *Pyrococcus* sp. KOD1. The Annual Meeting of the Society for Biotechnology, Japan. Kobe, Japan. November 1994.

DNA Sequences Published In DDBJ/EMBL/GENBANK:

1) LC602265. *Bacillus subtilis* R5 CatBsu gene for manganese catalase, complete cds https://www.ncbi.nlm.nih.gov/nuccore/LC602265

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

PhD Theses Supervised:

1) Comparative studies on thermostable L-asparaginases and their clinical and industrial applications (Muhammad Sajed; April 2024).
2) Comparative studies on glycolytic kinases from hyperthermophilic archaeon *Pyrobaculum calidifontis* (Samia Falak; February 2024).
3) Comparative studies on recombinant catalases of thermophilic (*Geobacillus thermopakistaniensis*) and mesophilic (*Bacillus subtilis* R5) origin (Abeera Shaeer; March 2022).
4) Construction of mutants of DNA polymerase from *Pyrobaculum calidifontis* for improved characteristic (Shazeel Ahmad; February 2022).
5) Synthesis, characterization and applications of recombinant cyclomaltodextrinase from *Geobacillus thermopakistaniensis* (Iqra Aroob; December 2021).

6) Production of recombinant starch hydrolyzing enzymes of hyperthermophilic origin and their industrial applications (Majida Atta Muhammad; September 2021).

7) Molecular and biochemical analysis of salt tolerance in maize (*Zea mays* L.) genotypes in response to plant growth promoting rhizobacteria (Khadija Rafiq

June 2021)

8) Gene cloning, expression in *Escherichia coli* and characterization of recombinant exonuclease from *Thermococcus kodakarensis* (Muhammad Sulaiman Saeed September 2020)

9) Studies on enzymes involved in DNA-Protein interactions in hyperthermophilic archaea (Hira Muzzamal September 2020)

10) Gene cloning and characterization of indole-3-glycerol-phosphte synthase, a key enzyme of biosynthetic pathway in hyperthermophilic archaeon *Pyrococcus furiosus* (Muhammad Arif September 2020)

11) Comparative studies on thermostable esterases of bacterial and archaeal origins (Ms Anam Tariq August 2020).

12) A *Drosophila* model to unravel functional roles for key neuroendocrine metabolic signaling nodes (Ms. Mehwish Akram August 2020).

13) Cloning and characterization of thermostable glucokinase and phosphofructokinase from *Thermococcus kodakarensis* (Nisar Ahmed Shakir April 2020).

14) Tryptophan biosynthesis pathway in hyperthermophilic archaeon, *Thermococcus kodakarensis* (Sumera Perveen October 8, 2018). Postdocterate Canada.

15) Comparative Studies on Recombinant Laccases of Thermophilic (*Geobacillus* SBS-4S) and Mesophilic (*Bacillus* strain R5) origins (Saadia Basheer January 22, 2018)

16) Comparative studies on Alcohol dehydrogenases from mesophilic (*Bacillus subtilis* R5) and hyperthermophilic (*Pyrobaculum calidifontis*) origins (Raza Asharf September 28, 2017)

17) Cloning and characterization of glyceraldehyde-3-phosphate dehydrogenase and fructose 1,6-bisphosphatase from hyperthermophilic archaeon *Pyrobaculum calidifontis* (Iram Aziz September 22, 2017). Postdocterate

Germany.

18) Thermostable kinases from *Pyrobaculum calidifontis*: cloning and characterization (Tahira Bibi September 13, 2017). Assistant Professor, KE University, Lahore.

19) Molecular cloning and characterization of two clinically important enzymes, malate dehydrogenase and aspartate aminotransferase, of thermophilic and hyperthermophilic origins (Ghazaleh Gharib 3rd September, 2016).

20) Glycosyl hydrolases from hyperthermophilic archaeon *Pyrobaculum calidifontis*: cloning and characterization (Sumaira Mehboob 1st March, 2016).

21) Optimization of Conditions for the Folding and Bioprocessing of Different Derivatives of Human Insulin (Munir Ahmad 31 Dec 2015) SBS Punjab University

22) Studies on L-asparaginases from mesophilic and thermophilic microorganisms (Shahid Mahmood Chohan 2015). Punjab Forensic Agency, Lahore.

23) Heme biosynthetic pathway in hyperthermophilic archaea (Naseema Azim 2014). Senior Research Officer, SBS, Punjab University, Lahore.

24) Studies on the engineering of human interferon α2-b derivatives: chimera and conjugate (Fatima Ahsan 2014). Assistant Professor, UVAS, Lahore.

25) Studies on reverse gyrase from hyperthermophilic archaeon Pyrobaculum calidifontis (Anmbreen Jamroze 2014). Post Doctorate Fellow, LUMS, Lahore.

26) 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.

27) 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.

28) Studies on Hepatitis C virus genes encoding structural and non-structural proteins from Pakistani isolates. (Faisal Bashir 2014).

29) Angiotensin-I converting enzyme gene insertion/deletion polymorphism and its association with albuminuria in type 2 diabetic patients. (Nakhshab Chaudhry 2013) Professor, King Edwards Medical University, Lahore

30) Molecular characterization of virus(es) infecting hollyhock (Alcea rosea L.) samples exhibiting different symptoms. (Muhammad Zia-ur-Rehman 2012) Associate Professor, Govt. Science College, Wahdat Road, Lahore

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

32) Engineering of modified derivatives of proinsulin for the production of human insulin. (Hina Zain 2012) Assistant Professor, Lahore College for Women University, Lahore

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

34) Mechanistic and stereochemical studies on 2-amino-3-ketobutyrate CoA ligase and related enzymes. (Farrukh Jamil 2011) Assistant Professor, COMSAT Sahiwal.

35) Hydrolytic enzyme(s) from newly isolated thermophilic strain from Pakistan (Muhammad Tayyab, 2011) Associate Professor, University of Veterinary and Animal Sciences, Lahore

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

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

38) Cloning and characterization of hydrolytic enzymes from bacterial strain R5. (Amir Jalal, 2010) Assistant Professor, Sahara Medical University, Narowal

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

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

41) Studies on the production of recombinant human insulin and its precursors. (Qurat-ul-Ain Afza Gardner, 2009) Associate Professor, School of Biological Sciences, University of the Punjab, Lahore

M. Phil Theses Supervised:

1) Recombinant production and characterization of phosphoglucose isomerase from *Pyrobaculum calidifontis* (Amina Maqsood 2022)

2) Molecular cloning and heterologous production of Pcal_0970 (a plant type L-asparaginase) from hyperthermophilic archaeon *Pyrobaculum calidifontis* (Tooba Hussain 2022)

3) Economical production of recombinant pullulanase from *Thermococcus kodakarensis* and its applications (Nimra Abbas 2022)

4) Cost-effective production of recombinant amylase for starch processing (Amna Ilyas 2022)

5) Recombinant production of L-asparaginase from *Thermococcus kodakarensis* for functional and application studies (Rameesha Arif 2022)

6) Studies on truncation of carbohydrate binding module (CBM-34) in cyclomaltodextrinase from *Geobacillus thermopakistaniensis* (Maryam Javed 2021)

7) Recombinant production, purification and characterization of a cellulase homologue from *Pyrobaculum calidifontis* (Saba Mobeen 2021)

8) Studies on recombinant production of DNA polymerase from Geobacillus sp. (Aqsa Anwar 2021)

9) *In vivo* soluble production of recombinant manganese catalase from *Geobacillus thermopakistaniensis* (Farhan Aziz 2020)

10) Heterologous expression in E. coli and characterization of recombinant Pcal_0976 from *Pyrobaculum calidifontis* (Asifa 2020)

11) Bioinformatic studies on a copper oxidase from *Geobacillus thermopakistaniensis* (Saman 2020)

12) Molecular cloning and characterization of recombinant Pcal_2031, a Rad51-like protein homologue from *Pyrobaculum calidifontis* (Syed Nasim Abbas 2019)

13) Molecular characterization of recombinant Pcal_0762, a transcriptional regulator homologue from *Pyrobaculum calidifontis* (Hafiza Zumra Fatima Hussain 2019)

14) Molecular cloning, production and optimization of recombinant phytases from mesophilic and thermophilic sources (Rabia Mukhtar 2018)

15) Cloning and characterization of α-amylase from *Anoxibacillus* (Rabia Rafique 2018)

16) Molecular cloning and production, in Escherichia coli, of copper oxidase from *Geobacillus thermopakistaniensis* with modified signal sequence (Maryam Shakeel 2017)

17) Molecular cloning and characterization of TK0522, a probable carbohydrate esterase from hyperthermophilic archaeon *Thermococcus kodakarensis* (Aleena Gul 2016)

18) Gene cloning, expression in *Escherichia coli* and characterization of TK1401, a probable carboxylesterase/lipase from hyperthermophilic archaeon *Thermococcus kodakarensis* (Tooba Zahid 2016)

19) Gene cloning and characterization of TK1884, an α–amylase from *Thermococcus kodakarensis* (Samia Falak 2016)

20) Gene cloning, with and without signal sequence, expression in *Escherichia coli* and characterization of a thermostable pullulanase from *Thermococcus kodakarensis* (Majida Atta Muhammad 2016)

21) Gene cloning, with and without signal sequence, expression in *Escherichia coli* and characterization of pullulanase from *Pyrobaculum calidifontis* (Ayesha Pervez 2016)

22) Gene cloning and expression, in *Escherichia coli*, of a hexokinase/glucokinase homologue from hyperthermophilic archaeon *Pyrobaculum calidifontis* (Musadiq Ali 2015)

23) Cloning and expression of α-amylase from *Bacillus licheniformis*, with and without signal sequence, and characterization of the gene product. (Barizah Malik 2012)

24) Characterization of thermostable pullulanase from *Thermococcus kodakaraensis*. (Mehwish Akram 2012)
25) Gene cloning and expression, in *Escherichia coli*, of tryptophan synthase α- and β-subunit from hyperthermophilc archaeon *Pyrobaculum caladifontis*. (Sumera Perveen 2012)
26) Gene cloning and characterization of a novel NAD(P)H oxidase from *Thermococcus kodakaraensis*. (Muhammad Hassan Shafiq 2012)
27) Comparative studies on NADH oxidases from hyperthermophilic archaeon *Thermocccoccus kodakarensis*. (Muhammad Atif Nisar 2011)
28) Characterization of 4-α-glucanotransferase from *Pyrobaculum caladifontis*. (Aslam Shehzad 2010)
29) Cloning and characterization of flap-endonuclease from *Thermococcus kodakaraensis.* (Qurat-ul-Ain 2009)
30) NADH Oxidase from *Thermococcuskodakaraensis.*(Saira Hameed 2009)
31) Cloning and characterization of NADH oxidase from hyperthermophilic archaeon *Thermococcus kodakaraensis.* (Saira Akmal 2008)
32) Gene cloning, expression and purification of thermostable NADH oxidase. (Fareeha Tasleem 2008)
33) Cloning and characterization of lipase from *Bacillus subtilis* strain R5. (Mariam Zameer 2008)
34) Cloning and characterization of α–amylase from *Bacillus licheniformis*. (Alia Farooq 2007)
35) Purification and characterization of α–amylase from *Bacillus licheniformis.* (Farrah Naz 2007)

Competitive Research Project Grants:

Sr. # Projects Title (as PI)	**Amount (Pak Rs.)**	**Sponsoring Agency**
1) Recombinant production and process optimization of thermostable L-asparaginases for therapeutic and	21,141,286/-	CPEC-HEC

industrial applications (CPEC-24)

2) Development, production and commercialization of VP2 viral vector vaccine for infectious bursal disease (Gumboro)	76,500,000/-	HEC, Pakistan
3) Discovering the missing phosphofructokinase in hyperthermophilic archaeon *Pyrobacullum caladifontis* (HEC 20-2024)	6,824,100/-	HEC, Pakistan
4) Cloning and characterization of a thermostable DNA polymerase	3,046,470/-	HEC, Pakistan
5) Production and characterization of recombinant laccase from locally isolated thermophillic *Geobacillus* strain SBS-4S	1,673,480/=	PSF, Pakistan
6) Characterization of thermostable DNA ligase	1,000,000/-	HEC, Pakistan

(as Co-PI)

1) Production of recombinant DNA Polymerase for rapid diagnostics of infectious diseases (NRPU 15727)	4,566,100/-	HEC, Pakistan
2) Production enhancement and PCR application of an archaeal DNA polymerase – an important diagnostic enzyme	6,824,400/-	HEC, Pakistan
3) Engineering a Laccase-Xylanase bifunctional enzyme to improve biomass conversion (Project # 20-13589/NRPU/R&D/HEC/2020)	10,234,770/-	HEC Pakistan
4) Development of Immuno and On-site Lateral Flow Strip Assay Kit for Diagnosis of Infectious Bursal Disease in Poultry (AS 015)	3574000/-	PARC Pakistan

5)	Optimization of simultaneous liquefaction and saccharification: a novel process developed by using newly discovered thermoacidophilic pullulanase. (NRPU No.8527)	7,379,292/-	HEC Pakistan
6)	Process scale up and optimization for synthesis of thermostable industrial enzymes (TDF 02-069)	14,000,000/-	HEC Pakistan
7)	Characterization of immunogenic regions of Dengue Virus for potential vaccine (7136/Punjab NRPU/R&D/HEC/2017)	6,179,468/-	HEC Pakistan
8)	Production and characterization of recombinant DNA ligase from *Pyrobaculum calidifontis* (21-2087/SRGP/HEC/ 2018)	490,000/-	HEC Pakistan
9)	Characterization of Laccase from halophilic archaeal strain isolated from halophytes (Project # 2432)	485000/-	HEC Pakistan
10)	Cloning, sequencing, and expression of gene and biochemical characterization of starch hydrolyzing enzyme pullulanase from hyperthermophilic archaeon *Pyrobaculum calidifontis*	3,261,635/-	HEC, Pakistan

Honors and Awards:

1) UNESCO Fellowship
2) MONBUSHO Fellowship
3) Kyoto University Fellowship
4) JST Fellowship

5) Research Productivity Award (PCST)
6) Member BOG (CEMB)
7) Member BOS (KEMU)
8) Member BOS (LCWU)
9) Member BOS (GCU)
10) Member BOS (NIBGE)
11) Member BOS (CEMB)
12) Member BOS (FA, PU)