

Curriculum vitae

Dr. Javed Hussain Niazi K. M.

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[Harapanahalli-583131](#), Davangere (Dist)

Karnataka, **India**

Academics

1996 April – 2003 Feb: Ph.D. Biochemistry - [Gulbarga University](#), India. **Advisor:** [Prof. T. B. Karegoudar](#)

1994 March – 1996 April: M.Sc. Biochemistry (1996) - Gulbarga University, India.

1991 June – 1994 March: B.Sc. (Chemistry) (1994) - [Gulbarga University](#), India

Expertise keywords

Bioelectronics, biosensors for disease biomarkers, aptamers, nanotoxicity, biomolecular engineering

Professional Experience

2011 July–till now: Research Faculty, [Sabancı University Nanotechnology Research & Application Center](#), Orta Mah. Tuzla, Istanbul.

2009 Apr–2011 June: Visiting Faculty, [Faculty of Engineering & Natural Sciences, Sabancı University](#), Orhanli, Tuzla 34956, Istanbul

2008 Sep–2009 Mar: Research Professor, [Biosensors & Biomolecular Technology](#), Dept. of Biotechnology, Korea University, Seoul, Rep. of Korea

2007 Sep–2008 Sep: Postdoctoral Research Associate, [Biosensors & Biomolecular Technology](#), Dept. of Biotechnology, Korea University, Seoul, Rep. of Korea

2005 Apr–2007 Sep: Visiting Scientist [Korea Institute of Science and Technology \(KIST\)](#), Cheongryangny, Seoul 130-650, Rep. of Korea.

2004 Mar–2005 Apr: Postdoctoral Researcher, [Gwangju Institute of Science & Technology \(GIST\)](#), 1 Oryong-dong, Buk gu, Gwangju 500 712, Rep. of Korea.

2003 Feb–2004 Feb: DBT-Postdoctoral Fellow, Nuclear Agriculture & Biotechnology Division (NA&BTD) [Bhabha Atomic Research Centre \(BARC\)](#), Trombay, Mumbai-85. *A national level PDF program sponsored by Dept. of Biotechnology, Govt. of India, Ministry of Science and Technology (DBT-PDF program).*

Research Grants

Ongoing

2013 May–2016 April: TÜBİTAK 1001 (project no. 112Y309) on *Microbial bio-transformation of semiconductor nanomaterials (NMs)*. Total budget- **359,933 TL** (equivalent to **US \$200,000**)

2012 Nov–2015 Oct: COST 2515, (project no. 112T670) on *Alternative cancer targeting strategies with photosensitising phthalocyanines linked to vitamins and aptamers*. Total budget – **290,000 TL** (equivalent to **US \$161,000**) –amount shared as a collaborative project.

2012 Dec–2015 Nov: TÜBİTAK 1001 (project no. 112E051) with Dr. Anjum Qureshi on *Probing size-dependent toxicity of nanomaterials on living microbial cells using lab-on-a-chip (LoC)*. Total budget- **412,327 TL** (equivalent to **US \$229,000**)

Completed

2011 Apr–2013 Mar: TÜBİTAK 1001 (project no. 110E287) on *"In-vitro selection of ssDNA aptamers and their use for the development of label-free aptamer based biosensors for cancer diagnosis"*. Total budget- **403,213 TL** (equivalent to **US \$226,190**)

2003 Feb–2004 Feb: DBT-PDF program, Govt. of India, Ministry of Science and Technology. Total budget- **Rs. 250,000 (\$5500)**

Patents

1. Man Bock Gu, **Javed H. Niazi**, Yeon Seok Kim, Yoon Jin Kim, Su Jin Lee “DNA aptamer binding to Oxytetracycline with specificity and production method” [International Patent No. WO2009/041776 \(Dec. 2, 2009\)](#). [[link 1](#)] [[link 2](#)]. WIPO link-<http://www.wipo.int/pctdb/en/wo.jsp?WO=2009041776>
2. Man Bock Gu, **Javed H. Niazi**, and Lee Su Jin. “[Twenty one single-stranded DNA aptamers having high affinity to tetracycline and it’s analogues with high specificity and production method thereof](#)”. Publication No. [KR20090103100 \(A\)](#) (pending).
3. Man Bock Gu, Jeong Choon Bok, and **Javed H. Niazi**. [45 Single-stranded DNA aptamers having high affinity to diclofeanc with high specificity and the development method](#). Korea Patent No. 10-2009-0048759 (pending).
4. Anjum Qureshi, Yasar Gurbuz, **Javed Hussain Niazi Kolkar Mohammed**, Saravan Kallempudi. [Novel method and device for whole-cell bacterial bio-capacitor chip for detecting cellular stress induced by toxic chemicals](#). **U.S. Provisional Application No. 61/488,693**, filed on May 20, 2011 and Non-provisional Application filed on May 17, 2012 (status-pending).

Publications (SCI) [[Pubmed](#)] [RSS Feed](#)

1. Pandey A, Gurbuz Y, Ozguz V, **Niazi JH*** and Qureshi A* (2017) [Graphene-interfaced electrical biosensor for label-free and sensitive detection of foodborne pathogenic E. coli O157:H7](#). **Biosensors and Bioelectronics** (Just Accepted!)
2. Bharadwaj S, Mitchell RJ, Qureshi A, **Niazi JH*** (2017) [Toxicity evaluation of e-juice and its soluble aerosols generated by electronic cigarettes using recombinant bioluminescent bacteria responsive to specific cellular damages](#). **Biosensors and Bioelectronics** 90, 53-60.
3. Chouhan RS, Panday A, Qureshi A*, Ozguz V, **Niazi JH*** (2016) [Nanomaterial resistant microorganism mediated reduction of graphene oxide](#). **Colloids and Surfaces B: Biointerfaces** 146, 39-46.
4. Chouhan RS, Qureshi A, Yagci B, Gülgün MA, V Ozguz, **Niazi JH*** (2016) [Biotransformation of multi-walled carbon nanotubes mediated by nanomaterial resistant soil bacteria](#). **Chemical Engineering Journal**, 298, 1-9.
5. **Niazi JH***, Pandey A, Gurbuz Y, Ozguz V, Qureshi A (2016) [Cells-on-chip based transducer platform for probing toxicity of metal nanoparticles](#). **Sensors and Actuators B: Chemical**, 231, 659–665.
6. Qureshi A*, Gurbuz Y and **Niazi JH*** (2015) [Label-free capacitance based aptasensor platform for the detection of HER2/ErbB2 cancer biomarker in serum](#). **Sensors and Actuators B. Chemical** 220, 1145-1151.
7. Pandey A, Chouhan RS, Gurbuz Y, **Niazi JH*** and Qureshi A* (2015) [S. cerevisiae whole-cell based capacitive biochip for the detection of toxicity of different forms of carbon nanotubes](#). **Sensors and Actuators B. Chemical**, 218, 253-260.
8. Chouhan RS, Qureshi A and **Niazi JH*** (2015) [Determining the fate of fluorescent quantum dots on surface of engineered budding S. cerevisiae cell molecular landscape](#). **Biosensors and Bioelectronics** 69, 26-33.
9. Qureshi A*, Gurbuz Y and **Niazi JH*** (2015) [Capacitive aptamer-antibody based sandwich assay for the detection of VEGF cancer biomarker in serum](#). **Sensors and Actuators B: Chemical**, 209, 645-651.

10. **Niazi JH***, Verma SK, Niazi S and Qureshi A (2015) [In vitro HER2 protein-induced affinity dissociation of carbon nanotube-wrapped anti-HER2 aptamers for HER2 protein detection](#). **Analyst**, 140, 243-240.
11. Anjum Qureshi,* Ashish Pandey, Raghuraj S. Chouhan, Yasar Gurbuz, and Javed H. Niazi* (2015) [Whole-cell based label-free capacitive biosensor for rapid nanosize-dependent toxicity detection](#). **Biosensors and Bioelectronics** 67, 100-106.
12. Chouhan RS, **Qureshi A***, **Niazi JH*** (2014) [Quantum dot conjugated *S. cerevisiae* as smart nanotoxicity indicators for screening toxicity of nanomaterials](#). **Journal of Materials Chemistry B**, 2, 3618–3625.
13. Chouhan RS, **Niazi JH***, **Qureshi A*** (2014) [Chemical toxicity detection using quantum dot encoded *E. coli* cells](#). **Sensors and Actuators B: Chemical** 196, 381-387.
14. Chouhan RS, **Niazi JH***, **Qureshi A**** (2013) [_E. coli-quantum dot bioconjugates as whole-cell fluorescent reporters for probing cellular damages](#). **Journal of Materials Chemistry B**, 1, 2724-2730.
15. Unal H, **Niazi JH*** (2013) [Carbon Nanotube Decorated Magnetic Microspheres as an Affinity Matrix for Biomolecules](#). **Journal of Materials Chemistry B**, 1, 1894-1902.
16. Park J-W, Kallempudi SS, Lee SJ, **Niazi JH***, Gurbuz Y, Youn BS, Gu MB* (2012) [Rapid and sensitive detection of nampt \(PBEF/Visfatin\) in Human Serum using an ssDNA aptamer-based capacitive biosensor](#). **Biosensors and Bioelectronics** 38(1), 233-238.
17. Qureshi A*, Gurbuz Y, **Niazi JH*** (2012) [Biosensors for Cardiac Biomarkers Detection: a review](#). **Sensors and Actuators B: Chemical** 171-172, 62-76.
18. Qureshi A, Roci I, Gurbuz Y, **Niazi JH*** (2012) [An aptamer based competition assay for protein detection using CNT activated gold-interdigitated capacitor arrays](#). **Biosensors and Bioelectronics** 34, 165-170.
19. Kallempudi SS, Altintas Z, **Niazi JH**, Gurbuz Y (2012) [A new microfluidics system with a hand-operated, on-chip actuator for immunosensor applications](#). **Sensors and Actuators B: Chemical** 163, 194-201. [\[PDF link\]](#)
20. Y.S. Kim, **J.H. Niazi**, Y.J. Chae, U.Go, M.B. Gu (2011), [Aptamers-in-liposome for selective and multiplexed capturing of small organic compounds](#), **Macromolecular Rapid Communications** 32, 1169-1173.
21. [Qureshi, A.](#), [Gurbuz, Y.](#) and **Niazi, J.H.***(2011) [Probing chemical induced cellular stress by non-Faradaic electrochemical impedance spectroscopy using *Escherichia coli* capacitive biochip](#). **Analyst** 136, 2726-2734. [\[Supplementary\]](#) This article has been featured in [Royal Society of Chemistry blogs- Click here](#)
22. **Niazi, J. H.**, Sang B. I., Kim, Y.S. and Gu, M.B. (2011) [Global gene response in *Saccharomyces cerevisiae* exposed to silver nanoparticles](#). **Applied Biochemistry & Biotechnology** 164, 1278-1291 [\[Supplementary\]](#) (SCI)
23. [Qureshi, A.](#), [Gurbuz, Y.](#), Kallempudi, S. and **Niazi, J.H.*** (2010) [Label-free RNA aptamer based capacitive biosensor for the detection of C-reactive protein](#). **Physical Chemistry Chemical Physics** 12, 9176-9182.
24. ***Qureshi, A.**, ***Niazi, J.H.**, Kallempudi, S. and [Gurbuz, Y.](#) (2010) [Label-free capacitive biosensor for sensitive detection of multiple biomarkers using gold interdigitated capacitor arrays](#). **Biosensors & Bioelectronics** 25, 2318-2323. [\[Supplementary\]](#) ***These authors equally contributed**

25. Kim, Y.J., Kim, Y.S., **Niazi, J.H.** and Gu, M.B. (2010) [Electrochemical aptasensor for tetracycline detection](#). **Bioprocess & Biosystems Engineering** 33, 31-37
26. Quershi, A., Gurbuz, Y., **Niazi, J.H.** (2010) [Label-free detection of cardiac biomarker using aptamer based capacitive biosensor](#). **Procedia Engineering** 5, 828-83.
27. Ahn, J.M., Hwang, E.T., Youn, C.H., Banu, D.L., Kim, B.C., **Niazi, J.H.** and Gu, M.B. (2009) [Prediction and classification of the modes of genotoxic actions using bacterial biosensors specific for DNA damages](#). **Biosensors & Bioelectronics** 25, 767-772. [[Supplementary](#)] (SCI)
28. *Joeng, C.B., ***Niazi, J.H.**, Lee, S.J. and Gu, M.B. (2009) [ssDNA aptamers that recognize diclofenac and 2-anilinophenylacetic acid](#). **Bioorganic & Medicinal Chemistry** 17, 5380-5387. [[Supplementary](#)] *-Equally contributed (SCI)
29. **Niazi, J.H.** and Gu, M.B. (2009) [Toxicity of metallic nanoparticles in microorganisms-a review](#). In: [Atmospheric and Biological Environmental Monitoring](#). Kim, Y.J.; Platt, U.; Gu, M.B.; Iwahashi, H. (Eds.) Springer-verlag, Heidelberg, Germany, pp. 193-206. [Book Chapter]
30. Kim, Y.S., **Niazi, J.H.** and Gu, M.B. (2009) [Specific detection of oxytetracycline using DNA aptamer immobilized interdigitated array electrode chip](#). **Analytica Chimica Acta** 634, 250-254.
31. **Niazi, J.H.**, Kim, B.C., Ahn, J.M. and Gu, M.B. (2008) [A novel bioluminescent bacterial biosensor using the highly-specific oxidative stress-inducible *pgi* gene](#). **Biosensors & Bioelectronics** 24, 670-675. [[Supplementary](#)] (SCI)
32. **Niazi, J.H.**, Lee, S.J. and Gu, M.B. (2008) [Single stranded DNA aptamers specific for antibiotics tetracyclines](#). **Bioorganic & Medicinal Chemistry** 16, 7245-7253. [Supplementary [data 1](#); [data 2](#)]
33. Lee, S.J., Youn, B.S., Park, J.W., **Niazi, J.H.**, Kim, Y.S., Gu, M.B. (2008) [A ssDNA aptamer-based SPR biosensor for the detection of RBP4 for the early diagnosis of type 2 diabetes](#). **Analytical Chemistry** 80, 2867-2873. [[PDF](#)] (SCI)
34. **Niazi, J.H.**, Lee, S.J., Kim, Y.S. and Gu, M.B. (2008) [ssDNA aptamers that selectively bind oxytetracycline](#). **Bioorganic & Medicinal Chemistry** 16, 1254-1261. (SCI)
35. **Niazi, J.H.**, Kim, B.C. and Gu, M.B. (2007) [Characterization of superoxide-stress sensing recombinant *Escherichia coli* constructed using promoters for genes *zwf* and *fpr* fused to *lux* operon](#). **Applied Microbiology & Biotechnology** 74, 1276-1283.
36. Patil, N.K., Sharanagouda, U., **Niazi, J.H.**, Karegoudar, T.B. (2004) [Stable degradation of catechol by *Pseudomonas* sp. strain NGK1 encapsulated in alginate and polyurethane foam](#). **Indian Journal of Biotechnology** 4, 568-572.
37. **Niazi, J.H.**, Shinde, M. and Karegoudar, T.B. (2003) [Degradation of dimethylphthalate by a *Bacillus* sp.](#) **Research Journal of Environmental Chemistry** 7, 57-61.
38. 3. Patil, N.K., Sharanagouda, **Niazi, J.H.**, Kim, C.K and Karegoudar, T.B. (2003) [Degradation of salicylic acid by free and immobilized cells of *Pseudomonas* sp. strain NGK1](#). **Journal of Microbiology & Biotechnology** 13, 29-34.
39. 2. **Niazi, J.H.**, Prasad, D.T. and Karegoudar, T.B. (2001) [Initial degradation of dimethylphthalate by esterases from *Bacillus* species](#). **FEMS Microbiology Letters** 196, 201-205
40. **Niazi, J.H.** and Karegoudar, T.B. (2001) [Degradation of dimethylphthalate by free and immobilized cells of *Bacillus* sp. in calcium alginate and polyurethane foam](#). **Journal of Environmental Science & Health A36**, 1134-1144.

Other articles

41. [Qureshi, A.](#), [Gurbuz, Y.](#), Kallempudi, S. and **Niazi, J.H.*** (2011) [Label-free capacitive E. coli biochip for determining chemicals that induce cellular toxicity](#). *Procedia Engineering*, 25, 928-931. [[PDF link](#)]
42. Taşdemir, Ferhat and Zehir, Samet and Özeren, Emre and Kolkar Mohammed, Javed Hussain Niazi and Qureshi, Anjum and Kallempudi, Sreenivasa Saravan and Kaynak, Mehmet and Scholz, Rene and Gürbüz, Yaşar (2010) *A new lab-on-chip transmitter for the detection of proteins using RNA aptamers*. In: 40th European Microwave Conference, Paris, France, pp. 489-492. [[PDF link](#)]
43. Ahn, J.M., Hwang, E., Kim, B.C., **Niazi, J.H.** and Man Bock Gu (2009) [Prediction and classification of the modes of genotoxic actions using bacterial biosensors and cell array chip](#). *Journal of Bioscience and Bioengineering* 108, 1, S94-S95.
44. Chouhan, RS, **Niazi JH***, and Qureshi A* (2014) [Quantum dots conjugated E. coli living cells as fluorescent reporters to detect cytotoxicity of chemicals](#). *Progress in Exergy, Energy, and the Environment*. Springer International Publishing, pp471-475.