

Sonu Gandhi, PhD

Scientist D

DBT-National Institute of Animal Biotechnology (NIAB)

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Education

- **Ph.D** (Biotechnology), CSIR-Institute of Microbial Technology (IMTECH) in collaboration with Department of Biotechnology, Panjab University, Chandigarh, India
- **M. Sc.** (Microbiology), Department of Microbiology, Jiwaji University, Gwalior, India (2002-2004).
- **B. Sc.** Botany (Hons), Department of Botany, Aligarh Muslim University, Aligarh, India (1999-2002).

Research Experience

- **Scientist-D** from 13th July 2018- till date at National Institute of Animal Biotechnology (NIAB), Hyderabad.
- **Assistant Professor** from October 2015- 10th July 2018, Amity Institute of Biotechnology, Amity University, Noida, India
- **Visiting Scientist** from 2014 to 2015, Department of Material Science and Engineering, University of Washington, Seattle, USA.
- **Postdoctoral Research Fellow** from 2010 to 2014, Campus IFOM-IEO, Milan, Italy.
- **Exchange Program** at Nanyang Technological University (NTU), Singapore in 2008

Research Projects

- **SERB-ECR 2016** “Development of peptide functionalized gold nanoparticles for efficient targeting and imaging of urokinase plasminogen activator receptor (uPAR) in cancer diagnostics” Date of sanction: 04/11/16, Completion Date: 03/08/20; Approved Cost: Rs. 35,04,600.00 (*Completed as Principal Investigator with Excellent grading*)
- **DBT-Biocare 2016** “Iron oxide nanoparticles-peptide complexes for imaging of urokinase plasminogen activator receptor (uPAR) in cancer diagnostics” Date of sanction: 04/07/2017, Completion Date: 25/08/2021; Approved Cost: Rs. 24,67,410.00 (*Ongoing as Principal Investigator*)
- **DST-INSA Young Scientist 2019** “Fabrication of paper device for real time detection of aflatoxin in milk” (*As mentor for the period of 2 months 1st July to 31st August, 2019*)
- **DBT-EMR 2020** “Development of Multiplex/Disposable Paper Microfluidic Device for Detection of β -lactam antibiotic residues in livestock and poultry products” Date of sanction: 01/01/2021, Completion Date: 31/12/2024; Approved Cost: Rs. 36,62,000.00 (*Ongoing as Principal Investigator*)
- **SERB-IRHPA 2020** “COVID-SCAN (Novel diagnostic platforms for point-of-care SARS-CoV-2 detection)” Date of sanction: 05/08/20, Completion Date: 04/08/23; Approved Cost: Rs. 56,73,360.00 (*Ongoing as Principal Investigator*)
- **SERB-CRG 2020** “PESTISCAN (Development of novel biosensor for endosulfan pesticide residue detection)” Proposed Cost: Rs. 37,00,000.00 (*Approved as Principal Investigator*)
- **SERB-WEA 2021** “Development of a new generation of biosensors integrated with nanostructured sensitive elements for detection of Salmonellosis” Cost: Rs. 15,00,000.00 (*Approved as Principal Investigator*)

Publications (Total Impact Factor- 208.848, Citation-1023, h-index-19, i10 index-25)

2021:

- 1) **Sonu Gandhi**[§], Saad M Alshehri, Molecular stability of the rabbit and chicken egg yolk immunoglobulins, *Frontiers in Bioscience, Elite*, 2021, 13, 185-194. (*Impact Factor- 2.7*).

2020:

- 2) Raghuraj Singh Chouhan, Ivan Jerman, David Heath, Sivasambu Bohm, **Sonu Gandhi**, Veera Sadhu, Syed Baker and, Milena Horvat, Emerging tri- s- triazine- based graphitic carbon nitride: A potential signal-transducing nanostructured material for sensor applications, *NanoSelect*, 2020, 1-32.
- 3) Emir Yasun*, **Sonu Gandhi***, Samraggi Choudhury, Reza Mohammadinejad, Farah Benyettou, Numan Gozubenli, Hamed Arami, Hollow Micro and Nanostructures for Therapeutic and Imaging Applications, *Journal of Drug Delivery Science and Technology*, 2020, 102094 (In Press), (*Impact Factor- 2.8*). (*=equal contribution)
- 4) Sandeep Kumar Kushwaha[§], Veerbhan Kesarwani, Samraggi Choudhury, **Sonu Gandhi**, Shailesh Sharma, SARS-CoV-2 transcriptome analysis and molecular cataloguing of immunodominant epitopes for multi-epitope based vaccine design. *Genomics*, 2020, 112, 5044-55 (*Impact Factor- 6.2*).
- 5) Akanksha Roberts, Neha Chauhan, Saurav Islam, Subhasis Mahari, Bhaskar Gawri, Ravi Kumar Gandham, Subeer S Majumdar, Arindam Ghosh, **Sonu Gandhi**[§], Functionalized Graphene-Based Field-Effect Transistors for Detection of Japanese Encephalitis and Avian Influenza Virus. *Scientific Reports*, 10, (1), 1-12, 2020, (*Impact Factor- 4.0*).
- 6) Subhasis Mahari, Akanksha Roberts, Deepshikha Shahdeo, **Sonu Gandhi**[§], eCovSens-Ultrasensitive Novel In-House Built Printed Circuit Board Based Electrochemical Device for Rapid Detection of nCovid-19 antigen, a spike protein domain 1 of SARS-CoV-2. *Biorxiv*, 2020, 1-20. doi: <https://doi.org/10.1101/2020.04.24.059204>
- 7) **Sonu Gandhi**[§], Amit Kumar Srivastava[§], Upasana Ray[§], Prem Prakash Tripathi[§], Is the collapse of respiratory center in the brain responsible for breakdown of COVID-19 patients? *ACS Chemical Neuroscience*, 2020, 11 (10), 1379–1381 (*Impact Factor- 4.5*).
- 8) Sreyashi Chandra, Md Tanjim Alam, Jhilik Dey, Baby Chakrapani P S, Amit Kumar Srivastava, **Sonu Gandhi**, Prem Prakash Tripathi, Healthy gut, healthy brain: The gut microbiome in neurodegenerative disorders. *Current Topics in Medicinal Chemistry*, 2020, 20 (12), 1142-1153, (*Impact Factor- 3.3*).
- 9) Swati Kaushik, **Sonu Gandhi***, Mehak Chauhan*, Deepa Ghosh, Aneesh Chandrasekharan, Avanish Singh Parmar, Alpana Sharma, T.R. Santhoshkumar, and Deepa Suhag, Water-templated, Polysaccharide-rich, Bio-artificial 3D Microarchitectures as Extra-Cellular Matrix Bioautomatons. (equal contribution), *ACS Applied Materials & Interfaces*, 2020, 12 (18), 20912-20921 (*Impact Factor- 8.8*). (* = equal contribution)
- 10) Young-Kyu Han, Shruti Shukla, Yuvaraj Haldorai, Vivek K. Bajpai, Imran Khan, Kang Sung-Min, **Sonu Gandhi**, Yun Suk Huh, Bioreceptor-free, sensitive and rapid electrochemical detection of patulin fungal toxin, using a reduced graphene oxide@SnO₂ nanocomposite, *Material Science & Engineering C*, 2020, 113, 110916 (*Impact Factor- 5.9*).
- 11) Akanksha Roberts, **Sonu Gandhi**[§], Japanese encephalitis Virus: A Review on Emerging Diagnostic Techniques, *Frontiers in Bioscience*, 2020, 25, 1875-1893, (*Impact Factor- 2.7*).
- 12) Sarthak Nandi, Ayusi Mondal, Akanksha Roberts, **Sonu Gandhi**[§]. Biosensor platforms for rapid detection of HIV. *Advances in Clinical Chemistry*, 2020, 98, 1-34, (*Impact Factor- 3.367*).
- 13) Aruna Kasoju, Azmat Ali Khan, Narlawar Sagar Shrikrishna, Deepshikha Shahdeo, Amer M. Alanazi, **Sonu Gandhi**[§], Microfluidic Paper Device for Rapid Detection of Aflatoxin B1 using Aptamer Based Colorimetric Assay. *RSC Advances*, 2020, 10, 11843 – 11850, (*Impact Factor- 3.1*).
- 14) Aruna Kasoju, Deepshikha Shahdeo, Azmat Ali Khan, Narlawar Sagar Shrikrishna, Subhashish Mahiri, Amer M. Alanazi, Mashooq Ahmad Bhat, Jyotsnendu Giri, **Sonu Gandhi**[§], Fabrication of microfluidic device for Aflatoxin M1 detection in milk samples with specific aptamers. *Scientific Reports*, 2020, 10, 4627 (*Impact Factor- 4.0*)
- 15) Vivek K. Bajpai, Cheol Woo Oh, Imran Khan, Yuvaraj Haldorai, **Sonu Gandhi**, Hoomin Lee, Xinjie Song, Myunghee Kim, Ashutosh Upadhyay, Yun Suk Huh, Young-Kyu Han, Shruti Shukla, Fluorescent immunoliposomal nanovesicles for rapid multi-well immuno-biosensing of histamine in fish samples,

2019:

- 16) Akanksha Roberts, Prem Prakash Tripathi, **Sonu Gandhi**[§], Graphene nanosheets as electric mediator for ultrafast sensing of urokinase plasminogen activator receptor-a biomarker of cancer, *Biosensors & Bioelectronics*, 2019, 141, 111398, (*Impact Factor- 10.2*).
- 17) Jhillik Dey, Tanjim Alam, Sreyashi Chandra, **Sonu Gandhi**, Prem Prakash Tripathi[§], Recalibrating the Existence of New Neurons in Adult Brain, *ACS Chemical Neuroscience*, 2019, 10, 2091-2093, (*Impact Factor- 4.5*).
- 18) Manoj Shrivastava, Akansha Srivastava, **Sonu Gandhi**, Appan Roychoudhury, Alesh Kumar, RK Singhal, Sandeep Kumar Jha, SD Singh, Monitoring of engineered nanoparticles in soil-plant system: A review. *Environmental Nanotechnology, Monitoring & Management*, 2019, 11, 100218, (*Impact Factor- 1.6*).
- 19) **Sonu Gandhi**[§], Jalaj Gupta, Prem Prakash Tripathi, The Curious Case of Human Hippocampal Neurogenesis, *ACS Chemical Neuroscience*, 2019, 10, 1131-1132, (*Impact Factor- 4.5*).
- 20) Saurav Islam, Shruti Shukla, Vivek K. Bajpai, Young-Kyu Han, Yun Suk Huh, Arindam Ghosh, **Sonu Gandhi**[§], Microfluidic based graphene field effect transistor for femtomolar detection of chlorpyrifos pesticide, *Scientific Reports*, 2019, 9, 276-282, (*Impact Factor- 4.0*).
- 21) Saurav Islam, Shruti Shukla, Vivek K. Bajpai, Young-Kyu Han, Yun Suk Huh, Arindam Ghosh, **Sonu Gandhi**[§], A smart nanosensor for the detection of human immunodeficiency virus and associated cardiovascular and arthritis diseases using functionalized graphene-based transistors, *Biosensors & Bioelectronics*, 2019, 126, 792-799, (*Impact Factor- 10.2*).

2018:

- 22) Prem Prakash Tripathi[§], Hamed Arami, Ivneet Banga, Jalaj Gupta, **Sonu Gandhi**[§], Cell penetrating peptides in preclinical and clinical cancer diagnosis and therapy, *Oncotarget*, 2018, 9, 37252-37267, (*Impact Factor- 5.2*).
- 23) Priya Mishra, Ivneet Banga, Roshika Tyagi, Tanya Munjal, Aditya Goel, Neena Capalash, Prince Sharma, CR Suri, **Sonu Gandhi**[§], An immunochromatographic dipstick as an alternate for monitoring of heroin metabolites in urine samples, *RSC Advances*, 2018, 8, 23163-23170, (*Impact Factor- 3.1*).
- 24) Anita Talan, Annu Mishra, Sergei A. Eremin, Jagriti Narang, Ashok Kumar, **Sonu Gandhi**[§]. Ultrasensitive electrochemical immunosensing platform based on gold nanoparticles triggering chlorpyrifos detection in fruits and vegetables. *Biosensors & Bioelectronics*, 2018, 105, 14–21, (*Impact Factor- 10.2*).
- 25) **Sonu Gandhi**[§], Ivneet Banga, Pawan Kumar Maurya, Sergei A. Eremin. Gold nanoparticles-single chain fragment variable antibody as immunoprobe for rapid detection of morphine by dipstick. *RSC Advances*, 2018, 8 (3), 1511-1518, (*Impact Factor- 3.1*).
- 26) Smritee Singh, Priya Mishra, Ivneet Banga, Avanish S Parmar, P P Tripathi, **Sonu Gandhi**[§]. Chemiluminescence based immunoassay for the detection of heroin and its metabolites. *Bioimpacts*, 2018, 8 (1), 57-62, (*Impact Factor- 3.5*).

Before 2017:

- 27) Pankaj Suman, **Sonu Gandhi**[§], Prahanshu Kumar, Kirti Garg. Prospects of electrochemical biosensor for the early diagnosis of preeclampsia. *American Journal of Reproductive Immunology*, 2017, 77, 1-10, (*Impact Factor- 2.7*).
- 28) **Sonu Gandhi**, Hamed Arami, Kannan M. Krishnan, Detection of cancer-specific proteases using magnetic relaxation of peptide-conjugated nanoparticles in biological environment. *Nanoletters*, 2016, 16, 3668–3674, (*Impact Factor- 13.8*).
- 29) **Sonu Gandhi**[§], Pankaj Suman, Ashok Kumar, Prince Sharma, Neena Capalash and C. R. Suri. Recent advances in opiate immunosensor for narcotic drug detection. *Bioimpacts*, 2015, 5, 207-213, (*Impact Factor- 3.5*).
- 30) Asahi Tomitaka, Hamed Arami, **Sonu Gandhi**, Kannan M Krishnan. Lactoferrin conjugated iron oxide nanoparticles for targeting brain glioma cells in magnetic particle imaging. *Nanoscale*, 2015, 7, 16890–16898, (*Impact Factor- 6.9*).
- 31) Baoyu Zhao, **Sonu Gandhi**, Cai Yuan, Zhipu Luo, Rui Li, Henrik Gårdsvoll, Nicolai Sidenius, Mingdong

- Huang, Michael Ploug. Stabilizing a flexible interdomain hinge region harboring the SMB binding site drives uPAR into its closed conformation. *Journal of Molecular Biology*, 2015, 427, 1389–1403, (*Impact Factor- 4.8*).
- 32) Priyanka Sharma, **Sonu Gandhi**, C. Raman Suri, Fluoroimmunoassay based on suppression of fluorescence self-quenching for ultra-sensitive detection of herbicide diuron, *Analytica Chimica Acta*, 2010, 676, 87-92, (*Impact Factor-6.0*).
 - 33) J. N. Tey*, **S. Gandhi***, I. P. M. Wijaya, Al. Palaniappan, J. Wei, I. Rodriguez, C. R. Suri and S. G. Mhaisalkar, Direct Detection of Heroin Metabolites using a Carbon Nanotubes Liquid Gated Field Effect Transistor based Competitive Immunoassay, *SMALL*, 2010, 6, 993-998. (**contributed equally*) (*highlighted in Nature India*) (*Impact Factor-11.5*).
 - 34) I Putu Mahendra Wijaya, Tey Ju Nie, **Sonu Gandhi**, Robin Boro, Isabel Rodriguez, Subodh G. Mhaisalkar, C. Raman Suri, Alagappan Palaniappan, Goh Wei Hau, Femto Molar Detection of 2, 4-dichlorophenoxyacetic acid Herbicides via Competitive Immunoassays using Microfluidic Based Carbon Nanotube Liquid Gated Transistor, *Lab on a Chip*, 2010, 10, 634–638, (*Impact Factor- 6.8*).
 - 35) I Putu Mahendra Wijaya*, **Sonu Gandhi***, Tey Ju Nie, Nishima Wangoo, G. Shekhawat, C. Raman Suri, Isabel Rodriguez, and Subodh G. Mhaisalkar, Protein/carbon nanotubes interaction: The effect of carboxylic groups on conformational and conductance changes, *Applied Physics Letters*, 2009, 95, 073704, (**contributed equally to work*) (*Impact Factor-3.6*).
 - 36) **Sonu Gandhi**, Neena Capalash, Prince Sharma and C Raman Suri, Strip based immunochromatographic assay using specific egg yolk antibodies for rapid detection of heroin and its metabolites in urine samples, *Biosensors & Bioelectronics*, 2009, 25, 502–505, (*highlighted in Nature India*) (*Impact Factor-10.2*).
 - 37) C. Raman Suri, Robin Boro, Yogesh Nangia, **Sonu Gandhi**, Nishima Wangoo, Priyanka Sharma, G. S. Shekhawat, Immunoanalytical techniques for the analysis of pesticides in the environment, *Trends in Analytical Chemistry*, 2009, 28, 29-31, (*Impact Factor- 9.8*).
 - 38) C. Raman Suri, Jasdeep Kaur, **Sonu Gandhi**, G. Shekhawat, Label-free ultra-sensitive detection of atrazine based on nanomechanics, *J. of Nanotechnology*, 2008, 19, 235502, (*Impact Factor-3.4*).
 - 39) **Sonu Gandhi***, Prince Sharma, Neena Capalash, R S Verma and C. Raman Suri, Group-selective antibodies based fluorescence immunoassay for monitoring opiate drugs, *Analytical and Bioanalytical Chemistry*, 2008, 392, 215-222, (*Impact Factor-3.6*).

(\$ = as corresponding author)

Patents

- 1) Nicolai Sidenius and **Sonu Gandhi**. Constitutively active uPAR variants and their use for the generation and isolation of inhibitory antibodies. US Patent application number PCT/EP2012/065198, International filing date 5th August 2011 (Granted).
- 2) Kannan M. Krishnan, **Sonu Gandhi**, Hamed Arami. Detection of cancer-specific proteases using magnetic relaxation of peptide-conjugated nanoparticles in biological environment. US Patent application number 62/234998, International filing date 30th September 2015.
- 3) **Sonu Gandhi**. Rapid detection of morphine by dipstick kit using gold nanoparticles- single chain fragment variable (AuNPs/scFv) antibody as immunoprobe. Patent application number 2017/11041780, National filing date 22nd November 2017.
- 4) **Sonu Gandhi**. FTO/AuNPs-based nanosensor for Chlorpyrifos detection in fruits and vegetables. Patent application number 2017/11044750, National filing date 14 December 2017.
- 5) Deepa Suhag, Alpana Sharma, Swati Kaushik, T Santhosh, R Kumar, and **Sonu Gandhi**. Hybrid hydrogels as extracellular matrix biomimics for cruelty free high throughput anti-cancer drug screening. National filing date 1st May 2019.
- 6) Kasoju Aruna, **Sonu Gandhi**. A microfluidic graphene vapor sensor as a device to detect Aflatoxins. TEMP/E-1/24675/2019-CHE, National filing date 13th June 2019.
- 7) Kasoju Aruna, **Sonu Gandhi**. Smart Phone based colorimetric biosensor for the detection of aflatoxin B1 using microfluidic paper device. Patent application number 201941047443, National filing date 21st November 2019.

- 8) **Sonu Gandhi**, Subhasis Mahari, Akanksha Roberts, Ravi Kumar Vuddagiri, System and methods of electrochemical sensing molecules in a solution. Patent application number 202041017366, National filing date 22nd April 2020.

Proceedings, Book, and Book chapter

- 1) **Sonu Gandhi**[§] (2013). Antibody based biosensor for the detection of opiate drugs. LAP LAMBERT Academic Publishing group. ISBN-13: 978-3847373872.
- 2) JN Tey, IPM Wijaya, **Sonu Gandhi**[§], J Wei, I Rodriguez, SG Mhaisalkar (2010). An Amplification Strategy to Label Free Opiate Drug Detection using Liquid-Gated Carbon Nanotubes Transistor. Nanoscience and Technology Institute, ISBN: 978-1-4398-3401-5.
- 3) Priya Mishra, Tanya Munjal, **Sonu Gandhi**[§] (2019). Nanoparticles for detection, imaging and diagnostic applications in animals. Nanoscience for Sustainable Agriculture-Springer. ISBN 978-3-319-97851-2.
- 4) Ivneet Banga, Roshika Tyagi, Deepshikha Shahdeo, **Sonu Gandhi**[§] (2019). Biosensors and their applications for the detection of Avian Influenza Virus. Nanotechnology in Modern Animal Biotechnology-Elsevier. ISBN 978-0-12-818823-1.
- 5) Deepa Suhag, Deepshikha Shahdeo, **Sonu Gandhi**[§] (2019). Emerging trends and advances in targeted nanotheranostics. SMC Bulletin, ISSN 2394-5087.
- 6) Deepshikha Shahdeo, Akanksha Roberts, Naina Abbineni, **Sonu Gandhi**[§] (2020). Graphene based sensors. Comprehensive Analytical Chemistry- Elsevier, Volume 91, ISSN 0166-526X.
- 7) Akanksha Roberts, Deepshikha Shahdeo, **Sonu Gandhi**[§] (2021). Advancement of Immobilization Techniques in Forensic Science. Immobilization Strategies: Biomedical, Bioengineering and Environmental Applications-Springer, ISBN 978-981-15-7998-1.
- 8) Narlawar Sagar Shrikrishna, Subhasis Mahari, Naina Abbineni, Sergei A Eremin, **Sonu Gandhi**[§] (2021). New trends in Biosensor development for pesticide detection. Biosensors in Agriculture: Recent Trends and Future Perspectives-Springer Nature, ISBN 978-3-030-66164-9.
- 9) Subhasis Mahari, Deepshikha Shahdeo, Ivneet Banga, Samraggi Choudhury, **Sonu Gandhi**[§] (2021). Clinical and preclinical data of therapeutic peptides. Peptide and Peptidomimetic Therapeutics: From Bench to Bedside-Elsevier (accepted).
- 10) Samraggi Choudhury, **Sonu Gandhi**[§] (2021), Magnetic properties-based biosensors for early detection of cancer. Biosensor Based Advanced Cancer Diagnostic: Labs to clinics- Elsevier (submitted).
- 11) Akanksha Roberts, Subhasis Mahari, **Sonu Gandhi**[§] (2021), Biological/Synthetic Receptors (Antibody, Enzyme and Aptamer) used for Biosensors development for virus detection. Advanced Biosensors for Virus Detection: Smart Diagnostics to Combat Against SARS-CoV-2 Pandemic - Elsevier (submitted).
- 12) Deepshikha Shahdeo, **Sonu Gandhi**[§] (2021), Next generation biosensors as cancer diagnostic tool. Biosensor Based Advanced Cancer Diagnostic: Labs to clinics- Elsevier (submitted).

Scholarships, Awards, and Honors

- Received SERB Women Excellence Award 2021
- Elected as Member of Indian National Young Academy of Sciences (INYAS), Hyderabad (2021-2025)
- Elected as Associate of Indian Academy of Sciences, Bengaluru (2020-2023).
- Received Tech Exhibition Award at IKMC2020: Future Scan-Predict & Prepare, October 28-29, 2020, organized by IKP-BIRAC, DBT, and DST
- 2020: Research highlighted in Nature India News on Ultrasensitive sensor for detecting Japanese encephalitis and Avian influenza viruses. <https://jwp-nindia.public.springernature.app/en/nindia/article/10.1038/nindia.2020.160>
- 2019: Co-chair a session on Animal Husbandry in 4th International conference on agriculture and animal husbandry. 28th-30th August 2019, Central University of Hyderabad, Hyderabad, India
- 2018: Research highlighted in **Current Science India**
- 2018: Distinguished speaker award in SELECT-BIO conference, Bangalore

- 2017: Visiting Faculty at Lomonosov Moscow State University, **Russia**
- 2016: **SERB-ECR** early career award
- 2016: **DBT-BioCare** women scientist award
- 2017: Best Young Investigator Award at IIT-BHU, Varanasi
- 2011: Won prestigious 2 years Scholarship from **Marie Curie** cofund for post doc research
- 2011: Fellowship to participate in conference, **University of Cambridge**, UK
- 2010: Research highlighted in **Nature India**
<https://www.natureasia.com/en/nindia/article/10.1038/nindia.2010.64>
- 2009: Research highlighted in **Nature India**
<http://www.natureasia.com/en/nindia/article/10.1038/nindia.2009.310>
- 2008: Three months' fellowship from **NTU, Singapore** for Ph.D. work
- 2007: Award of senior research fellowship (**SRF**) from CSIR

Membership of Societies

- Member of Indian National Young Academy of Sciences (INYAS), Hyderabad (2021-2025)
- Young Associate of Indian Academy of Sciences (IASc), Bengaluru (2020-2023)
- Executive council member of Biosensor Society of India (BSI) (2019-Lifetime)
- Member of American Chemical Society, USA (2017-till date)
- Member of Royal Society of Chemistry, Cambridge, United Kingdom (2016-till date)
- Lifetime Member of World Research Council (WRC) (2019)
- Associate Board Member of The Open Nanomedicine Journal (2019)
- Editorial Member of GRD journal of Engineering (2016)
- Member of Indian Association of Nanoscience & Nanotechnology (2016)
- Guest Editor for Journal of Nanomaterials (2015)

Professional and Mentorship Experiences

- Jury member in Sci-Art Competition (INYAS, TYSA, NYAB) (10th-24th Feb 2021)
- DST expert committee member (PAC) for COVID-19 Diagnostic projects (2020-23)
- Member of Doctoral Committee at VIT Chennai
- Nodal Officer from NIAB in Vigyan Jyoti Scheme, sponsored by DST for JNV, Hyderabad
- Reviewer of Gandhian Young Technological Innovation Awards (2020)
- Managing Editor of Frontiers of Bioscience (1st Jan 2019-till date)
- Advisory committee member for National conference in University of Pune held on 23-24 Feb, 2019
- Reviewer for ACS Nano, Bentham Journals, Drug Discovery Today, Biosensors and Bioelectronics, Sensor & Actuators: Physical, Analytica Chimica Acta, Bioengineering & Translational Medicine, Frontiers in toxicology, Frontiers in pharmacology, RSC Advances, Artificial Cells Nanomedicine and Biotechnology, Plos One, Journal of Nanomaterials, Colloids and Surfaces A: Physicochemical and Engineering Aspects
- Ph.D. supervisor for three students at National Institute of Animal Biotechnology, Hyderabad, India
- Mentored one post-graduate student for Master's thesis at University of Washington, Seattle, USA
- Mentored one post- graduate student for Master's thesis at Amity University, Noida, India

Student Alumni

- Ms Anita Talan, (worked as PhD student at Amity University, Noida) selected as Graduate student at Institut National de la Recherche Scientifique (INRS), Quebec, Canada (2018).
- Ms Ivneet Banga (worked as M. Tech. student at Amity University, Noida) selected as Graduate student at Department of Bioengineering, University of Texas, Arlington, TX, USA (2018).
- Ms Roshika Tyagi (worked as Project Assistant in DBT-Biotech at Amity University, Noida) selected as

- Graduate student at University of Nevada, Reno (2018).
- Ms Ayusi Mondal (worked as Project Assistant in DBT-Biocare at NIAB, Hyderabad) selected as Master student at University of Leicester, London, UK (2019).
- Ms Naina Abbineni worked as Project Trainee at NIAB during Jan-July 2020.
- Ms Samraggi Choudhury (worked as Project Assistant in DBT-Biocare at NIAB, Hyderabad) selected as Graduate student at INST, Mohali (2020).

Invited Webinars

- 1) **Sonu Gandhi**, Innovation in Material Science for Biomedical Applications, 24th-25th February 2021, CSIR-AMPRI, Bhopal.
- 2) **Sonu Gandhi**, Point of Care Diagnostics: a platform for rapid detection, Indian Institute of Technology (IIT), Hyderabad, 13th February, 2021.
- 3) **Sonu Gandhi**, Research and Innovation to Combat Pandemic & Crisis-Young Scientists Conference, India International Science Festival (IISF), December 22th–24th, 2020.
- 4) **Sonu Gandhi**, Turbo talk, Science for Self-Reliant India and Global Welfare, 6th India International Science Festival (IISF), December 13, 2020.
- 5) **Sonu Gandhi**, SCO-YSC– First Young Scientists Conclave at IICT Hyderabad organized by Department of Science and Technology under the aegis of Ministry of Science and Technology along with the Ministry of External Affairs, Government of India, November 24th–28th, 2020.
- 6) **Sonu Gandhi**, Nano Virtual Meet 2020 in International E-Conference on Advanced Materials Science and Graphene Nanotechnology, London, United Kingdom, November 25-26, 2020.
- 7) **Sonu Gandhi**, 86th Annual Meeting of Indian Academy of Sciences, Bengaluru, November 6-8, 2020.
- 8) **Sonu Gandhi**, Current Trends in the field of Biosensors, Bioelectronics and Microfluidics, International Webinar on Biosensors and Bioelectronics, Germany, October 28-30, 2020.
- 9) **Sonu Gandhi**, Frontiers of Science Symposium on Materials for Society, organized by the Indian Academy of Sciences, 1st October, 2020. (attended)
- 10) **Sonu Gandhi**, Nano-diagnostics for Food and Feed Safety, organized by NIFTEM, Sonapat, Haryana on 18th September, 2020.
- 11) **Sonu Gandhi**, DST & ACS Virtual Workshop, organized by DST-ACS on 28th July, 2020.
- 12) **Sonu Gandhi**, Indo-Italian Webinar on COVID-19, organized by DST-SERB on 14th July, 2020.
- 13) **Sonu Gandhi**, Biosensor for diagnosis of Covid-19, organized by Aligappa University, Karaikudi on 2nd July, 2020.
- 14) **Sonu Gandhi**, "Science Academies- INYAS Science Leadership Workshop", organized by INSA-INYAS on 22-28 June, 2020.
- 15) **Sonu Gandhi**, DST/DBT "Research and development of new technologies/tools for diagnosing COVID-19" organized by DST and DBT-BRICS on 19 June, 2020.
- 16) **Sonu Gandhi**, "COVID-19 international online R&I networking" under Diagnostic' domain in the EU network event organized by SERB on 10 June, 2020.

Invited Lectures/Workshops

- 1) **Sonu Gandhi**, Workshop & training on Laboratory diagnosis of Covid-19, organized by Gandhi Medical College, Hyderabad on 1-14th October, 2020.
- 2) **Sonu Gandhi**, Workshop on Recent advances in rapid diagnostic methods for SARS-Cov-2, organized by Gandhi Hospital, Hyderabad on 14-26th September, 2020.
- 3) **Sonu Gandhi**, A gold nanoparticle-single-chain fragment variable antibody as an immunoprobe for rapid detection of morphine by dipstick, 9th Global Conference on Materials Science and Engineering (CMSE 2020), Kyiv, Ukraine, November 20-23, 2020.
- 4) **Sonu Gandhi**, Functional Nanomaterials for Biological Applications. International Conference on Advanced Lightweight Materials (ICALMS 2020), March 6-7, 2020 at CMS Technical College, Hyderabad, India.
- 5) **Sonu Gandhi**, Diagnostics: a platform for rapid detection. National Conference on

Nano/Biotechnology (Nano/Bio-Tech 2019), December 19-21, 2019 at Jawaharlal Nehru University (JNU), New Delhi, India.

- 6) **Sonu Gandhi**, Point of Care Diagnostics: a platform for rapid detection of diseases. International Conference on Nanomaterials driven advances in chemical & biosensors, at Algappa University, Karaikudi. 27th-29th November, 2019.
- 7) **Sonu Gandhi**, c-DNA workshop at CeNSE, Indian Institute of Science (IISc), Bangalore from 4-6 November, 2019.
- 8) **Sonu Gandhi**, Protease as a biomarker for disease detection in animals. 4th International conference on agriculture and animal husbandry. 28th-30th August 2019 Central University of Hyderabad, Hyderabad, India.
- 9) **Sonu Gandhi**, Biosensors. Five Days Workshop on Research Informed and Research Oriented Teaching in Pharmaceutical Sciences. 20th – 24th August 2019 at Central University of Rajasthan, Jaipur, India.
- 10) **Sonu Gandhi**, Nanobiosensors for rapid detection of narcotic drugs. 6th June 2019 at Saha Institute of Nuclear Physics (SINP), Kolkata, India.
- 11) **Sonu Gandhi**, Success stories, 1st DBT-BioCARE conclave: Women Scientists Achieving Great Heights, 8-9th March, 2019 at Department of Biotechnology (DBT) and National Institute of Plant Genomic Research (NIPGR), New Delhi, India.
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