



DR. SAIFULLAH BULLO

DIRECTOR RESEARCH (ORIC) | BEGUM NUSRAT BHUTTO
WOMEN UNIVERSITY SUKKUR SINDH PAKISTAN

OBJECTIVE

Change the life of patients by utilizing the Nanomedicine and Nanotechnology.

My area of expertise are.
Drug Delivery, nanocarriers
Nanomedicine application
Tuberculosis, Cancer & microbial treatment.
Green Nanotechnology.
Natural Products and drug discovery.

Designing of multifunctional nanoparticles and their characterization.
In Vitro assays, In vivo Studies
Research proposal for Grants/funding
Writing review and research articles, Guiding PhD, MPhil and final year research students.

EXPERIENCE

H INDEX = 23

ASSOCIATE PROFESSOR SINCE OCT 2020 Begum Nusrat Bhutto Women University Sukkur

To Design the Research & Research ethics Policy and Promote the Research Culture in The University. Organize different seminars, workshops and conferences

CHAIPERSON SINCE FEB 2021 Department of Human & Rehabilitation Sciences, Begum Nusrat Bhutto Women University Sukkur.

To design and implement the advanced curricula of the offered program e.g. BS chemistry, BS Biotechnology, BS Environmental sciences and Doctor of physical therapy. To look after the day to affairs of the department.

ASSISTANT PROFESSOR Aug 2019- Aug 2020 Institute of Advanced Research Studies in Chemical Sciences, University of Sindh Jamshoro, Sindh Pakistan.

Postdoctoral Research Fellow April 2018- Aug 2019 Institute of Nanosciences & Nanotechnology, University Putra Malaysia

Postdoctoral Research Fellow, May 2016- April 2018. Institute of Biosciences, University Putra Malaysia, Serdang Selangor Malaysia.

Postdoctoral Research Fellow 2016-2017. University of London Birkbeck, UK

Postdoctoral Research Fellow, Oct 2014- May 2016 Institute of Nanosciences & nanotechnology (ION2), University Putra Malaysia, Serdang Selangor Malaysia.



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Quality Control Officer Jan 2010- September 2011

Shahab Molecular & Diagnostic Pathology Laboratory, Shahdadpur, Sindh Pakistan.

Research Officer (Natural products/Medicinal Chemist), Jan 2007- December 2009, International Center for Chemical & Biological Sciences, University of Karachi, Pakistan.

Lecturer Chemistry BPS-17 2006-2007)

Victor Public Higher Secondary School, Jacobabad.

EDUCATION

PhD (Nanotechnology /Nanomedicine) • OCT 2014. UNIVERSITY PUTRA MALAYSIA

Designing of metallic Nanolayered host for the sustained release of anti-TB drugs.

MSC (ORGANIC CHEMISTRY • JULY 2006 • SHAH ABDUL LATIF UNIVERSITY KHAIRPUR SINDH

BSC (CHEMISTRY • JUNE 200 • SHAH ABDUL LATIF UNIVERSITY KHAIRPUR SINDH

HIGHER SECONDARY SCHOOL CERTIFICATE (PREMEDICAL) • 2001. GOVT COMPREHENSIVE HIGHER SECONDARY SCHOOL SUKKUR SINDH PAKISTAN.

SECONDARY SCHOOL CERTIFICATE (SCIENCE). 1998. GOVT HIGH SCHOOL SUKKUR SIND PAKISTAN.

VOLUNTEER EXPERIENCE OR LEADERSHIP

Free career counselling to the fresh students, especially selecting the field of their choice. Leader of the flood relief mobile medical campaign Sep 2022

MEMBERSHIPS

1. Member of the European Respiratory Society(ERS) (membership # **306755**)since September 2015 (<http://www.ersnet.org>)
2. Member of the British Society for Nanomedicine Since May 2015 (www.BritishSocietyNanomedicine.org)
3. Member of the European Society of Clinical Microbiology and Infectious Diseases (ID 134812) (<https://www.escmid.org/>) Since November 2016

AWARDS

1. Best Researcher Award for the Year 2022 from Department of Universities and Boards Govt of Sindh Pakistan.
2. **European Respiratory Society (ERS) Short-Term Research Training Fellowship 2016** (STRTF 2016) (November 2016 -March 2017).
3. Fully funded Scholarship for PhD studies under **“Commonwealth Scholarship and Fellowship Plan (CSFP)”** by Malaysian Higher Education Commission (MOHE) for three years 2011-2014.
4. **Gold MEDAL AWARD** For the Best Research at The Invention, Research And Innovation (PRPI) Exhibition, Held In University Putra Malaysia On 15-16th November 2016.
5. **Silver Medal Award** in The 3rd International, Innovation, Design and Articulation IDEa 2016, University Technology Mara (UiTM) Perlis. 27-29th April 2016.
6. **Silver medal award** in for the best research at the Invention, Res: and Innovation (PRPI) 2014 exhibition, held in University Putra Malaysia on 30th September to 1st October 2014.

Research Grants

1. International Development Research Centre (IDRC) Research grants 2024.
Project Title: Strengthening Science Teaching Skills of Secondary School Teachers: A Professional Development Initiative for the schools of district Sukkur Sindh Pakistan. Requested Budget: **360000 Canadian Dollars (74 Million PKR)**
2. 7th Call for Concept Proposals in the areas of Nanotechnology, Materials and Artificial Intelligence (Research Support Programme) . by Paksitan Science Foundation.
Project Title: Designing of the Anti-Tuberculosis Nanoformulations with synergistic therapeutic, sustained release and anti-inflammatory properties for the treatment Tuberculosis. Requested Budget **10 Million PKR**. Submitted.

3. Rapid Technology Transfer Grant (RTTG). HEC Pakistan. 2023.
Project Title: Development of the Anti-Tuberculosis metallic nanoparticle formulations with synergistic therapeutic, sustained release and anti-inflammatory properties for the treatment Tuberculosis. Requested Budget: 6.4 million. Project Submitted.
4. National Research Program for Universities (NRPU) by HEC Pakistan
Project Title: Designing of the Anti-Tuberculosis Nanoformulation using nanolayers as drug delivery system for the controlled release of anti-TB drugs. Requested Budget. 9.6 Million. 2021.
5. Lab Strengthening Grant Sindh HEC PKR 3140000 for Chemistry Lab at BNBWU.
6. European Respiratory Society (ERS) Short Term Research Grant of EURO 9700 in 2016/2017.
7. Fundamental Research Grant Scheme (FRGS) sum of RM111,000, for the project entitled Development of drug delivery systems for anti-tuberculosis drugs using Graphene oxide as Nanocarrier 2013 - 2015.
8. HPLC analysis Service Incharge (Generate income of 40-60K Malaysian Ringgits annually)

Research Supervision

PhD Supervision students

1. Mona Ebadi Thesis Title: Design, Synthesis of Core Shell Nanoparticles for the anticancer drug delivery. 2022
2. Isshadiba Mustafa: Designing of the nanofungicides for the treatment of gynoderma disease in oil palm trees. 2022
3. Kalaivani , Thesis Title: Design, Synthesis of graphene oxide based nanoparticles and their application liver cancer therapy. 2020
4. Farahtun Nijaat: Designing of Nanofungicide based on of Chitosan NPs and their application in treatment of gyoderma disease in oil Palm Trees.
5. Muhammad Usman Sani: Thesis Title: Designing of the graphene Oxide-Gadolinium based nanoparticles as theranostics agents for brain cancer therapy. 2018.
6. Julia Tan: Thesis Title: Synthesis of single wall and multiwall functionalized carbon nanotubes and their drug delivery applications. 2017
7. Ubedullah Kaka: Thesis Title: Application of lignocaine and lidocaine for the pain management in Dogs. 2016

Masters Students

1. Abdul Malik: Thesis Title: Synthesis and evaluation of AgNPs by green method using extract of bitter
2. plants Citrullus colocynthis and Momordica charantia and their antibacterial activity against the
3. pathogenic bacteria. 2024.
4. DM Seema : Thesis Title : Design, synthesis and application of anticancer Nanoformulation using

5. graphene oxide and phenethyl isothiocyanate. 2019
6. Rehan Rosman: Thesis Title: Synthesis and application of Magnetite NPs-PEG nanocomposite based
7. anticancer Nanoformulation for breast cancer therapy. 2018.
8. Riffat Javeria: Thesis Title: Efficient synthesis of Salicylaldehyde-Based Thiosemicarbazones:
9. Theoretical and experimental approach. 2023

Undergraduate students

1. **Farwa Bhallai, Isra Almani and Darshna:** Development of sustained release formulation of rabies vaccine using inorganic nanolayers as drug delivery system. 2019.
2. Muzammil Talpu and Abid Rind: Thesis Title: Synthesis, characterization and drug delivery application of Mg/AL-LDHs. 2019

LIST OF PUBLICATIONS

1. **Saifullah Bullo*** et al. Efficient Synthesis, Spectroscopic Characterization, and Nonlinear Optical Properties of Novel Salicylaldehyde-Based Thiosemicarbazones: Experimental and Theoretical Studies. *ACS Omega* 2023, 8, 15, 13982–13992 **IF: 4.132 published on 7th April 2023. HEC W Category.**
2. **Saifullah Bullo*** et al. Structural Tailoring via End-capped Acceptors of Thiophene-based C-shaped Non-fullerene Compounds with A- π -A Backbone for the Exploration of Photovoltaic Response. *Journal of Saudi Chemical Society*. **Volume 28, Issue 1**, January 2024, 101799 **I.F. = 5.6 HEC W Category**
3. Faranza, Dena Dorniani, **Bullo Saifullah et al.** Tannic acid chitosan iron oxide nanocomposite for cervical cancer treatment. *Inorganic Chemistry Communications* **162**, 112160. 2024. **(IF. 3.8)**
4. Saeed Ahmed, Iram Irshad, Saima Nazir, Salma Naz, Muhammad Adnan Asghar, Saad M. Alshehri, **Saifullah Bullo** & Muhammed Lamin Sanyang. Designing of banana shaped chromophores via molecular engineering of terminal groups to probe photovoltaic behavior of organic solar cell materials. *Sci Rep* **13**, 15064 (2023). <https://doi.org/10.1038/s41598-023-39496-6>. **I.F. = 4.996. HEC W Category.**
5. Muhammad Atta Ur Rehman, Muhammad Atta Ur Rehman, Muhammad Adeel*, Saad M. Alshehri, Ume Aiman, Alexander Villinger, **Saifullah Bullo**, Rabia Baby et al. Novel Fluorinated Biphenyl Compounds Synthesized via Pd(0)-Catalyzed Reactions: Experimental and Computational Studies. *ACS Omega* 2023, 8, 32, 29414–29423. **IF: 4.132 HEC W Category.**
6. **Bullo Saifullah**, Palanisamy Arulselvan, Sharida Fakurazi, Development of a novel anti-tuberculosis nanodelivery formulation using magnesium layered hydroxide as the nanocarrier and pyrazinamide as a model drug. *Scientific Reports*. 12, Article number: 14086 (2022). **(IF. 4.996).**

7. Mona Ebadi, Kalaivani Buskaran, Saifullah Bullo et al. Synthesis and Cytotoxicity Study of Magnetite Nanoparticles Coated with Polyethylene Glycol and Sorafenib–Zinc/Aluminium Layered Double Hydroxide. *Polymers* 2020, 12, 2716. **(IF. 4.207)**
8. Mona Ebadi, Saifullah Bullo, Kalaivani Buskaran et al. Dual-Functional Iron Oxide Nanoparticles Coated with Polyvinyl Alcohol/5- fluorouracil/Zinc–Aluminium- Layered Double Hydroxide for Simultaneous Drug and Target Delivery System. *Polymers* 2021, 13, 855. **(IF4.967)**.
9. Julia Meihua Tan, Saifullah Bullo, Sharida Fakurazi & Mohd Hussein. Characterization of betulinic acid-multiwalled carbon nanotubes modified with hydrophilic biopolymer for improved biocompatibility on NIH/3T3 cell line. *Polymers* 2021, 13, 1362. **(IF4.967)**.
10. Kalaivani Buskaran, **Saifullah Bullo**, Mohd Zobir et al. Anticancer Molecular Mechanism of Protocatchic Acid loaded on Foate coated functionalized graphene oxide nanocomposite delivery system in human hepatocellular carcinoma. *Materials* 2021, 14, 817. **IF. (IF 3.748)**.
11. Samer Hasan Hussein-Al-Ali , Suha Mujahed Abudoleh , Mohd Zobir Hussein, Saifullah Bullo Arul Palanisamy. Graphene oxide-ellagic acid nanocomposite as effective anticancer and antimicrobial agent. *IET Nanobiotechnol.* 2021;15:79–89 . **IF. 1.847**
12. Julia Tan, Bullo Saifullah and Mohd Zobir et al. Preparation, characterization and biological evaluation of biopolymer-coated multi-walled carbon nanotubes for sustained-delivery of silibinin. *Scientific Reports.* October 2020). **(IF. 4.996)**
13. Mona Ebadi ¹, Saifullah Bullo ^{1,2}, Kalaivani Buskaran et al. Release of a Liver Anticancer Drug, Sorafenib from its PVA/LDH- and PEG/LDH-Coated Iron Oxide Nanoparticles for Drug Delivery Applications. *Materials* June 2020. **(IF 3.748)**.
14. **Bullo Saifullah** Mohd Zobir Hussein et al. Anti-Tuberculosis Drug Nano-delivery System with Strong in Vitro Therapeutic and Anti-Inflammatory Properties using Para-amino salicylic Acid-Magnesium Layered Hydroxide Nanocomposite. 15 October 2021 Volume 2021:16 Pages 7035—7050 “International Journal of Nanomedicine. **(IF. 7.033)**.
15. Samer, Sharida, Mohd Zobir, **Bullo Saifullah** et al Chlorambucil-Iron Oxide Nanoparticles as a Drug Delivery System for Leukemia Cancer Cells. A 16, 6205–6216-2021. *International Journal of Nanomedicine.* **(IF. 7.033)-2021.**
16. **Bullo Saifullah** and Mohd Zobir B Hussein*. Inorganic nanolayers structure preparation and biomedical applications. *International Journal of nanomedicine.* 2015:10 5609–5633. **(IF. 7.033)**
17. **Bullo Saifullah**, Mohd Zobir B Hussein et al. Development of highly biocompatible nanodelivery system for tuberculosis drug based on isoniazid-Mg/Al Layered Double Hydroxide. *International Journal of Nanomedicine.* 2014:9 4749–4762. **(IF. 7.033)**
18. **Bullo Saifullah**, Mohd Zobir B Hussein et al. Synthesis, characterization, and efficacy of antituberculosis isoniazid zinc aluminum-layered double hydroxide based nanocomposites. *International Journal of nanomedicine* (2016:11 3225–3237). **(IF. 7.033)**
19. Faraha Naz, **Bullo Saifullah**, Dena dormianiet al Graphene oxide as a nanocarrier for controlled release and targeted delivery of an anticancer active agent, chlorogenic acid. *Materials Science and Engineering C* 74 (2017) 177–185. **(IF 8.457)**
20. Mona Ebadi, **Bullo Saifullah** and Mohd Zobir Hussein. Synthesis and Properties of Magnetic Nanotheranostics coated with Polyehylene Glycol/5-Fluorouracil/Layered Double Hydroxide. in **International Journal of Nanomedicine.** (Volume 2019:14 Pages 6661—6678). **(IF. 7.033)**

21. **Bullo Saifullah**, Mohd Zobir B Hussein*, Samer: Controlled-release approaches towards the chemotherapy of tuberculosis. *International Journal of Nanomedicine* 2012;7:5451-5463. **(IF. 7.033)**.
22. FarahaNaz, **Bullo Saifullah**, Dena dorniani et al. Sustained Release of anticancer agent phytic acid from its chitosan coated magnetic nanoparticles for drug delivery system. *International Journal of Nanomedicine* **2017**;12 2361–2372. **(IF. 7.033)**
23. Mona Ebadi, Kalaivani Buskaran, **Bullo Saifullah**, Sharida Fakurazi, and Mohd Zobir Hussein. The Impact of Magnesium–Aluminum-Layered Double Hydroxide-Based Polyvinyl Alcohol Coated on Magnetite on the Preparation of Core-Shell Nanoparticles as a Drug Delivery Agent. *Int. J. Mol. Sci.* 2019, *20*(15), 3764; **(IF 6.208)**
24. **Bullo Saifullah**, Kalaivani Buskaran, Rabia Baby Shaikhet al. Dual Drugs Anticancer Nanoformulation Using Graphene Oxide-PEG as Nanocarrier For Protocatechuic Acid and Chlorogenic Acid. *Pharm Res (springer)* (2019) 36:91. **(IF 4.2)**.
25. **Bullo Saifullah**, Kalaivani Buskaran, Rabia Baby Shaikhet al. Graphene oxide-PEG-Protocatechuic acid Nanocomposite formulation with improved anticancer properties. *Nanomaterials* 8, 820, 2018 **(IF 5.719)**.
26. D.M. Seema, **Bullo Saifullah**, Mariadoss Selvanayagam et al. Chemopreventive Effects Of Phenethyl Isothiocyanate In A Graphene Oxide Based Nanocomposite Against Human Lung, Breast And Colon Cancer Cell Lines. *World Journal of Pharmaceutical Research.* 2018, 9(1), 1-9. **(IF 0.0)**
27. Rabia Baby, **Bullo Saifullah** and Fawad ur Rehman. Greener Method for the Removal of Toxic Metal Ions from the Wastewater by Application of Agricultural Waste as an Adsorbent. *Water* **2018**, *10*(10), (IF.3.530)
28. D.M. Seema, **Bullo Saifullah**, Mariadoss Selvanayagam et al. Designing of the anticancer nanocomposite with sustained release properties by using graphene oxide nanocarrier with phenethyl isothiocyanate as anticancer agent. *Pharmaceutics* 2018, 10, 109. **(IF 6.252)**
29. Julia Tan, **Bullo Saifullah**, A.M. Kura et al. Incorporation of Levodopa into Biopolymer Coatings based on Carboxylated Carbon Nanotubes for pH-dependent Sustained Release Drug Delivery. *Nanomaterials* **2018**, *8*(6), 389. **(IF 5.719)**.
30. Raihana Rosman, **Bullo Saifullah**, Sandra Maniamet al. Improved anticancer effect of Magnetite nanocomposite formulation (Fe₃O₄-PEG-GA) of Gallic acid against lung, breast and colon Cancer cells. *Nanomaterials* 2018, 8, 83. **(IF 5.719)**.
31. Samer Hasan Hussein-Al-Ali, Palanisamy Arulselvan, Mohd Zobir Hussein, Sharida Fakurazi, **Bullo Saifullah**. Evaluate the Cytotoxicity of Kojic Acid Nanocomposites on Melanoma Cells and Normal Cells of the Skin. *Journal of Biomimetics, Biomaterials and Biomedical Engineering*, 36, 45-55, 2018. **(IF.0.81)**
32. Isshadiba Mustafa, Mohd Zobir Hussein, **Bullo Saifullah** et al. Synthesis of (Hexaconazole-Zinc/Aluminum-Layered Double Hydroxide Nanocomposite) Fungicide Nanodelivery System for Controlling Ganoderma Disease in Oil Palm. *Journal of Agricultural and food chemistry. J. Agric. Food Chem.* 2018, 66(4):806-813. **(IF 5.895)**.
33. **Bullo Saifullah**, Arundhati Maitra et al. Nano-Formulation of Ethambutol with Multifunctional Graphene Oxide and Magnetic Nanoparticles Retains Its Anti-Tubercular

- Activity with Prospects of Improving Chemotherapeutic Efficacy. *Molecules* (MDPI) 2017, 22, 1697. (IF 4.927)
34. **Bullo Saifullah**, Arundhati Maitra et al. Novel anti-tuberculosis nanodelivery formulation of ethambutol with graphene oxide. *Molecules* 2017, 22, 1560. (IF 4.927)
 35. Mohd Faizul Mohd Sabri, Ethar, Mohd Zobir Hussein, Khaulah Binti Sulaiman, Dr. Suhana Binti Mohd Said, **Bullo Saifullah**, Mohd Bashir. Structural, Optical and Electrical Properties of ZnO/ZnAl₂O₄ Nanocomposites Prepared via Thermal Reduction Approach. *Journal of Materials Science JMSC*.30.8. 2017 1504-9). (IF 4.22)
 36. Dena dornaini, **Bullo Saifullah**, Mohd Zobir Hussein et al. Graphene Oxide-Gallic Acid Nanodelivery System for Cancer Therapy. *Nanoscale Research Letters* (2016) 11:491. (IF 4.73)
 37. Ubedullah Kaka; **Bullo Saifullah** and et al. Serum concentrations of ketamine associated with mechanical antinociceptive effects in conscious dogs. *BMC Veterinary Research* (2016) 12:198 (IF 2.792)
 38. Aminu Umar Kura¹, **Saifullah Bullo**, Pike-See Cheah², Mohd Zobir Hussein⁴, Norazrina Azmi⁵, SharidaFakurazi^{1,3}. Acute oral toxicity and biodistribution study of zinc aluminium-levodopa nanocomposite. *Nanoscale Research letters (Springer)*- March 2015, 10:105. (IF 4.73)
 39. **Bullo Saifullah**, Mohd Zobir B Hussein* et al. Antimycobacterial, antimicrobial activities and biocompatibility of nanocomposites of Para aminosalicylic acid with ZnLH and Zn/Al LDHs. *Drug Design, Development and Therapy* . 2014:8 1029–1036. (IF 4.16)
 40. **Bullo Saifullah**, Mohd Zobir Hussein* et al. Development of a highly biocompatible anti-tuberculosis nanodelivery formulation based on para-aminosalicylic acid–zinc layered hydroxide nanocomposites. *The scientific world journal* Volume 2014 (2014), Article ID 401460, 12 pages. (IF 2.30)
 41. **Bullo Saifullah**, Mohd Zobir B Hussein*, Samer et al. Antituberculosis nanodelivery system with controlled-release properties based on para-amino-salicylate–zinc aluminum-layered double-hydroxide nanocomposites. *Drug Design, Development and Therapy* 2013: 7: 1365–1375. (IF 4.16)
 42. **Bullo Saifullah**, Mohd Zobir B Hussein*, Samer et al. Sustained release formulation of an anti-tuberculosis drug based on para-aminosalicylic acid-zinc layered hydroxide nanocomposite. *Chemistry Central Journal* 2013, 7:72 (IF 4.25)
 43. Samer Hasan Hussein Al Ali, Mothanna Al-Qubaisi, Mohd Zobir Hussein, Maznah Ismail, **Bullo Saifullah**. Hippuric acid nanocomposite enhances doxorubicin and oxaliplatin-induced cytotoxicity in MDA-MB231, MCF-7 and Caco2 cell lines. *Drug Design, Development and Therapy* 2013:7: 25-31. (IF 4.16).
 44. Khalid Muhammad, **Bullo Saifullah**; Kamal, Mustafa et al. A Facile and Concise Route to Hydroxy Benzoyl Pyrido [2,3-d] Pyrimidine Heterocycles Derivatives: Synthesis, Structural, Spectral and Computational Exploration. *RSC Adv.*, 2019, 9, 34567–34580 (IF 4.036)
 45. Rabia baby, **Bullo Saifullah** and Mohd Zobir Hussein. Carbon Nanomaterials for the treatment of heavy metal contaminated water and environmental remediation. *Nanoscale Res Lett* 14, 341 (2019). (IF .4.73)

46. Rabia Baby, Bullo Saifullah and Mohd Zobir Hussein. Palm kernel shell as an effective adsorbent for the treatment of heavy metal contaminated water. *Scientific Reports (springer nature)* 11, 12 Dec 2019). **IF. 4.996**
47. Samer Hasan Hussein-Al-Ali, Raad Al-Ani, Jamal Alyoussef Alkradl, Suha Mujahed Abudoleh, Qais Ibrahim Abdallah Abualassal, Rami Ayoub, Mohd Zobir Hussein, Saifullah Bullo, and Arulselvan Palanisamy. Betulinic Acid-Graphene Oxide Nanocomposites for Cancer Treatment. *Science of Advanced Materials*. **IF. 1.067.**

CONFERENCES/WORKSHOPS

1. **Keynote Speaker:** 4th International Conference on Physical Sciences and Engineering on February 14-16th February, 2024. KFEIT Rahim Yar Khan. Title of the Talk : Designing of Anti-TB Nano-formulation using MgLH as a host and Pyrazinamide as a guest with controlled Release Properties.
2. **Keynote Speaker.** Green Nanotechnology: 4th International Conference on Advancing Knowledge from Multidisciplinary Perspective in Engineering and Technology. 26-27th January. 2024. Manila Philippines.
3. **Keynote Speaker:** Nanotechnology. In 3rd International Conference on Physical Sciences Engineering (ICPSE 2023) 16-18 May 2023.
4. **Keynoted Speaker** in 1st International Conference on Environmental Challenges and Material Science. March 6th and 7th March 2023.
5. **Mona Ebadi, Bullo Saifullah, Mohd Zobir.** Fe₃O₄-PEG-LDHs core-shell nanoparticles for drug delivery. Regional Conference on materials and ASEAN microscopy conference 2017 (RCM & AMC 2017.) 12-13 December 2017. Olive tree Hotel Penang, Malaysia.
6. **Mohd Zobir and Bullo Saifullah.** Synthesis of Fungicide-iron oxide Nanocomposite for Ganoderma Disease Control in Palm oil Trees. 2016 International Conference on Frontiers Composite material ICFCM2016. 19th-21st November 2016, Auckland New Zealand.
7. **Bullo Saifullah, Mohd Zobir and Sharida Fakurazi.** Synthesis and bioimaging applications of **Graphene quantum dots**-iron oxide nanoparticles. Workshop on Advanced Material and Nanotechnology (WAMN 24-25th August 2016) held at The Everly Putrajaya Malaysia.
8. Munasalih, **Bullo Saifullah** and Mohd Zobir Hussein. Palm oil tree waste as an alternative source for the production of **graphene quantum dots**. Workshop on Advanced Material and Nanotechnology (WAMN 24-25th August 2016) held at The Everly Putrajaya Malaysia.
9. Isshadiba Mustafa, **Bullo Saifullah** and Mohd Zobir Hussein. Synthesis of Hexaconazole-Zn/Al-LDHs nanocomposite fungicide nanodelivery system for controlling the Ganoderma disease in oil palm. Workshop on Advanced Material and Nanotechnology (WAMN 24-25th August 2016) held at The Everly Putrajaya Malaysia.
10. **Bullo Saifullah, Mohd Zobir Hussein***, and Sharida Fakurazi. Design, synthesis and drug delivery application of multifunctional graphene oxide-iron oxide magnetite nanoparticles using para-aminosalicylic acid as model drug. **Workshop on Advanced material and Nanotechnology (Green Nanotechnology) 4-5th November 2015.**
11. Dena Dorniani, **Bullo Saifullah** and Mohd Zobir Hussein. Development of Nanodelivery System For Anti-Cancer Drug Using Graphene Oxide. **3rd Malaysia Graphene and Carbon Nanotube Workshop 19th-20th October 2015** Razak Tower, University technology Malaysia (UTM).
12. Mohd Zobir and **Bullo Saifullah.** Graphene oxide-para-amino salicylic acid nanocomposite as an anti-tuberculosis nanodelivery system. 28th Regional Symposium of Malaysia Analytical Sciences, Ipoh Perak, Malaysia. 17-20 August 2015.
13. **Bullo Saifullah, Mohd Zobir Hussein*** et al. Drug delivery application of graphene oxide using para-aminosalicylic acid as model drug. Workshop on Advanced Materials and Nanotechnology 2014 (WAMN 2014), UPM, Malaysia, August 25-26, 2014.

14. Mohd Zobir Hussein* and **Bullo Saifullah et al.** Graphene as a platform for an anti-tuberculosis nanodelivery system based on isoniazid. *Advanced Material Conference 2014*. Langkawi, Malaysia. 25-26 November 2014.
15. Mohd Zobir Hussein and **Bullo Saifullah et al.** Nanodelivery system for anti-tuberculosis drug based on Mg/Al and Zn/Al layered double hydroxides-isoniazid nanocomposites. *The International Conference fo Academic Disciplines 16-19 June 2014 at Casa Convalescencia, Sant Antoni Maria Claret 171, Barcelona, Spain.*
16. **The 6th Nanotechnology cancer Asia-pacific (NCAP) Network Meeting** (Healthcare session I of APAN 37th Video Conferencing meeting) IDEC Alpha University Putra Malaysia 23 January 2014.
17. **Workshop on Advanced Materials and Nanotechnology 2013 (WAMN)**, Organized by Institute of Advanced Technology (ITMA), University Putra Malaysia (UPM), 10-11 September 2013.
18. **Nanomaterials and Nanodelivery Workshop 2013**. Organized by Laboratory of Molecular Medicine, Institute of Bioscience, University Putra Malaysia 25th April 2013.
19. **43rd Union World Conference on Lung Health 2012**. Held in Kuala Lumpur from 13-17 November 2012, organized by the International Union against Tuberculosis and Lung Disease (The Union).
20. **Workshop on Advanced Materials and Nanotechnology 2011 (WAMN2011)**. Organized by Institute of Advanced Technology (ITMA), Faculty of engineering & Faculty of Science UPM, 16-17th November 2011.

TRAININGS

1. **Workshop on Bacterial Biofilms 2017**, Organized by Laboratory for Natural Products, Institute of Biosciences, University Putra Malaysia 18-19th May 2017.
2. **Malaysia ZebraFish Disease Models Workshop**, held at Cancer Research Malaysia, USJ Laboratory on 11 -12th November 2015.
3. **(RAISE) Workshop** (RAISE = Reliable- Accuracy- Intravenous inoculation with Safety , Easy and Efficiency), at Source of Laboratory Animal University Kebangsaan Malaysia (UKM). Organized by Laboratory Animal Science Association of Malaysia. 20-21st October 2015.
4. **In Vivo small animal imaging system using Perl Trilogy** for Near Infrared Fluorescence and Bioluminescence on 28th September 2015, held in UniversityKembangan Malaysia (UKM).
5. **Workshop Confocal Laser Scanning Microscopy**, Organized by Microscopy Unit, **Institute of Bioscience, University Putra Malaysia and Matrix Optics (M) Sdn and Bhd. 9th September 2015**
6. **Workshop on Electron microscopy for Biological Science Research 24-28th August 2015. Organized by Electron microscopy unit**, Institute of Bioscience (IBS), University Putra Malaysia (UPM).
7. **Animal Cell Culture Workshop 25-27th June 2012**. Organized by Laboratory of Vaccine and Immunotherapeutic Institute of Bioscience (IBS), University Putra Malaysia (UPM).

NANOMATERIAL

Design, synthesis and drug delivery Applications of the following Nanomaterials

- Graphene and Graphene oxide quantum dots, Graphene oxide
- Inorganic nanolayers (Layered Double Hydroxides (LDHs), layered hydroxy salts (Zinc layered

- hydroxides and magnesium layered hydroxides etc)
- Iron oxide magnetite nanoparticles ,
 - Fabrication of iron oxide magnetite nanoparticles with graphene oxide
 - Fabrication of iron oxide magnetite nanoparticles with chitosan biopolymer
 - Polymeric NPs
 - Gold Nanoparticles
 - Silver Nanoparticles
 - Every metals NPs etc.

IN VITRO AND IN VIVO STUDIES

- Mona Cell culture, Cytotoxicity Study, antimicrobial assays, antimycobacterial assays (e.g. HT-SPOTi, REMA and MABA) and *in vivo* studies on rats, mice, rabbits, goats and dogs etc.

ORGANIC CHEMISGTRY SKILLS

- Mona Natural Products Chemistry
- Extraction and isolation of pure compounds from plants and herbs
- Organic Synthesis
- Chromatography, Thin Layer Chromatography TLC, Column Chromatography, GC and HPLC etc.

TECHNIQUES

- | | | |
|------------------------|----------------------|--------------------------------------|
| 1. X-ray diffraction | 7. FTIR Spectroscopy | 12. BET Surface Area Analysis |
| 2. Raman Spectroscopy | 8. FESEM | 13. Inductively coupled Plasma (ICP) |
| 3. Analytical HPLC | 9. HR-TEM | 14. NMR spectroscopy |
| 4. Gas chromatography | 10. TGA | 15. Mass spectrometry and etc. |
| 5. UV/Vis spectroscopy | 11. DSC | |
| 6. DLS | | |

REFERENCES

1. Prof. Mohd Zobir Hussein (PhD & Postdoc Supervisor)

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