



UNIVERSITY OF THE PHILIPPINES
BAGUIO
Governor Pack Road, Baguio City 2600



College of Science
Telefax: (074)442-7231
Email: cs.upbaguio@up.edu.ph

CURRICULUM VITAE

Asst. Prof. Mac Michael M. Rubio

Email address: mmrubio1@up.edu.ph
Contact Number: +63985 269 0532
Research Interest/Discipline: **Natural Products,
Polymer Chemistry, Biomaterials, Biosensors and
Bioanalytical Chemistry, Nanotechnology**
PRC License Number: 0013026 (Registered Chemist)



Educational Background

Duration:	January 2021 - December 2022
Degree:	Master of Science in Chemistry
University:	North Carolina Agricultural & Technical State University
Thesis Title:	Iodinated Polymer Growth and Conjugates for Bioimaging
Awards and Distinction Received:	Recipient, 2022 College of Science and Technology Outstanding Junior Graduate Research Assistant Award Recipient, DOST-SEI Foreign Graduate Scholarship Program in Priority S&T Field
Duration:	June 2012 - July 2016
Degree:	Bachelor of Science in Chemistry
University:	Central Luzon State University
Thesis Title:	Extraction of Anthocyanin using Response Surface Methodology and its Stability in Biologically Relevant Buffers
Awards and Distinction Received:	Recipient, Department of Chemistry Best Thesis Award Recipient, Expanded Student's Grants-in-Aid Program for Poverty Alleviation – A Joint Scholarship Program of the Commission on Higher Education (CHED) and Department of Social Welfare and Development (DSWD)

Work Experience

Duration:	Feb 2023-present
Position/Designation:	Assistant Professor 1
Employer:	University of the Philippines Baguio
Duration:	January 2021 - December 2022
Position/Designation:	Graduate Research Assistant
Employer:	North Carolina Agricultural & Technical State University

Duration: September 2019 - May 2020
Position/Designation: Instructor
Employer: Central Luzon State University

Duration: October 2016 – August 2019
Position/Designation: Science Research Analyst/Science Research Specialist 1
Employer: Philippine Rice Research Institute

Other Designations/Committees while Affiliated with UP Baguio

Duration	Designation/ Committee
March 2023 - present	Member, Committee on Elections (COMELEC)
February 2023 - present	Member, Socials Committee
February 2023 - present	Member, Biological and Chemical Waste Management Committee

Research Projects/ Research Involvements/Patents

Duration	Research Project/Patent Details
2018 – 2021	Title: Novel Targeted Iodinated Microbubbles for Molecular Imaging with Computed Tomography Position: Graduate Student Funding agency: United States National Institute of Health - National Institute of Biomedical Imaging and Bioengineering
January 2017 – August 2019	Title: Development of Multiple Strains of Plant Growth-Promoting Rhizobacteria (PGPR)-based Biofertilizer for Irrigated Lowland Rice Production Position: Project Researcher Funding agency: Department of Science and Technology - Philippine Council for Agriculture, Aquatic and Natural Resources Research and Development (DOST-PCAARD)
June 2015 – June 2016	Title: Extraction and Encapsulation of Antioxidants and Proteins from Rice Bran for Functional Food and Biomedical Applications (Study Title) Position: Undergraduate Thesis Student Funding agency: Philippine Rice Research Institute-Department of Agriculture

List of Publications (Books, Journals, Proceedings, etc.)

Articles

1. **Rubio, M.M.M.**, Truong, H.X., & dela Cruz, A.A. (2022). Identification and Characterization of Rhizobacterial Diversity in the Irrigated Rice Ecosystem in Central Luzon using 16s Ribosomal RNA Gene Sequencing. *Rice-Based Biosystems Journal*, 11, 107-117.

2. Djorgbenoo, R., **Rubio, M.M.R.**, Yin, Z., Moore, K. J., Jayapalan, A., Fiadorwu, J., ... & He, P. (2021). Amphiphilic phospholipid-iodinated polymer conjugates for bioimaging. *Biomaterials Science*, 9(14), 5045-5056.
3. Bulatao, R.M., Samin, J.P.A., Tubera, R.M., **Rubio, M.M.M.**, Romano, D.M., & Rafael, R.R. (2019). Optimization of Process Parameters for the Extraction of Anthocyanins from Black Rice Bran using Response Surface Methodology. *Philippine Agricultural Scientist*, 102(1), 1-13.

Discussion Paper

1. Truong, HX, Duque, MD, & **Rubio, MMM.** (2019). Rhizotrophic Bacteria with Plant Nutrition Potential. *PhilRice Discussion Paper Series No. 2019-09*. Philippine Rice Research Institute, Nueva Ecija

Conference Proceedings

1. Drakes, A., **Rubio, M. M. M.**, & He, P. (2023). Gold Nanoparticles Conjugated with Iodinated Copolymers as a Potential Dual X-ray Imaging Contrast Agent. *Women in Science and Technology Conference*, North Carolina Agricultural and Technical State University, Greensboro, North Carolina; March 24-25, 2022. (Poster Presentation)
2. He, P., **Rubio, M. M. M.**, & Moore, K. J. (2023). Iodinated Polymer Growth for X-ray Imaging Contrast Agent Optimization. *2023 Pittcon Conference and Exposition*, Philadelphia, Pennsylvania; March 18-22, 2022. (Oral Presentation)
3. **Rubio, M. M. M.**, Moore, K. J., Alonzo, S. M. A., & He, P. (2023). Iodinated Polymer Growth for X-ray Imaging Contrast Agent Optimization. *Society for Laboratory Automation and Screening (SLAS) 2023 International Conference and Exhibition*, San Diego, California; February 25 – March 1, 2023. (Poster Presentation)
4. Drakes, A., **Rubio, M. M. M.**, & He, P. (2022). Gold Nanoparticles Conjugated with Iodinated Copolymers as a Potential Dual X-ray Imaging Contrast Agent. *NanoImpacts Conference 2022 Undergraduate Research Symposium*, Joint School of Nanoscience and Nanoengineering, Greensboro, North Carolina; October 15, 2022. (Poster Presentation-Third Place Award)
5. **Rubio, M. M. M.**, Moore, K. J., & He, P. (2022). Iodinated Polymer Growth for X-ray Imaging Contrast Agent Optimization. *10th Annual Triangle Student Research Competition*, Research Triangle Park, North Carolina; October 4, 2022. Abstract book, p. 22. (Poster Presentation)
6. **Rubio, M. M. M.**, Moore, K. J. & He, P. (2021). Iodinated Polymer Conjugates for Bioimaging. *9th Annual Triangle Student Research Competition*, Research Triangle Park, North Carolina; October 7, 2021. Abstract book, p. 10. (Poster Presentation)
7. **Rubio, M.M.M.**, Truong, H.X., & Dela Cruz, A.A. (2018). Molecular Identification and Biochemical Characterization of Rhizobacteria toward Development of a Multiple-strain Rhizobacteria-based Biofertilizer for Rice; program abstracts. *45th Annual Convention of Philippine Society of Biochemistry of Molecular Biology*, Grand Xing Imperial Hotel, Iloilo City, Philippines; November 27-30, 2018. Abstract book, p. 106. (Poster Presentation-3rd Best Poster)

8. **Rubio, M.M.M.**, Truong, H.X., & Dela Cruz, A.A. (2018). Molecular Identification and Biodiversity of Plant Growth-Promoting Rhizobacteria in Rice Ecology; program abstracts. *31st National Rice Research for Development Conference*, PhilRice-CES, Maligaya Science City of Muñoz, Nueva Ecija, Philippines; September 6-7, 2018. Abstract book, p. 51-52. (Oral Presentation)
9. **Rubio, M.M.M.**, Truong, H.X., & Dela Cruz, A.A. (2018). Simple DNA Extraction Technique for Plant Growth-Promoting Rhizobacteria to Optimize PCR Amplification for Downstream Processes; program abstracts. *33rd Philippine Chemistry Congress*, Philippine International Convention Center, Pasay City, Philippines; May 30-June 1, 2018. Abstract book. (Oral Presentation)
10. **Samin, J.P.A.**, Tubera, R.M., **Rubio, M.M.M.**, Romano, D.M., & Bulatao, R.M. (2018). Extraction of Anthocyanin from Black Rice Bran using Response Surface Methodology and its Stability in Biologically Relevant Buffers. *33rd Philippine Chemistry Congress*, Philippine International Convention Center, Pasay City, Philippines; May 30-June 1, 2018. Abstract book. (Oral Presentation)
11. **Rubio, M.M.M.**, Truong, H.X., & Dela Cruz, A.A. (2017). Efficacy Evaluation of Multiple-trait Plant Growth-Promoting Rhizobacteria-based Biofertilizer; program abstracts. *30th National Rice Research for Development Conference*, PhilRice-CES, Maligaya Science City of Muñoz, Nueva Ecija, Philippines; September 5-6, 2017. Abstract book, p. 43-44. (Oral Presentation)
12. **Bulatao, R.M.**, Samin, J.P.A., Tubera, R.M., **Rubio, M.M.M.**, Romano, D.M., Rafael, R.R. (2017). Extraction of Anthocyanin from Black Rice Bran using Response Surface Methodology and its Stability in Biologically Relevant Buffers; program abstracts. *24th Federation of Crop Science Societies of the Philippines Scientific Conference*, Diversion 21 Hotel, Iloilo City, Philippines; June 13-17, 2017. Abstract book. (Poster Presentation)

Research Presentations in Conferences

Date	Title of Presentation	Conference and Venue
International		
October 4, 2022	<i>Iodinated Polymer Growth for X-ray Imaging Contrast Agent Optimization (Poster Paper)</i>	10th Annual Triangle Student Research Competition Venue: North Carolina, USA
October 7, 2021	<i>Iodinated Polymer Conjugates for Bioimaging (Poster Paper)</i>	9th Annual Triangle Student Research Competition Venue: North Carolina, USA
National		
November 27-30, 2018	<i>Molecular Identification and Biochemical Characterization of Rhizobacteria toward Development of a Multiple-strain Rhizobacteria-based Biofertilizer for Rice (Oral Paper)</i>	45th Annual Convention of Philippine Society of Biochemistry of Molecular Biology Venue: Iloilo City, Philippines
September 6 - 7, 2018	<i>Molecular Identification and Biodiversity of Plant Growth-</i>	31st National Rice Research for Development Conference

May 30 - June 1, 2018	<i>Promoting Rhizobacteria in Rice Ecology (Oral Paper)</i> <i>Simple DNA Extraction Technique for Plant Growth-Promoting Rhizobacteria to Optimize PCR Amplification for Downstream Processes (Oral Paper)</i>	Venue: PhilRice CES, Nueva Ecija 33 rd Philippine Chemistry Congress Venue: Philippine International Convention Center, Pasay City, Philippines
September 5-6, 2017	<i>Efficacy Evaluation of Multiple-trait Plant Growth-Promoting Rhizobacteria-based Biofertilizer (Oral Paper)</i>	30th National Rice Research for Development Conference Venue: PhilRice CES, Nueva Ecija

Public Service

Date/s

Extension Service Details

April 27-29, 2023

Title: 28th Summer Institute in the Natural Sciences and Mathematics

Position: Lecturer

Title of talk: Web Applications and Software Programs for Flexible and Modern Teaching in Chemistry and Research Methods

June 14, 2022

Title: 2022 Nueva Ecija Division Science and Technology Fair

Position: Judge

December 4, 2021

Title: Graduate Students Colloquium Webinar

Position: Resource Speaker

Title of talk: Amphiphilic Phospholipid-Iodinated Polymer Conjugates for Bioimaging

August 12, 2021

Title: 2021 Nueva Ecija Virtual Division Siyensikula

Position: Judge

October 29, 2019

Title: CLSU Chemical Society General Chemistry Quiz Bee: Ika-anim na PatiCHEM: Quizzards Unite"

Position: Judge

June 13-14, 2019

Title: Philippine Society of Biochemistry and Molecular Biology (PSBMB) Central Luzon Chapter Capacity Enhancement Training on Basics Molecular Biology Techniques for High School Teachers and Science Researchers

Position: Laboratory Resource Person

May 23, 2018

Title: Central Luzon State University Senior High School Research Conference: Research Capability Building of Young Minds: Immersion and Capstone

Position: Judge

April 4, 2017

Title: Vega National High School 2nd Moving-up Ceremony
Position: Guest Speaker

Membership in a National/International Organizations

Date/s	Organization Details
2022 - present	Member, Honor Society
2022 - present	Member, American Chemical Society
2016 - present	Member, Integrated Chemist of the Philippines
2018 - 2020	Member, Philippine Society of Biochemistry and Molecular Biology
2012 - 2016	Member, Philippine Association of Chemistry Students
2013 - present	Alumnus, CLSU Chemical Society
2013 - present	Alumnus, Christ in Central Luzon Campus Ministry

Professional Development: Participation in Conferences/Training

Date	Conference and Venue
International October 15, 2022	NanoImpacts Conference 2022 Undergraduate Research Symposium Venue: Greensboro, North Carolina, USA
August 2-5, 2021	US National Science Foundation (NSF) BioPolymers, Automated Cellular Infrastructure, Flow, and Integrated Chemistry Materials Innovation Platform (BioPacific MIP) Summer School Venue: Virtual
National April 20, 2023	Identify impactful journals that suit your research using Journals Citation Reports Venue: Virtual Webinar
August 3 – 4, 2022	Training Workshop on Quality Assurance/ Quality Control (QA/QC) and Method Verification/Validation Venue: Virtual and BSWM Lecture Room 1
September 20 – 21, 2021	35th Philippine Chemistry Congress Venue: Virtual (Streaming Live from Metro Manila, Philippines)
December 1 - 4, 2020	47 th PSBMB Annual Convention: A Virtual International Conference Venue: Virtual
August 26-30, 2019	Training Workshop on Technical Writing for Publication in a Refereed Journal Venue: PCAARRD, Los Baños, Laguna

June 13-14, 2019	Philippine Society of Biochemistry and Molecular Biology (PSBMB) Central Luzon Chapter Capacity Enhancement Training on Basics Molecular Biology Techniques for High School Teachers and Science Researchers
March 29, 2019	Seminar and Training on the Operation of Quantitative Real-Time PCR (Analytikjena qTower ³ Touch) by Chemoscience Philippines Inc.
September 6-7, 2018	31st National Rice Research for Development Conference Venue: PhilRice-CES, Nueva Ecija
May 30 – June 1, 2018	33rd Philippine Chemistry Congress Venue: Philippine International Convention Center, Pasay City, Philippines
November 27-30, 2018	45th Annual Convention of Philippine Society of Biochemistry of Molecular Biology Venue: Iloilo City, Philippines
December 5-8, 2017	Training on Research Design, Statistical, and Financial Analysis for the Agricultural Resources Management Sector Venue: PCAARRD, Los Baños, Laguna
September 5-6, 2017	30th National Rice Research for Development Conference Venue: PhilRice CES, Nueva Ecija
June 20, 2017	Hands-on Workshop for Biolog GENIII Microbial Identification System Venue: PhilMech, Nueva Ecija