



**Name:** DR. MASOOD AHMED SIDDIQUI  
**Sex:** Male  
**Nationality:** Pakistan      **Local/ Domicile:** Quetta, Balochistan  
**Date of Birth** April 13, 1962. Quetta, Pakistan  
**Marital status:** Married  
**Permanent address:** Department of Chemistry, University of Balochistan, Quetta, Pakistan.  
E-mail address: [masoodbioeng@hotmail.com](mailto:masoodbioeng@hotmail.com)  
**Field of specialization:** Chemistry, Biochemistry, [Genetic engineering and Biotechnology](#).  
**Research Interest:** Hyperthermophiles and their thermostable products, industrially important microorganisms and their enzymes Redox proteins. Low temperature adaptation of hyperthermophiles, Proteomics and bioinformatics.

### Education:

Name of school	Location	Degree	Field	Year	Division
Osaka University	Suita, Osaka Japan	Ph. D.	<b>Biotechnology</b>	March 1998	Thesis
Balochistan University	Quetta, Pakistan	M. Phil	<b>Biochemistry</b>	1994	First/ Thesis
Balochistan University	Quetta, Pakistan	M. Sc.	Chemistry Specialization in <b>Biochemistry</b>	1986	First
Govt. Science College	Quetta, Pakistan	B. Sc.	Chemistry Biology	1983	2nd
Govt. Science College	Quetta, Pakistan	F. Sc.	Science subjects	1981	First
Tameer-I-Nou Public School	Quetta	Matric.	Science subjects	1979	First

**M.Phil. Thesis:** Structure Elucidation of Bacterial Cell Wall (*Micrococcus lysodeikticus*).

**Ph.D. Thesis:** Studies on a Redox Protein and an Oxidoreductase Involved in Fermentative Metabolism of the Hyperthermophilic Archaeon *Pyrococcus* sp. KOD1.

### **Teaching/Research experience:**

**Visiting Scholar/ Postdoc:** (2012) Department of Microbiology, School of Biological Sciences, [University of Georgia, Athens, United States of America \(USA\)](#) under HEC Sabbatical/Duty leave fellowship program.

**Professor Tenure Track System (TTS):** (2008-to date) Department of Chemistry, University of Balochistan Quetta, Pakistan

**Professor:** (2004-2008) Department of Chemistry, [University of Balochistan Quetta, Pakistan](#).

**JSPS Postdoctoral Fellowship:** (August 2002-August 2004) Nanobiotechnology center, Department of Life Science, School of Science and Technology, [Kwansei Gakuin University](#), 2-1 Gakuen, Sanda 669-1337, Japan.

**Saint Paul's University Postdoctoral Fellowship:** (April 2001-October 2001) Department of Life Science, Graduate School of Life Science, [Saint Paul's \(Rikkyo\) University](#), Ikebukuro, Toshima-ku, Tokyo, Japan.

**Assistant Professor:** (April 2000 – June 2004) Department of Chemistry, [University of Balochistan](#), Quetta, Pakistan.

**Ph.D. Research Student:** (April 1995-March 1998) Department of Biotechnology, Graduate School of Engineering, [Osaka University, Japan](#).

**Research Fellow:** (Oct 1994-March 1995) Department of Biotechnology, Graduate School of Engineering, [Osaka University, Japan](#).

**Japanese language course:** (April 1994-Sep 1994) [Osaka University of Foreign Studies](#), Minoo-shi, Osaka, Japan.

**M. Phil Research student:** (1987-1990) Institute of Biochemistry, [University of Balochistan Quetta](#), Pakistan.

**Lecturer:** (April 1987-April 2000) Department of Chemistry, [University of Balochistan Quetta](#), Pakistan.

### **Honour/ Award**

- Best teacher award for the year 2012-2013 awarded by Higher Education Commission Pakistan dated December, 2014.
- HEC Sabbatical/Duty leaves fellowship 2012.

- JSPS Postdoctoral Fellowship 2002-2004.
- Saint Paul's University (Rikkyo) Postdoctoral Fellowship 2001.
- Monbusho Scholarship Govt. of Japan 1994-1998.

### **National/ International Projects:**

1. Cloning, Sequencing, and Expression of Gene and Biochemical Characterization of Starch Hydrolyzing Enzyme from Hyperthermophilic Archaeon *Pyrobaculum calidifontis*. (Principal Investigator)  
Donor Agency: Higher Education Commission Pakistan. Amount. Rs.3.3 Million. Year. 2007.
2. Bioassay guided isolation of natural products from *Juniperus excelsa*. (Co-Principal Investigator) Donor Agency: Higher Education Commission Pakistan. Amount. Rs.0.5 Million. Year. 2011.

### **Membership of Academic Societies:**

1. The Society of Fermentation and Bioengineering, Japan
2. Japan Society for Bioscience, Biotechnology and Agro chemistry (JSBBA).
3. Pakistan Chemical Society (Life Member)
4. Pakistan Biological Society.

### **Fellowship of Professional Bodies.**

1. Fellow Chemical Society of Pakistan (FCSP).

### **Administrative Responsibility:**

1. **Dean**, Faculty of Basic Sciences, University of Balochistan (February 2016 to till date).
2. **Acting Dean**, Faculty of Basic Sciences, University of Balochistan (January-February 2012).
3. **Chairman**, Department of Chemistry, University of Balochistan (August 2010-August 2013).
4. Incharge Biochemistry Section (1987-1998, 2004 to till date)
5. Incharge Biochemistry Research Lab.
6. Member Academic Council, University of Balochistan, Quetta since 2004.
7. Member Finance and Planning Committee, University of Balochistan, Quetta.
8. Member National Curriculum Committee.
9. Member Senate, University of Balochistan, Quetta

10. Member Board of Studies, Department of Chemistry, University of Balochistan, Quetta.
11. Chairman, Board of Studies, Faculty of Basic Sciences, University of Balochistan, Quetta.

**Supervisor:** HEC approved PhD. Supervisor.

**Conferences/Workshops/Seminars Organized / Participated:**

1. Participated in the “All Balochistan Scientific Program, 1983” organized by Pakistan Science and Technical Information Centre.
2. International workshop on “Glycoconjugates” organized by Institute of Biochemistry University of Balochistan. October 6-9, 1986.
3. Workshop on “Student Tutorial and Management” organized by University of Balochistan. December 5-7, 1987.
4. Workshop on “Course Planning and Management” organized by University of Balochistan. April 16-20, 1989.
5. Symposium entitled “Protein Structure Function Relationship” organized by H.E.J. Research Institute of Chemistry, University of Karachi. December 11-14 1989.
6. International seminar on “Macromolecules” organized by Pakistan Biological Science Society. Islamabad, September 1992.
7. Workshop on “Basic Analytical Techniques” under the auspices of National Core Group” organized by Department of Chemistry University of Balochistan, Quetta, November, 13-19, 2005.
8. First International conference on the “Role of Chemistry and Biochemistry” organized by Department of Chemistry & Institute of Biochemistry, University of Balochistan, Quetta, April, 16-18, 2007.
9. Workshop on “Semester System” Organized by the Department of Learning Innovation, Higher Education Commission, Pakistan, May 25-26, 2007.
10. Molecular Biology Experiments in the School of Biological Sciences, University of the Punjab, February 16-21, 2009.
11. “8<sup>th</sup> International and 20<sup>th</sup> National Chemistry Conference” organized by Department of Chemistry, Quaid-i-Azam University Islamabad, February 15-17. 2009.
12. 2<sup>nd</sup> Pak-Turk seminar on “Chemical Sciences” organized by National Centre of Excellence in Analytical Chemistry, University of Sindh, Jamshoro, Pakistan in

Collaboration with Department of Chemistry, Selcuk University, Konya, Turkey, February 11-13, 2010.

13. 15<sup>th</sup> National Pediatric Conference Organized by Pakistan Pediatric Council held on 30<sup>th</sup> September to 2<sup>nd</sup> October 2011 at Quetta.

### **International conferences:**

- 1) **Siddiqui, MA.**, Fujiwara, S., and Imanaka, T. Cloning, sequencing and characterization of indolepyruvate ferredoxin oxidoreductase *Pyrococcus* sp. KOD1. Society for fermentation and Bioengineering (Nagoya University, **Japan**) 1997.
- 2) **Imai, T.**, Yasujima, D., and **Siddiqui, MA.** A novel method for the measuring enzyme activity above 100°C by continuous monitoring of the absorbance change. The 4<sup>th</sup> International congress on **extremophiles, Italy** Sept 2002. 4: 387.
- 3) **Siddiqui, MA.**, Higashibata, H., Takagi, M., Imanaka, T., and Fujiwara, S. Effect of inter-molecular ion pair on nucleosome formation of hyperthermophilic histone. Japan Society for Bioscience, Biotechnology, and Agrochemistry (Nihon University, Kanagawa, **Japan**). April 2003. 22.
- 4) **Hirooka, K.**, **Siddiqui MA.**, Yamanaka, A., Imanaka, T., Fukusaki, E., Kobayashi, A., and Fujiwara, S. Characterization of isopentenyl diphosphate isomerase from *Thermococcus kodakaraensis* KOD1. The Society for Biotechnology (Komamoto University, Kyushu, **Japan**). April 2004.
- 5) **Siddiqui, MA.**, Masaya Yoshida, Michi Izumi, Tadayuki Imanaka, and Shinsuke Fujiwara. Low temperature adaptation of hyperthermophilic archaea. International Symposium of Environmental Biotechnology (University of Illinois Chicago, **USA**) June 2004.
- 6) **Shinsuke Fujiwara**, Aiko Yamanaka, **Masood Ahmed Siddiqui**, Kazutake Hirooka, Takeshi Bamaba, Akio Kobayashi, Tadayuki Imanaka, Ei-ichiro Fukusaki. Polyisoprenoid synthesis using hyperthermophilic enzymes in organic-aqueous two-liquid phase system. International Symposium on Extremophiles and Their Applications (Toyo University, Japan) November, 2005.

### **Genome Sequence:**

**Siddiqui, M.A.**, Rashid, N., Whitman, W. and Ayyampalayam, S (2013). *Geobacillus thermopakistaniensis* strain. MAS1, whole genome shotgun sequencing project.

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**Publications:**

- 1) Tayyab, M., Rashid, N., Wasim, M., Raza, A., Firyal, S., Tahir, Y., and **Siddiqui, MA.** (2015) Hydrophobic interactions induced activation of a thermo-alkalophilic lipase from *Geobacillus* SBS-4S by molecular dynamics simulations. *J. Chem. Soc. Pak.* 37/5 1030-1032.
- 2) **Siddiqui, MA.,** Rehman, H., and Rashid, N. (2014) Gene cloning and characterization of a type II pullulanase hydrolase from a hyperthermophilic archaeon *Pyrobaculum calidifontis*. *Pakistan J. Zool.* 46/4 (Aug) 1077-1084.
- 3) **Siddiqui, MA.,** Rashid, N., Ayyampalayam S., and Whitman WB. (2014) Draft genome sequence of *Geobacillus thermopakistaniensis* strain MAS1. *Genome Announc.* 2(3):e00559-14. doi:10.1128/genomeA.00559-14.
- 4) **Siddiqui, MA.,** Rashid, N., and Rehman, H. (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. Pharma. Sci.* 26/4 (July) 733-740. **Impact Factor (1.103)**
- 5) Rasool, N., Rashid, N., Bashir, Q., and **Siddiqui, MA.** (2013) Proteolytic inventory of *Thermococcus kodakaraensis*. *Afr. J. Microbiol. Res.* 7/25 (June) 3139-3150. **Impact Factor (0.56)**
- 6) Ozawa, Y., **Siddiqui, MA.,** Takahashi, Y., Urushiyama, A., Ohmori, D Yamakura, F., Arisaka, F., and Imai, T. (2012) Indolepyruvate ferredoxin oxidoreductase: An oxygen-sensitive iron-sulfur enzyme from the hyperthermophilic archaeon *Thermococcus profundus*. *J. Biosci. Bioeng.* (Elsevier Science B.V., Amsterdam, the Netherlands), 114/1 (July) 23-27. **Impact Factor (1.702)**
- 7) Sami, M., Waseem, A., Jafri YZ., Haider, SS., Muzaffar AK., Akbar, S., **Siddiqui, MA.,** and Murtaza, G. (2012) Prediction of the rate of dust fall in Quetta city, Pakistan using seasonal ARIMA (SARIMA) modeling. *Int. J. Phys. Sci.* 7: 1713-1725. **Impact Factor (0.54)**
- 8) Rashid, N., Saira, H., **Siddiqui, MA.,** and Ikram-ul- Haq. (2011) Gene cloning and characterization of NADH oxidase from *Thermococcus kodakaraensis*. *Afr. J. Biotechnol.* 10: 17916-17924. **Impact Factor (0.573)**

- 9) Rashid, N., **Siddiqui, MA.**, Haider, MS., and Arshad, J. (2010) Crystallization of Fructose 1,6-bisphosphatase from the Hyperthermophilic Archaeon *Thermococcus kodakaraensis*. *Pak. J. Bot.* 42: 2313-2316. **Impact Factor (0.836)**
- 10) **Siddiqui, MA.**, Fujiwara, S., and Imanaka, T. (2009) Identification of temperature dependant proteins by proteomics. *J. Chem. Soc. Pak.* 31: 263-268. **Impact Factor (1.377)**
- 11) **Siddiqui, MA.**, and Niaz, M. (2008) Purification and characterization of glutamate dehydrogenase from Ovine brain. *J. Chem. Soc. Pak.* 30: 756-761. **Impact Factor (1.377)**
- 12) Waseemm, A., Yaqoob, M., Nabi, A., and **Siddiqui, MA.** (2007) Determination of carbaryl by flow injection with luminal chemiluminescence inhibition detection, *Int. J. Environ. Anal. Chem.* (Taylor & Francis) 87/12 (Oct) 825–832. **Impact Factor (0.954)**
- 13) **Siddiqui, MA.**, and Imai, T. (2007) Purification of an anaerobic oxidoreductase from the hyperthermophilic archaeon by affinity chromatography. *J. Chem. Soc. Pak.* 29: 390-303. **Impact Factor (1.377)**
- 14) **Siddiqui, MA.**, and Fujiwara, S. (2007) Preliminary structural studies of the type II isopentenyl diphosphate isomerase from a hyperthermophilic archaeon. *Science. Int.* 19: 369-372.
- 15) **Siddiqui, MA.**, Yamanaka, A., Hirooka, K., Bamaba, T., Kobayashi, A., Imanaka, T., Fukusaki, E., and Fujiwara, S. (2005) Thermodynamic and Enzymological Characterization of Type II Isopentenyl Diphosphate Isomerase from Hyperthermophilic Archaeon *Thermococcus kodakaraensis*. *Biochem. Biophys. Res. Commun.* (Elsevier Science USA) 331: 1127-1136. **Impact Factor (2.823)**
- 16) Imai, T., Yasujima, D., and **Siddiqui, MA.** (2004) An instant measurement of oxidoreductase activity above 100°C by monitoring the absorbance change. *J. Biosci. Bioeng.* (Elsevier Science B.V., Amsterdam, the Netherlands), 97/5 (May), 336-338. **Impact Factor (2.009)**
- 17) Higashibata, H., **Siddiqui, MA.**, Takagi, M., Imanaka, T., and Fujiwara, S. (2003). Surface histidine residue of archaeal histone affects DNA compaction and thermostability. *FEMS. Microbiol. Lett.* (Elsevier Science B.V., Amsterdam, the Netherlands), 224/1 (July), 17-22. **Impact Factor (2.223)**

- 18) Yaqoob, M., Nabi, A., **Siddiqui, MA.**, Waseem, A., Achakzai, AKK., Saeed, A., and Masoom, M. (2001) Enzymatic procedures for the determination of phospholipids. *J. Chem. Soc. Pak.* 23: 171-175. **Impact Factor (1.377)**
- 19) **Siddiqui, MA.**, Fujiwara, S., Takagi, M., and Imanaka, T. (1998) In Vitro heat effect on heterooligomeric subunit assembly of thermostable indolepyruvate ferredoxin oxidoreductase. *FEBS. Lett.* (Elsevier Science B.V., Amsterdam, the Netherlands), 434/3 (Sep.), 372-376. **Impact Factor (3.261)**
- 20) **Siddiqui, MA.**, Fujiwara, S., Takagi, M., and Imanaka, T. (1998) Phylogenetic analysis and effect of heat on conformational change of ferredoxin from hyperthermophilic archaeon *Pyrococcus* sp. KOD1. *J. Ferment. Bioengn* (Elsevier Science B.V., Amsterdam, the Netherlands), 85/3 (Mar.), 271-277. **Impact Factor (2.009)**
- 21) **Siddiqui, MA.**, Fujiwara, S., and Imanaka, T. (1997) Indolepyruvate ferredoxin oxidoreductase from *Pyrococcus* sp. KOD1 possesses a mosaic structure showing features of various oxidoreductases. *Mol. Gen. Genet.* (Springer-Verlag, Heidelberg, Germany), 254/4 (Apr.), 433-439. **Impact Factor (2.733)**
- 22) **Siddiqui, MA.**, Qureshi, MH., Malghani, MAK., Walker, N., Fayyaz-ud-Din., and Nasir-ud-Din. (1992) Structure of *Micrococcus lysodeikticus* cell wall containing phosphorylated sugars. *Biochem. Intl.* (Academic Press Australia) 26/3 (March), 509-519. **Impact Factor (2.347)**
- 23) Yaqoob, M., **Siddiqui, MA.**, and Masoom, M. (1992) Spectrophotometric flow injection determination of nitrite in water samples. *J. Chem. Soc. Ind.* 69: 32-33. **Impact Factor (0.552)**
- 24) Yaqoob, M., **Masood, AS.**, Anwar, M., and Masoom, M. (1991) Flow injection method for sulphide determination Using an organic mercury compound. *Anal. Lett.* (Marcel Dekker, Inc. New York, United states), 24/4 (April), 581-588. **Impact Factor (1.219)**
- 25) Yaqoob, M., **Siddiqui, MA.**, and Masoom, M. (1991) Spectrophotometric flow injection determination of nitrate and nitrite in potable water using 8-hydroxyquinoline. *J. Chem. Soc. Pak.* 13: 248-252. **Impact Factor (1.377)**