

CURRICULUM VITAE

Dr. RIYAZALI ZAFARALI SAYYED



(A) Personal Profile

Date of Birth : 01 January 1973
Sex : Male
Marital Status : Married
Languages Known : English, Urdu, Hindi, Marathi

Correspondence Address

Dept. of Microbiology, PSGVP Mandal's Arts, Sci & Comm College, SHAHADA 425409 (MS), India.
Mob : + 91 9890234486
E-mail : sayyedrz@gmail.com

Permanent Address

Plot No. 12, 38-1/B, Opp. Raza Masjid, Garib Nawaz Colony, SHAHADA 425409 (MS), India
Mob : + 91 9673578286
E-mail : riyaz829@yahoo.co.in

(B) Academic Profile

Exam Passed	Board/University	Subject/Specialization	Year	Division/Grade Merit etc.
Ph. D. (Microbiology)	NMU, Jalgaon	Microbiology Studies on secondary metabolites of <i>A. faecalis</i> with special reference to its applicability in plant nutrition and disease management	Sep 2003	---
M. Sc. (Microbiology)	NMU, Jalgaon	Microbiology	May 1996	First-Distinction (72.00%)
B. Sc. (Microbiology)	NMU, Jalgaon	Microbiology	May 1994	First Class (66.00%)

(C) Professional Profile

Teaching Experience : Graduate level =25.0 yrs, Masters level = 17.0 yrs

Organization Name	Designation	From Date	To Date	Nature of Duties
PSGVP Mandal's Arts, Scien and Commerce College Shahada 425409 (MS), India	Professor	04/11/2020	Till this Date	Teaching Theory & Lab Courses, Field Demonstration, students' research prjcts and Supervising Ph.D. students
	Associate Prof	04/09/2016	03/11/2020	
	Assistant Prof.	16/09/2005	03/09/2016	
RC Patel College, Shirpur (MS)	Lecturer	21/08/2004	15/09/2004	
North Maharashtra Univ., Jalgaon	Lecturer	25/01/2002	30/03/2004	
PSGVPM'S ASC College Shahada 425409 (MS)	Lecturer	16/08/1996	30/04/1999	

Teaching Assignments

Teaching the following course to Graduate and Masters' student of Microbiology

<i>Course Title</i>	<i>Theory/ Laboratory</i>	<i>Course Credit and Teaching Hours</i>	<i>Level</i>
SEMESTER I			
Elementary Microbiology/ Microbial Diversity	Theory	2 (2)	Graduates
Microbiology Practical -I	Laboratory	2 (4)	Graduates
Basic Immunology	Theory	3 (3)	Graduates
Methods in Applied Microbiology - I	Laboratory	2 (4)	Graduates
Immunology	Theory	4 (3)	Masters
Applied and Environmental Microbiology	Theory	4 (3)	Masters
Methods in Enzymology	Laboratory	4 (4)	Masters
SEMESTER II			
Cell Biology of Microorganisms	Theory	2 (2)	Graduates
Microbiology Practical -II	Laboratory	2 (4)	Graduates
Diagnostic Immunology	Theory	3 (3)	Graduates
Methods in Applied Microbiology - II	Laboratory	2 (4)	Graduates
Agricultural Microbiology	Theory	4 (3)	Masters
Methods in Applied Microbiology	Laboratory	4 (4)	Masters
Research Methodology	Theory		Ph.D.

Academic and Administrative Responsibilities

- Head, Graduate and Post Graduate Dept. of Microbiology from Mar 2015 till this date
- Head, Graduate Dept. of Biotechnology Mar 2011- Mar -2015
- Co-ordinated the following committees in the college
 - Staff academy from 2011-2013
 - Entry in Service from 2011-2013
 - Remedial coaching from 2013-2015
- **Member**, National Assessment & Accreditation Council (NAAC) steering Committee from 2007
- **Member**, Internal Quality Assurance Cell (IQAC) committee 2007 onwards

Professional Trainings//Course attended

Professional Training			
Sr. No.	Training programme	Date and place	Place
1	Winter School on Biosciences	21 Nov-11 to Dec 2003	SP University, V.V.Nagar (Guj).
2	Orientation course	17 th Feb to 08 th Mar	Kumaun University, Nainital,

		2008,	Uttarakhand.
3	Refresher Course in Biosciences	9 th -30 th Nov 2010	HP University, Shimla, (HP).
4	Summer School in Basic Science	5-26 May 2012	Jamia Milia Islamia Univ. N. Delhi.
5	STC on Nano-Science & Technology	29 Aug to 03 Sep 2016	HRDC, BAMU, Aurangabad.

Professional Recognition/Awards/Fellowship

1. **Fellow Indian Phytopathological Society (FPSI) 2021**
2. **Outstanding Achievement Award, Kalp Lab, Mathura, India, 26th Jul 2020**
3. **Springer-Society Award (2020)**, Society for Environmental Sustainability, Lucknow.
4. **Award for Excellent (2020)** contribution to the Society of Environmental Sustainability
5. **Excellence in PGPR Research Award**, Asian PGPR Society & National University of Uzbekistan, 19 Aug 2019.
6. **Prof. Man Mohan Sharma Award (2018) for Science & Technology (2018)** by Marathi Vignyan Parishad, Mumbai.
7. **Excellence in PGPR Research Award**, Asian PGPR Society & Institute of Biology, Indonesia 18 July 2017.
8. **Best Teacher Award (2016)**, NMU, Jalgaon.
9. **Green Globe Award** : International Society for Biodiversity Conservation & Res., Mar 2014.

Appointments on University Statutory bodies

1. **Member** – Faculty of Science and Technology, KBC NMU, Jalgaon, 2020 onwards
2. Member, Board of Studies in Microbiology, KBCNMU, Jalgaon, 2018 onwards.
3. Member, Board of Studies in Microbiology, Sathey College, Mumbai 2021 onwards
4. Member, Board of Studies in Microbiology, Dr. B.A. Marathwada Uni., Aurangabad, 2011-2016

Membership of Professional Association

- **President -Asian PGPR Society**, Indian Chapter(Jul 2017 onwards)
 - **Vice president -Asian PGPR Society** (Nov 2016 to Jul 2017)
(<http://www.ag.auburn.edu/auxiliary/asianpgpr/advisory.php>)
 - **Executive Board Member - Asian PGPR Society** (2013-2016)
- Life member of --**
- 1). Association of Microbiologists of India (A.M.I.) from 2005 till today
 - 2). Biotechnology Research Society of India (B.R.S.I.) from 2005 till today
 - 3). Microbiologists Society, India (M.S.I.) from 2007 till today
 - 4). Indian Phytopathological Society (I.P.S.) from 2008 till today
 - 5). Asian PGPR Society for Sustainable Agriculture (APSSA) from 2009 till today

Books authored = 79

Edited/Reference Books = 26 + 53 text Books = 79

Sl. No	Title	Publisher, ISBN	Year
1.	Plant Growth Promoting Microorganisms of Arid Region: Status and Prospects	Ritu Mawar, R Z Sayyed , Sushil K Sharma and Krishna Sundari Sattiraju Springer, India	2022
2.	Secondary metabolites and volatiles of PGPRs in plant-growth promotion	R. Z. Sayyed, Virgilio Gavicho Uarrota Springer, USA 978-3-031-07558-2 http://www.lavoisier.eu/books/note.asp?ouvrage=4722546	2022
3.	Microbial Biosurfactants Volume III: Application Environmental Reclamation/ Bioremediation	R. Z. Sayyed CRC Press- Taylor and Francis group- USA 978-1-032-19635-0 https://www.routledge.com/Microbial-Surfactants-Volume-3-Applications-in-Environmental-Reclamation/Sayyed/p/book/9781032196350	2022
4.	Microbial Surfactants Volume II : Application in Food and Agriculture	R. Z. Sayyed & EnshasyHE CRC Press- Taylor and Francis group- USA 978-1032-21624-7 https://www.routledge.com/Microbial-Surfactants-Volume-2-Applications-in-Food-and-Agriculture/Sayyed-El-Enshasy/p/book/9781032162478	2022
5.	Microbiome-Gut-Brain Axis Implications on health	Sayyed, R.Z. , Khan Mahejibin Springer, Singapore 978-981-16-1626-6 https://link.springer.com/book/10.1007/978-981-16-1626-6	2022
6.	Antioxidants in Plant-Microbe Interaction	Singh, HB, Anukool V, Sayyed, R Z 978-981-16-1349-4 https://link.springer.com/book/10.1007/978-981-16-1350-0	2021
7.	Microbial Surfactants Volume I: Production and Applications	CRC Press- Taylor and Francis group- USA Sayyed RZ , Enshasy HE & Hameeda B 978-0367-52118-9 https://www.routledge.com/Microbial-Surfactants-Volume-I-Production-and-Applications/Sayyed-El-Enshasy-Hameeda/p/book/9780367521189	2021
8.	Soil Bioremediation: An Approach Towards Sustainable Technology	J Parray, Hasheem A, R. Z. Sayyed Wiley Blackwell, US 978-1-119-54795-2 https://www.wiley.com/en-us/Soil+Bioremediation:+An+Approach+Towards+Sustainable+Technology-p-9781119547976	2021
9.	Plant Growth Promoting Rhizobacteria for Sustainable Stress Management Vol 1 Rhizobacteria in Abiotic Stress Management	R Z Sayyed , N. Arora, M. S. Reddy Springer-Nature Singapore 978-981-13-6535-5	2019
10.	Plant Growth Promoting Rhizobacteria for Sustainable Stress Management Vol II Rhizobacteria in Biotic Stress Management	R Z Sayyed Springer-Nature Singapore 978-981-13-6985-8 https://link.springer.com/book/10.1007/978-981-13-6986-5	2019
11.	Plant Growth Promoting Rhizobacteria (PGPR): Prospects for Sustainable Agriculture	R Z Sayyed , M. S. Reddy, Sarjiya Antonius Springer, Singapore 978-981-13-6789-2 https://doi.org/10.1007/978-981-13-6790-8	2019
12.	Renewable Resources and Environment	B.Tabssum, P Bajaj & R Z Sayyed	2018

		Discovery publishing House, New Delhi 978-93-5056-893-4	
13.	<i>Alcaligenes faecalis</i> for plant nutrition and disease control	R Z Sayyed Lambert publishing, Germany 978-3-330-06195-8 https://www.lap-publishing.com/catalog/details/store/gb/book/978-3-330-06195-8/alcaligenes-faecalis-for-plant-nutrition-and-disease-control	2017
14.	Recent Trends in PGPR Research for Sustainable Crop Productivity	R Z Sayyed , M. S. Reddy, A I Al-Turki Scientific Publ., Jodhpur 978-81-7233-990-6	2016
15.	Advances in Bio-Medico Science	R Singh and R Z Sayyed Excell India Publ, New Delhi 978-93-85777-30-1	2016
16.	Advances in Plant Sciences	S. K. Tayade, R.Z. Sayyed , S Pathak Sara Pub, Ahmadabad 978-1-73032-656-1 https://www.amazon.in/Advances-Plant-Sciences-Prof-Tayade/dp/B07D39LQPQ	2016
17.	Biotechnology for degree students	R Z Sayyed , Prashant pub, Jalgaon 978-93-84228-26-2	2014
18.	A text book of Biotechnology	R Z Sayyed , Prashant pub, Jalgaon 978-93-81546-66-6	2014
19.	Applied Biotechnology	R Z Sayyed , Prashant pub, Jalgaon 978-93-84228-26-2	2014
20.	Essentials of Biotechnology	R Z Sayyed , Prashant pub, Jalgaon 978-93-84228-17-0	2014
21.	Fundamentals of Biotechnology	R Z Sayyed , Prashant pub, Jalgaon 978-93-84228-20-0	2014
22.	Applied Microbiology	R Z Sayyed , Prashant pub, Jalgaon 978-93-84228-18-7	2014
23.	Essentials of Microbiology	R Z Sayyed , Prashant pub, Jalgaon 978-93-84228-19-4	2014
24.	Recent Advances in Biofertilizers and Biofungicides (PGPR) for Sustainable Agriculture	M.S.Reddy, . . . R. Sayyed S. Gopalkrishnan Cambridge Scholars Press, London 978-1-4438-6515-9 https://cambridgescholars.com/product/978-1-4438-6515-9	2014
25.	Plant Growth Promotion by PGPR for sustainable Agriculture	R.Z. Sayyed , M S Reddy & A Al-Turki Scientific publ., Jodhpur 978-81-7233-660-8 https://www.amazon.in/Growth-Promotion-Rhizobacteria-Sustainable-Agriculture/dp/8172336608	2010
26.	Biotechnology : Emerging Trends	R. Z. Sayyed and A S Patil Scientific Publ. Jodhpur 978-81-7233-587-8 https://www.scientificpubonline.com/bookdetail/biotechnology-emerging-trends/9788172335878/0	2009
27.	Text Books Edited = 53		

(D) Research Profile

Areas of research Interest

1) **Plant Microbe Interaction- PGPR** in plant growth promotion, biocontrol and stress tolerance

My laboratory work on the role of Rhizobacteria (PGPR) in plant growth promotion, systemic resistance, biocontrol of plant pathogens and bioremediation of heavy metal, salinity and drought affected soil. We have evaluated various rhizobacteria for their plant growth promoting metabolites (nitrogen fixation, phytohormones; siderophores, P solubilization, and ammonia production) and their effects in various crops.

We have successfully demonstrated the biocontrol of various phytopathogens through the use of biocontrol traits (siderophores, HCN, antibiotics and hydrolytic enzymes) producing PGPR.

We have successfully demonstrated the role of stress tolerant metabolites (IAA, EPS, ACC deaminase; antioxidant enzyme, osmolytes) producing PGPR in tolerance against salinity, drought and heavy metal ion contamination.

2. Development of protocol for production of biodegradable polymers

We developed the protocol for the production of biodegradable plastic from microorganisms using agro-wastes. We have also studied the biodegradation of this polymer and found it as an eco-friendly alternative to the synthetic plastic.

Research Profile at a Glance

- Research Gate Profile : http://www.researchgate.net/profile/Riyaz_Sayyed
- Google scholars profile-<http://scholar.google.co.in/citation?user=vJUrgAAAAJ&hl=en&cstart=0&pagesize=20>
- ScopusProfile:<http://www.scopus.com/authid/detail.uri?authorId=55403640000>
- Scopus Author ID : 55403640000
- ORCID ID : 1553-1213

Citations				IF range	h index				i10 index		Res Gate Score
G. Scholars	Scopus	WoS	Res Gate		Google Scholars	Scopus	WoS	RG	G. Scholar	Scopus	
4484	2074	1316	3879	0.8-8.0	30	21	15	30	77	- - -	36.63

- Research Gate Profile : http://www.researchgate.net/profile/Riyaz_Sayyed
- Google scholars profile-<http://scholar.google.co.in/citation?user=vJUrgAAAAJ&hl=en&cstart=0&pagesize=20>
- ScopusProfile:<http://www.scopus.com/authid/detail.uri?authorId=55403640000>
- Scopus Author ID : 55403640000
- ORCID ID : 1553-1213

▪ Total Impact Factor (JCR-Thompson-Reuters) of publications F = 456.316

Total	International Publications	National publications	In Proceedings	Book Chapters
225	141	20	23	41

▪ In Peer Reviewed International Journals = 147

Sl No	Authors	Title of paper	Scientific Journal	Vol. pp Year	IF
1.	Thakur P, Thakur S, Kumari P, Shandilya M, Sharma S*, Poczai P, Alarfaj AA, and Sayyed RZ*	Nano-insecticide: Synthesis, Characterization, and Evaluation of Insecticidal Activity of ZnO NPs Against <i>Spodoptera litura</i> and <i>Macrosiphum euphorbiae</i>	Applied NanoScience	12 July 2022 Online https://doi.org/10.1007/s13204-022-02530-6	3.674

2.	Muccee F* Bijou O, Harakeh S, Ahmad RA, Sayyed RZ , Haghshenas L, Alshehri S, Ansari MJ, Ghazanfar S	In-silico investigation of effects of single nucleotide polymorphisms in PCOS associated CYP11A1 gene on mutated proteins	Genes	12 Jul 2022 , 13, 1231. https://doi.org/10.3390/genes13071231	4.441
3.	Tarfeen N, Ul-Nisa K, Hamid H*, Bashir Z, Yatoo AM, Dar MA, Mohiddin FA, Amin Z, Ahmad R, and Sayyed R.Z.*	Microbial Remediation: A Promising Tool for Reclamation of Contaminated Sites with Special Emphasis on Heavy Metal and Pesticide Pollution: A review	Processes	12 Jul 2022 10, 1358. https://doi.org/10.3390/pr10071358	3.352
4.	Verma A, Shameem N, Jatav HS, Sathyanarayana E, Parray JA, Pocai P, and Sayyed RZ*	Fungal Endophytes to Combat Biotic and Abiotic Stresses for Climate-Smart and Sustainable Agriculture	Frontiers in Plant Science	05 Jul 2022 13:953836. doi: 10.3389/fpls.2022.953836	6.627
5.	Bhat KA, Mir RA, Farooq A, Manzoor M, Hami A, Allie KA, Wani SM, Khan MN, Sayyed RZ* , Pocai P, Almalki WH, Zargar SM, and Shah AA*	Advances in Nematode Identification: A Journey from Fundamentals to Evolutionary Aspects	Diversity	01 July 2022 14, 536. https://doi.org/10.3390/d14070536	2.465
6.	Fatima S, Mir MI, Khan MR, Sayyed R. Z. , Mehnaz S, Abbas S, Sadiq MB*, Masih R	Optimization of gelatin extraction from chicken feet and development of gelatin based active packaging for shelf-life extension of fresh grapes	Sustainability	28 June 2022 , 14, 7881. https://doi.org/10.3390/su14137881	3.251
7.	Zhang R, Ouyang J, Xu X, Li J, Rehman M, Deng G, Shu J, Zhao D, Chen S, Sayyed RZ , Fahad S* and Chen Y	Nematicidal activity of <i>Burkholderia arboris</i> J211 against <i>Meloidogyne incognita</i> on tobacco	Frontiers in Microbiology	10 June 2022 13:915546. https://doi.org/10.3389/fmicb.2022.915546	4.076
8.	Khumairah FH, Setiawati MR, Fitriatin BN, Simarmata T, Alfaraj S, Ansari MJ, Enshasy HE, Sayyed RZ* , Najafi S	Halotolerant Plant Growth Promoting Rhizobacteria isolated from Saline Soil Improve Nitrogen fixation and alleviate Salt Stress	Frontiers in Microbiology	06 Jun 2022 13:905210 https://doi.org/10.3389/fmicb.2022.905210	5.645
9.	Wang G, Zhou X, Wang L, Saud S, Wang D, Ahmed M, Fahad S and Sayyed RZ	Effects of cotton and peanut intercropping patterns on cotton yield formation and economic benefit	Frontiers in Sustainable Food Systems	31 May 2022 Front. Sustain. Food Syst. 6:900230. doi: 10.3389/fsufs.2022.900230	4.49
10.	Sheikh T, Baba Z, Hamid B, Iqbal S, Yatoo A, Fatima S, Nabi A, Kanth R, Dar K, Hussain N, Alturki AI, and Sayyed RZ*	Extracellular polymeric substances in psychrophilic cyanobacteria: A potential bioflocculant and carbon sink to mitigate cold stress	Biocatalysis and Agricultural Biotechnology	19 May 2022 42 (2022) 102375 https://www.sciencedirect.com/science/article/pii/S1878818122001025?via%3Dihub	3.28
11.	Singh N, Ujina M, Langyan S,	Genome-Wide Exploration of	Plos One	13 May 2022	3.240

	Sayyed RZ* , Enshasy HE, Kenawy AM	Sugar Transporter (Sweet) Family Proteins In Fabaceae For Sustainable Protein And Carbon Source		17(5): e0268154. https://doi.org/10.1371/journal.pone.0268154	
12.	Ali SAM, Sayyed RZ* , Mir MI, Hameeda B, Khan Y, Alkhanani MF, Haque S, Tawaha ARMA	Production, Characterization and gene expression of Surfactin of <i>Bacillus velezensis</i> MS20 and evaluation of its Induced Systemic Resistance and Antibiofilm activity	Frontiers in Microbiology	9 May 2022 13:879739 https://doi.org/10.3389/fmicb.2022.879739	4.076
13.	Sheladiya P, Kapadia C, Prajapati V, Enshasy HE, Malek RA, Marraiki N, Zaghloul NS & Sayyed RZ*	Production, statistical optimization, and functional characterization of alkali stable pectate lyase of <i>Paenibacillus lactis</i> PKC5 for use in juice clarification	Scientific Reports	09 May 2022 12:7564 https://doi.org/10.1038/s41598-022-11022-0	4.379
14.	Polapally R, Mansani M, Rajkumar K, Burgula S, Hameeda B, Alhazmi A ³ , Bantun F, Almalki AH; Haque S, Enshasy HE and Sayyed RZ*	Melanin Pigment of <i>Streptomyces puniceus</i> RHPR9 Exhibits Antibacterial, Antioxidant, and Anticancer Activities	Plos One	25 Apr 2022 17(4): e0266676. https://doi.org/10.1371/journal.pone.0266676	3.240
15.	Rastgou M, Danesh YZ, Ercişli S , Sayyed RZ , Enshasy HE, Dailin DJ, Alfarraj S and Ansari JA	The effect of some wild grown plant extracts on <i>Pectobacterium betavascularum</i> : The Causative Agent of Bacterial Soft Rot and Vascular Wilt of Sugar Beet	Plants	25 Apr 2022, 11, 1155. https://doi.org/10.3390/plants11091155	3.935
16.	Bright JP, Karunanadham K, Maheshwari HS, Karuppiiah EAA, Thankappan S, Nataraj R, Pandian D, Ameen F, Poczai P & R. Z. Sayyed*	Seed-borne Probiotic Yeasts Foster Plant Growth and Elicit Health Protection in Black Gram (<i>Vigna mungo</i> L.)	Sustainability	12 Apr 2022 , 14, 4618. https://doi.org/10.3390/su14084618	3.251
17.	Nasab BF, Sayyed RZ* , Mojahed LS, Rahmani AF, Ghafari M, Antonius S & Sukanto	Biofilm production: A strategic mechanism for survival of microbes under stress conditions	Biocatalysis and Agricultural Biotechnology	05Apr 2022 42,102337, https://doi.org/10.1016/j.bcab.2022.102337	3.28
18.	Patel N, Kapadia C, Sayyed RZ* , Enshasy, Adawi HE, Alhazmi A, Almalki AH, and Haque S	Formation of Recombinant Bifunctional Fusion Protein: A Newer Approach to Combine The Activities of Two Enzymes in A Single Protein	Plos One	1 Apr 2022 17(4): e0265969. https://doi.org/10.1371/journal.pone.0265969	3.240
19.	Islam M, Al-Hashimi A, Ayshasiddeka M, Ali H, Enshasy HE, Dailin DJ, Sayyed R.Z* . Yeasmin T	Prevalence of mycorrhizae in host plants and rhizosphere soil: A biodiversity aspect	PLOS ONE	31 Mar 2022 17(3): e0266403. https://doi.org/10.1371/journal.pone.0266403	3.240
20.	Khalili L, Elgadir TEMA, Mallick AK, Enshasy HE and	Nuts as a part of dietary strategy to improve metabolic	Frontiers in Nutrition	29 Mar 2022 Front. Nutr.	6.576

	Sayed R. Z*	biomarkers: A narrative review		9:881843. doi: 10.3389/fnut.2022.881843	
21.	Rustamova N, Litao N, Bozorov K, Sayed R , Aisa HA & Yili A	Plant-associated endophytic fungi: a source of structurally diverse and bioactive natural products.	<i>Plant Cell Biotechnol and Mol Biol</i>	16 Mar 2022 23(7-8), 1-19 https://www.ikppress.org/index.php/PCBMB/article/view/7454	0.13
22.	Ravinder R, Manasa M, Roopa D, Bukhari NA, Hatamleh AA, Khan MY, Reddy MS, Hameeda B, Enshasy HE, Hanapi SZ, Sayed RZ	Biosurfactant Producing Multifarious <i>Streptomyces puniceus</i> RHPR9 of <i>Coscinium fenestratum</i> Rhizosphere Promotes Plant Growth in Chilli	Plos One	15 Mar 2022 17(3): e0264975. https://doi.org/10.1371/journal.pone.0264975	3.240
23.	Khairnar M, Hagir A, Parmar K, Sayed R , James E, Rahi P	Phylogenetic diversity and plant growth-promoting activities of rhizobia nodulating fenugreek (<i>Trigonella foenumgraecum</i> Linn.) cultivated in different agroclimatic regions of India.	FEMS Microbiology Ecology	10 Feb 2022 0168-6496 98(2):1-13 DOI: 10.1093/femsec/fiac014	4.194
24.	Arora H*, Sharma A, Poczai P, Sharma S, Haron FF, Gafur A and Sayed RZ	Plant-Derived Protectants in Combating Soil-Borne Fungal Infections in Tomato and Chilli	J of Fungi	21 Feb 2022 2022, 8, 213. https://doi.org/10.3390/jof8020213	5.816
25.	Ahmadi H, Solouki M, Nasab B F, Heidari F & RZ Sayed RZ	Internal Transcribed Spacer (ITS) regions: A powerful tool for analysis of diversity of wheat genotypes	Indian J. of Experimental Biology	01 Feb 2022 60 (2):137-43	1.165
26.	Najafi S, Nasi HN, Tuncurk R, Tuncurk M, Sayed RZ* & Amirnia ⁵	Biofertilizer application enhances drought stress tolerance and alters the antioxidant enzymes in medicinal pumpkin (<i>C. pepo</i> convar. <i>pepo</i> var. <i>Styriaca</i>)	Horticulturae	17 Dec 2021 , 7, 588. https://www.mdpi.com/2311-7524/7/12/588/html	2.923
27.	Fallah M*, Hadi H, Amirnia R, Ghorttaped AH, Ali TKZ and Sayed RZ	Eco-Friendly Soil Amendments Improve Growth, Antioxidant Activities, and Root Colonization in Linum (<i>Linum Usitatissimum</i> L.) Under Drought Conditions	PLoS ONE	23 Dec 2021 16(12): e0261225. https://doi.org/10.1371/journal.pone.0261225	3.752
28.	Saravanan R, Nakkeeran, S, Sarayna, S, Senthilraja, C, Renukadevi P, Krishnamoorthy AS, Enshasy HE, Eldawi HA, Malathi VG, Salmen SH, Ansari MJ, Khan N & Sayed RZ*	Mining the Genome of <i>Bacillus velezensis</i> VB7 (CP047587) for MAMP Genes and Non-Ribosomal Peptide Synthetase Gene Clusters Conferring Antiviral and Antifungal Activity.	Microorganisms	03 Dec 2021 , 9, 2511. https://www.mdpi.com/2076-2607/9/12/2511/html	4.926
29.	Rezapour S*, Moghaddam SS, Jalil HM, and R Sayed	An analysis of bioaccumulation, phytotranslocation, and health	International J of Env Sci & Tech	22 Nov 2021 doi.org/10.1007/s13762-021-	2.860

		risk potential of soil cadmium released from waste leachate on a calcareous-semi-arid transect		03777-2	
30.	Jabborova D*, Kannepalli A, Davranov K, Narimanov A, Enakiev Y, Syed A, Elgorban AM, Bahkali AH, Wirth S, Sayed RZ* , and Gafur A	Co-inoculation of rhizobacteria promotes growth, yield, and nutrient contents in soybean and improves soil enzymes and nutrients under drought conditions	Scientific Report	11 Nov 2021 2021:11:22081 https://doi.org/10.1038/s41598-021-01337-9	4.996
31.	Manasa M, Ravinder P, Gopalakrishnan S*, Srinivas, V, Sayed RZ* , Enshasy HE, Khan MY, ATK ALi* Kassem HM & Hameeda B*	Co-inoculation of <i>Bacillus</i> spp. for growth promotion and iron fortification in sorghum	Sustainability	02 Nov 2021 , 13(21), 12091. https://doi.org/10.3390/su132112091	3.889
32.	Faridvand S; Amirnia R, Tajbakhsh M; Enshasy HE, Sayed RZ	The effect of foliar application of magnetic water and nano, organic, and chemical fertilizers on phytochemical and yield characteristics of different landraces of fennel (<i>Foeniculum vulgare</i> Mill)	Horticulturae	8 Nov 2021 , 7,475 https://doi.org/10.3390/horticulturae7110475	2.331
33.	Rahimi A, Amirnia R*, Moghaddam SS, Enshasy HA, Hanapi SZ, & Sayed RZ	Effect of different biological and Scorganic fertilizer sources on the quantitative and qualitative traits of <i>Cephalaria syriaca</i> .	Horticulturae	13 Oct 2021 , 7,397 https://doi.org/10.3390/horticulturae7100397	2.331
34.	Moradzadeh S, Moghaddam SS, Rahimi R, Pourakbar R, Enshasy HE, Sayed RZ	Bio-chemical fertilizer improves the oil yield, fatty acid compositions, and macro-nutrient contents in <i>Nigella sativa</i> L.	Horticulturae	27 Sep 2021 7, 345. https://doi.org/10.3390/horticulturae7100345	2.923
35.	Baba ZA, Hamid B*, Sheikh TA, Alotaibi S, Enshasy HE* Ansari MJ, ATK Zuan* & Sayed RZ*	Psychrotolerant <i>Mesorhizobium</i> sp. Isolated from temperate and cold desert regions solubilize Potassium and produces multiple plant growth promoting metabolites	Molecules	23 Sep 2021 26, 5758. https://www.mdpi.com/1420-3049/26/19/5758/htm	4.927
36.	Bhaskar KA, Hashimi AA, Meena M, Meena VS, Langyan S, Shrivastava M, Sayed RZ* , Enshasy HE, Almunqedhi BMA, Singh R*	Conservation agricultural practices for minimizing ammonia volatilization and maximizing wheat productivity	Env Sci Poll Res	10 Sep 2021 29:9792–9804 https://doi.org/10.1007/s11356-021-16370-4	5.190
37.	Pourakbar L, Moghaddama SS, Enshasy HE & Sayed RZ	Antifungal activity of the extract of a macroalgae, <i>Gracilariopsis persica</i> , against four plant pathogenic fungi <i>in-vitro</i>	Plants	26 Aug 2021 , 10, 1781. https://doi.org/10.3390/plants10091781	3.658

38.	Devi AP, AlsulimaniA, Hidalgo JR, Neske A, Sayyed RZ* , Ameta KL*	Bis- and mono-substituted chalcones exert anti-feedant and toxic effects on fall armyworm <i>Spodoptera frugiperda</i>	Saudi J of Biol Sci	18 Sep 2021 28 (2021)5754-59 https://doi.org/10.1016/j.sjbs.2021.06.016	4.052
39.	Selvamani S, Dailin DJ, Gupta VK, Mohd W, Keat HC, Natasya KH, Malek RA, Haque S, Sayyed RZ , Abomoelak B, Sukmawati D, Varzakas T, Enshasy HEE*	An Insight into Probiotics Bio-Route: Translocation from the Mother's Gut to the Mammary Gland	Applied Science	6 Aug 2021 11, 7247. https://doi.org/10.3390/app11167247	2.838
40.	Nayeri FD, Mafakheri S, Mirhosseini M, Sayyed R	Phyto-mediated silver nanoparticles via <i>Melissa officinalis</i> aqueous and methanolic extracts: synthesis, characterization and biological properties against infectious bacterial strains	Intl J of Adv Biol and Biomed Res	4 Aug 2021 9 (3):270-285 10.22034/ijabbr.2021.525079.1349	00
41.	Singh S, Singh V, Mishra BN, Sayyed RZ* , Haque S*	<i>Lilium philadelphicum</i> flower as a novel source of antimicrobial agents: A study of bioactivity, phytochemical analysis and partial identification of antimicrobial metabolites	Sustainability	29 Jul 2021, 13, 8471. https://doi.org/10.3390/su13158471	3.251
42.	Kapadia C, Sayyed RZ* Enshasy HEE*, Vaidya H, Sharma D, Patel V*, Malek R A, Syed A, Elgorban AM, Ahmad K and Zuan ATK*	Halotolerant microbial consortia for sustainable mitigation of salinity stress, growth promotion, and mineral uptake in tomato plant and soil nutrient enrichment	Sustainability	27 Jul 2021 13, 8369. https://doi.org/10.3390/su13158369	3.889
43.	Sukmawati D, Family N, Hidayat I, Sayyed RZ , Elsayed EA, Dailin DJ, Hanapi SZ, Wadaan MA, Enshasy HE*	Biocontrol Activity of <i>Aureobasidium pullulans</i> and <i>Candida orthopsilosis</i> isolated from <i>Tectona grandis</i> L. Phylloplane against <i>Aspergillus</i> sp. In Post-Harvested Citrus Fruit	Sustainability	05 July 2021, 13, 7479. https://doi.org/10.3390/su13137479	3.889
44.	Bastami A, Amirnia R*, Sayyed RZ* , Enshasy HE	The effect of mycorrhizal fungi and organic fertilizers on quantitative and qualitative traits of two important Satureja species	Agronomy	28 June 2021, 11, 1285. https://doi.org/10.3390/agronomy11071285	3.949
45.	Kapadia C*, Lokhandwala F, Patel N, Elesawy BH, Sayyed RZ* , Alhazmi A, Haque S, and Datta R,	Nanoparticles combined with cefixime as an effective synergistic strategy against <i>Salmonella</i> enteric typhi,	Saudi J of Biol Sci	19 Jun 2021, https://doi.org/10.1016/j.sjbs.2021.05.032 28:4164-72	4.052
46.	Khan N, Ali A, Shahi MA, Mustafa A, Sayyed RZ & Curaá JA	Insights into the Interactions among Roots, Rhizosphere and Rhizobacteria for Improving Plant Growth and	Cells	19 June 2021, 10 (6), 1551 https://doi.org/10.3390/cells100	7.666

		Tolerance to Abiotic Stresses: A Review		61551	
47.	Jabborova D, Sayyed RZ* , Azimov A, Jabbarov Z, Matchanov A, Enakiev Y, Alaa B, Sabagh AE, Danish S & Datta R	Impact of mineral fertilizers on mineral nutrients in the ginger rhizome and on soil enzymes activities and soil properties	Saudi J of Biol Sci	May 2021 , 28:5268-74 https://doi.org/10.1016/j.sjbs.2021.05.037 .	4.219
48.	Kour D, Kaur T, Devi R, Yadav A, Singh M, Joshi D, Singh J, Suyal DC, Kumar A, Rajput VD, Yadav AN, Singh K, Singh J, Sayyed RZ , Arora NK, Saxena AK	Beneficial microbiomes for bioremediation of diverse contaminated environments for environmental sustainability: Present status and future challenges.	Environmental Science and Pollution Research	May 2021 28:24917-39 https://doi.org/10.1007/s11356-021-13252-7	4.223
49.	Moradzadeh S, Smoghaddam SS*, Rahimi A, Pourakbar I & Sayyed RZ	Combined bio-chemical fertilizers ameliorate agro-biochemical attributes of black cumin (<i>Nigella sativa</i> L.)	Scientific Report	30 May 2021 11:11399 https://doi.org/10.1038/s41598-021-90731-4	4.379
50.	Langyan, S, Dar ZA, Chaudhary DP, Shekhar JC, Herlambang S, Enshasy HE, Sayyed RZ , and Rakshit, S.	Analysis of Nutritional Quality Attributes and Their Inter-Relationship in Maize Inbred Lines for Sustainable Livelihood”	Sustainability	29 May 2021 , 13, 6137. https://doi.org/10.3390/su13116137	3.251
51.	Walhe RA, Diwanay SS, Patole MS, Sayyed RZ , AL-Shwaiman HA, Alkhulaifi MM, Elgorban AM, Danish S and Datta R	Cholesterol Reduction and Vitamin B ₁₂ Production Study on <i>Enterococcus faecium</i> and <i>Lactobacillus pentosus</i> Isolated from Yoghurt	Sustainability	23 May 2021 , 13, 5853. https://doi.org/10.3390/su13115853	3.251
52.	Nithyapriya S, Lalitha S, Sayyed RZ , Reddy MS, Dailin DJ, Enshasy HE*, Suriani NL & Herlambang S	Production, purification, and characterization of bacillibactin siderophore of <i>Bacillus subtilis</i> and its application for improvement in plant growth and oil content in sesame	Sustainability	12 May 2021 , 13, 5394. https://doi.org/10.3390/su13105394	3.251
53.	Bandal JN, Tile VA, Sayyed RZ* , Jadhav HP, Azelee NIW, Danish S & Datta R	Statistical-based bioprocess optimization of amylase production from halophilic <i>Bacillus</i> sp. H7.	molecules	11 May 2021 , 26,2833. https://doi.org/10.3390/molecules26102833	4.411
54.	Najafi ZV, Sohrabi Y, Sayyed RZ , Suriani NL and Datta R	Effects of combinations of Rhizobacteria, mycorrhizae, and seaweeds on growth and yields in wheat cultivars under the influence of supplementary irrigation	Plants	20 Apr 2021 , https://www.mdpi.com/2223-7747/10/4/811/html	3.935
55.	Sayyed RZ* , Shaikh SS, Wani SJ, Rehman MT, Mohamed FA, Haque S and Enshasy HE	Production of biodegradable polymer from agro-wastes in <i>Alcaligenes</i> sp. And <i>Pseudomonas</i> sp.	molecules	22 Apr 2021 <i>Molecules</i> 2021 ,26(9), 2443; https://doi.org/10.3390/molecules26092443	4.411

56.	Deepranjan S, Rakshit A, Al-Turki A, Sayyed RZ* and Datta R*	Connecting bio-priming approach with integrated nutrient management for improved nutrient use efficiency in crop species	agriculture	19 Apr 2021 , 11, 372. https://doi.org/10.3390/agriculture11040372	2.925
57.	Arora H, Sharma A*, Sharma S, Haron FF, Gafur A, Sayyed RZ* , and Datta R	Pythium damping-off and root rot of <i>Capsicum annuum</i> L.: Impacts, Diagnosis, and Management	<i>Microorganisms</i>	13 Apr 2021 , 9, 823. https://www.mdpi.com/2076-2607/9/4/823/html	4.128
58.	Nizami G*, Rehman S, Sayyed RZ , Fatma UK & Enshasy HE	Long term Impacts of Effluents on Quality of the Kosi River Water at District Rampur, Uttar Pradesh, India	Biosciences Biotechnology Research Asia,	Mar 2021 . Vol.18(1), p. 59-69	0.00
59.	Jakinala P, Lingampally N, Hameeda B, Sayyed RZ , Khan M. Y, Elsayed EA, et al.	Silver nanoparticles from insect wing extract: Biosynthesis and evaluation for antioxidant and antimicrobial potential.	PloS ONE	Mar 2021 . 16(3): e0241729. https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0241729	3.240
60.	Hamid B, Zaman, M, Farooq S, Fatima S, Sayyed, R.Z , Baba ZA, Sheikh TA, Reddy MS, Enshasy HE, Gafur A & Suriani NL	Bacterial Plant Biostimulants: A Sustainable Way towards Improving Growth, Productivity, and Health of Crops. Sustainability	Sustainability	Mar 2021 21,13, 2856. https://doi.org/10.3390/su13052856	3.251
61.	Nasab BF and Sayyed RZ	In silico molecular docking analysis of α -pinene: An antioxidant and anticancer drug obtained from <i>Myrtus communis</i>	International J of cancer management	2021 Feb 14(2):e89116 doi: 10.5812/ijcm.89116	0.790
62.	Basu A, Prasad P, Subha Narayan Das, Sadaf Kalam * R. Z. Sayyed* M. S. Reddy & Hesham El Enshasy	Plant Growth Promoting Rhizobacteria (PGPR) as Green Bioinoculants: Recent Developments, Constraints, and Prospects	Sustainability	Jan 2021 , 13, 1140. https://doi.org/10.3390/su13031140	3.251
63.	Deepa T, Gangwane A, Sayyed RZ* , Jadhav HP, and Mehjabeen	Optimization and scale-up of laccase production by <i>Bacillus</i> sp. Isolated from the soap industry waste site	Environmental Sustainability Springer	3(4):471–79 Dec 2020 https://doi.org/10.1007/s42398-020-00135-9	00
64.	Raval AA, Raval UG & Sayyed RZ*	Utilization of industrial waste for the sustainable production of bacterial cellulose	Environmental Sustainability Springer	3(4):427-35 Dec 2020 https://doi.org/10.1007/s42398-020-00126-w	00
65.	Dailin DJ, Elsayed AE Malek RA, Hanapi SZ, Selvamani S, Ramli S, Sukmawati D, Sayyed RZ	Efficient Kefiran Production by <i>Lactobacillus kefiranofaciens</i> ATCC 43761 in submerged Cultivation: Influence of Osmotic Stress and Nonionic Surfactants, and Potential Bioactivities	Arabian Journal of Chemistry	Dec 2020 13,8513-23 https://doi.org/10.1016/j.arabj.2020.09.030	5.165

66.	Kalam S, Basu A, Ahmad I, Sayyed RZ , Enshasy HE, Dailin DJ, Suriani NL	Recent understanding of soil Acidobacteria and their ecological significance: A critical review	Frontiers in Microbiology	Oct 2020 11:580024. Doi: 10.3389/fmicb. 2020.580024	5.645
67.	Sharma A*, Gupta A, Dalela M, Sharma S, Sayyed RZ , Enshasy HE & Elsayed AE	Linking organic metabolites as produced by <i>Purpureocillium lilacinum</i> 6029 cultured on Karanja deoiled cake medium for the sustainable management of root-knot nematodes	Sustainability	Oct 2020 12 (9), 8276; doi:10.3390/su1 2198276	3.251
68.	Suriani NL*, Suprpta D, Novizar N, Parwanayoni N, Darmadi A, Dewi D, Sudatri N, Ahmad F, Sayyed RZ* , Syed A, Elgorban AM, Bahkali AH, Enshasy HE & Dalin DJ	A Mixture of Piper Leaves Extracts and Rhizobacteria for Sustainable Plant Growth Promotion & Biocontrol of Blast Pathogen of Organic Bali Rice	Sustainability	Oct 2020 , 12, 8490; doi:10.3390/su1 2208490	3.251
69.	Sapna*, Chauhan SK, Dar ZA, Sayyed RZ and Enshasy HE	Correlation studies among nutritional quality parameters of baby corn	Journal of Scientific & Industrial Research	87(9):804-809 Sep 2020	1.056
70.	Sagar A, Sayyed RZ* Ramteke PW, Sharma S, Marraiki N, Elgorban AM and Syed A	ACC deaminase and antioxidant enzymes producing halophilic <i>Enterobacter</i> sp. PR14 promotes the growth of rice and millets under salinity stress	Physiology & Mol Biology of Plants	Online 09 Aug 2020 26:1847-54 Sep 2020	2.391
71.	Jabborova D, Wirth S, Kannepalli A, Narimanov A, Desouky S, Davranov K, Sayyed RZ , Enshasy HE, Malek RA, Syed A, Bahkali AH	Co-inoculation of rhizobacteria and biochar application improves growth and nutrient in soybean and enriches soil nutrients and enzymes	Agronomy	10,1142; doi:10.3390/agr onomy1008114 2 Aug 2020	3.417
72.	Jadhav HP, Sayyed RZ* , Shaikh SS, Bhamare HM, Sunita K & Enshasy HE	Statistically Designed Bioprocess for Enhanced Production of Alkaline Protease in <i>Bacillus cereus</i> HP_RZ17	Journal of Scientific & Industrial Research	79:491-498 June 2020	1.056
73.	Saxena B, Rani A and Sayyed RZ	Analysis of nutrients, heavy metals and microbial content in organic and non-organic agriculture fields of Bareilly region- Western Uttar Pradesh, India	Biosciences, Biotechnology Research Asia	17(2):399-06 June 2020	0.00
74.	Parmar DV, Umrana VV, Mistry M, George JJ & Vishwakarma NP	Antibacterial resistance trend in urinary tract infections and their control at a tertiary care hospital in Saurashtra region of Gujarat, India.	Biosciences, Biotechnology Research Asia	17(2):293-299 June 2020	0.00
75.	Jabborova D*, Annapurna K, Fayzullaeva M, Sulaymonov K, Kadirova D, Jabbarova Z and Sayyed RZ	Isolation and characterization of endophytic bacteria from ginger (<i>Zingiber officinale</i> Rosc.)	Annals of Phytomedicine	9(1):116-121 June 2020	0.00

76.	Thomas D, Gangwane A, Sayyed RZ* , Sapna, Enshasy HE & Zaidel DNA	UV induced mutagenesis elevates the production of laccase in <i>Enterobacter cloacae</i>	Journal of Scientific & Industrial Research	79 :442-448 May 2020	0.735
77.	Sayyed RZ * , Bhamare HM, Sapna, Marraiki N, Elgorban AM, Syed A, Enshasy HE, and Daniel J.	Tree bark scrape fungus: A potential source of laccase for application in bioremediation of non-textile dyes	PLOS ONE	PloS ONE 15(6): e0229968 Mar 2020	2.766
78.	Eyahmalay K, Elsayed EA, Dailin DJ, Ramli S, Sayyed RZ & Enshasy HE	Statistical optimization approaches for high cell biomass production of <i>Lactobacillus casei</i>	Journal of Scientific and Industrial Research	79 (3):216-21 Mar 2020	0.735
79.	Jadhav HP, Sonawane MS, Khairnar MH & Sayyed RZ	Production of alkaline protease by rhizospheric <i>Bacillus cereus</i> HP_RZ17 & <i>Paenibacillus xylanilyticus</i> HP_RZ19	Environmental Sustainability Springer	3:5-13 Mar2020	00
80.	Sagar A, Riyazuddin R, Shukla PK, Ramteke PW & Sayyed RZ*	Heavy metal stress tolerance in <i>Enterobacter</i> sp. PR14 is mediated by plasmid	Indian J. of Experimental Biology	58(2):115-21 Feb 2020	1.165
81.	Ambehatabi KK, Hanapi SZ, Baz AE, Sayyed RZ , Dailin DJ & Enshasy HE	Isolation and identification studies on potential xylanase producing strain <i>Trichoderma</i> sp. WICC F46 Isolated from Tropical Soil	Journal of Scientific and Industrial Research	79(2):153-59 Feb 2020	0.735
82.	Sayyed RZ , Wani SJ, Alarfaj AA, Syed A, Enshasy HE	Production, purification and evaluation of biodegradation potential of PHB depolymerase of <i>Stenotrophomonas</i> sp. RZS7	PLOS ONE	15(1):e0220095 Jan 2020	2.766
83.	Nasab BF Sayyed RZ* , Farsi M, Ansari S & Enshasy HE	Genetic assessment of the internal transcribed spacer region (ITS1.2) in <i>Mangifera indica</i> L. landraces	Physiology & Mol Biology of Plants	26(1):107-117 Jan 2020	1.539
84.	Sayyed RZ* , Wani SJ, Alyousef AA, Alqasim A, Syed A, & Enshasy HE	Purification and kinetics of the PHB depolymerase of <i>Microbacterium paraoxydans</i> RZS6 isolated from a dumping yard	PLOS ONE	18 Jun 2019 14(6):e0212324 https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0212324	2.766
85.	Sayyed RZ* , Sonia Seifi, PR Patel, SS Shaikh, HP Jadhav & Hesham El Enshasy	Siderophore Production in Groundnut Rhizosphere isolate, <i>Achromobacter</i> sp. RZS2 Influenced By Physicochemical Factors and Metal Ions.	Environmental Sustainability Springer	2(2):117-24 Jun 2019	00
86.	Zope VP, Jadhav HP & Sayyed RZ*	Neem cake carrier prolongs shelf life of biocontrol fungus <i>Trichoderma viridae</i>	Indian J. of Experimental Biology	57(5):372-375 May 2019	1.165
87.	Naik MK, Prasad GR, Jadhav	Differentiation of toxigenic	Indian J. of	56(12):892-98	1.165

	HP Abeer H, Abd_Allah EF & Sayed RZ	and atoxigenic <i>Aspergillus flavus</i> : Polyphasic approach, a new dimension.	Experimental Biology	Dec 2018	
88.	Saxena B & Sayed RZ	Botanical insecticides effectively control chickpea weevil, <i>Callosobruchus maculatus</i>	Environmental Sustainability Springer	1(3):295-301 Dec 2018	000
89.	Pandya ND, Desai PV, Jadhav HP & Sayed RZ	Plant growth promoting potential of <i>Aspergillus</i> sp. NPF7, isolated from wheat rhizosphere in South Gujarat	Environmental Sustainability Springer	1(3):245-252 Dec 2018	000
90.	Bhamare HM, Jadhav HP & Sayed RZ*	Statistical optimization for enhanced production of extracellular laccase from <i>Aspergillus</i> sp. HB_RZ4 isolated from bark scrapping	Environmental Sustainability Springer	1(2):159-166 Aug 2018	000
91.	Patel PR, Shaikh SS, Sayed RZ*	Modified chrome azurol S method for detection and estimation of siderophores having affinity for metal ions other than iron	Environmental Sustainability Springer	1(1):81-87 Jun 2018	000
92.	Sonawane MS, Chaudhary RD, Shouche YS, Sayed RZ*	Insect Gut Bacteria: A Novel Source for siderophore production	Proceedings of Nat. Academy of Science (B)	88(2) 567-72 Apr-Jun 2018	0.396 4.0
93.	Shaikh SS, Wani SJ, Sayed RZ* Thakur R & Gulati A	Production, purification and kinetics of chitinase of <i>Stenotrophomonas maltophilia</i> isolated from rhizospheric soil	Indian J. of Experimental Biology	56(4) 274-78 Apr 2018	1.165
94.	Reshma P, Naik MK, Aiyaz M, Niranjana SR, Chennappa G, Shaikh SS & Sayed RZ*	Induced systemic resistance by 2,4diacetylphloroglucinol positive fluorescent <i>Pseudomonas</i> strains against rice sheath blight	Indian J. of Experimental Biology	56(3):207-12 Mar 2018	1.165
95.	Shaikh SS, Wani SJ and Sayed RZ.	Impact of Interactions between Rhizosphere and Rhizobacteria: A Review.	J Bacteriol Mycol	2018; 5(1): 1058. Feb 2018	000
96.	Nizami G and Sayed R	Antimicrobial, electrochemical and thermodynamic studies of Schiff base complexes and their potential as anticarcinogenic and antitumor agents: A review.”	IOSR Journal of Applied Chemistry (IOSR-JAC)	10(10):40-51 Oct 2017	000
97.	Gangurde NS, Patil YP, Jain R & Sayed RZ	Poly-β-hydroxybutyrate biodegradation by mixed culture population vis-à-vis single culture population under varying environmental conditions: A new approach	Indian J. of Experimental Biology	55(5):311-320 May 2017	1.165
98.	Jadhav HP and Sayed RZ	Role of hydrolytic enzymes of PGPR in crop protection	MOJ cell Science report	3(5): 00070 Dec 2016	000
99.	Vinay JU, Naik MK, Rangeshwaran R, Chennappa	Detection of antimicrobial traits in fluorescent	3 Biotech, Springer	6(227):1-11 Dec 2016	1.361

	G, Shaikh SS, Sayed RZ*	pseudomonads and molecular characterization of an antibiotic pyoluteorin			
100.	Sharma S, Sayed R , Sonawane M, Trivedi M, Thivakaran G	<i>Neurospora</i> sp SR8, a novel phosphate solubilizer from rhizosphere of soil of Sorghum in Kachh, Gijarat, India	Indian J. of Experimental Biology	54:644-649 Oct 2016	1.165
101.	Wani SJ, Shaikh SS, Tabassum B, Thakur R, Sayed RZ*	<i>Stenotrophomonas</i> sp. RZS 7, a novel PHB degrader isolated from plastic contaminated soil in Shahada, Maharashtra, Western India	3 Biotech, Springer	Aug 2016 , 6:179 https://doi.org/10.1007/s13205-016-0477-8	1.361
102.	Wani SJ, Shaikh SS & Sayed RZ*	Statistical-based optimization and scale-up of siderophore production process on laboratory bioreactor	3 Biotech, Springer	Jun 2016 ; 6:69 https://doi.org/10.1007/s13205-016-0365-2	1.361
103.	Patel PR, Shaikh SS & Sayed RZ*	Dynamism of PGPR in bioremediation and plant growth promotion in heavy metal contaminated soil	Indian J of Experimental Biology	54 (4):286-290 Apr 2016	1.165
104.	Wani SJ, Shaikh SS and Sayed RZ	Microbial biopolymers in biomedical field	MOJ cell Science report	3(3): 00055 Feb 2016	000
105.	Wani SJ and Sayed RZ	Production, efficient recovery and partial characterization of biodegradable polymer produced by soil <i>Streptomyces</i>	Indian Journal of Biotechnology	15:127-29 Jan 2016	0.289
106.	Singh R and Sayed RZ	Histochemical alterations of various metabolites and their localization in <i>Luffa olubilizer</i> roots infected with <i>Meloidogyne incognita</i>	Pakistan J. of Nematology	34(1):67-73 Jan 2016	000
107.	Wani SJ, Shaikh S & Sayed R*	Microbial biopolymers: An initial step towards green plastic	International J of Sci.& Engg Research	6(6) 1339-47 Nov 2015	000
108.	Wani SJ, Shaikh S & Sayed R*	Medium Optimization for PHB depolymerase production by <i>Stenotrophomonas maltophilia</i> using Plackett Burman design & Response Surface Methodology	International J of Sci. & Engineering Research	6(10):818-829 Oct 2015	000
109.	Sayed RZ* , Patel PR & Shaikh SS	Plant Growth Promotion and Root Colonization by EPS Producing <i>Enterobacter</i> sp. RZS5 under Heavy Metal Contaminated Soil	Indian J Experimental Biology	53 :116-123 Feb 2015	1.165
110.	Shaikh SS, Patel PR, Patel SS, Nikam SD, Rane TU & Sayed RZ*	Production of biocontrol traits by banana field fluorescent Pseudomonads and comparison with chemical fungicide	Indian J Experimental Biology	52 :917-920 Sep 2014	1.165
111.	Sharma SB, Trivedi MH, Sayed RZ and Thivakaran GA	Status of soil phosphorus in context with phosphate solubilizing microorganisms in different agricultural	Annual Research and Review in Biology	4(18):2901-09 May 2014	4.79

		amendments in Kachchh, Gujarat, Western India			
112.	Sharma SB, Sayyed RZ, Trivedi MH & Gobi T	Phosphate solubilizing microbes: sustainable approach for managing phosphorus deficiency in agricultural soils	Springer Plus	Jun 2013, 2:587 https://springerplus.springeropen.com/articles/10.1186/2193-1801-2-587	1.130
113.	Gangurde NS, Sayyed RZ, Shashi K & Gulati A	Development of eco-friendly bioplastic like PHB from distillery effluent microorganisms	Env. Sci. & Pollution Res.	20(1):488-97 Jan 2013	2.741
114.	Sayyed RZ*, Jamadar DD & Patel PR	Production of Exopolysaccharide by <i>Rhizobium</i> sp.	Indian J. of Microbiology	51(3):294-00 Jul 2011	1.290 7.29
115.	Sayyed RZ* & Patel PR	Biocontrol potential of siderophore based heavy metal resistant <i>Alcaligenes</i> sp. And <i>Acinetobacter</i> sp. Vis-à-vis organophosphorus fungicide	Indian J. of Microbiology	51(3):266-72 Jul 2011	1.290
116.	Sayyed RZ* & Chincholkar SB	Chemical characterization, cross feeding and iron uptake studies on hydroxamate siderophores of <i>A. faecalis</i>	Indian J. of Microbiology	51(2):176-81 Jan 2011	1.290
117.	Sayyed RZ* Shimpi GB & Chincholkar SB	Constitutive production of extracellular glucose isomerase by <i>Aspergillus</i> sp. Under submerged conditions	J.of Food Sci & Technology	47(5):496-0 Sep 2010	1.262
118.	Sayyed RZ* & Gangurde NS	Poly-β-hydroxy butyrate production by <i>Pseudomonas</i> sp under aerobic and semi-aerobic conditions	Indian J.of Expl Biology	48 :942-947 Sep 2010	1.165
119.	Sayyed RZ*, Gangurde NS, & Chincholkar SB	Siderophore production by <i>A. faecalis</i> and its application for growth promotion in <i>A. hypogaea</i>	Indian J. of Biotechnology	9(3):302-07 Jul 2010	0.289
120.	Sayyed RZ*& Chincholkar SB	Growth and siderophore production in <i>A. faecalis</i> is Influenced by metal ions	Indian J. of Microbiology	50(2):179-82 Apr 2010	1.290
121.	Rokade Y, Dongre N, Behra G & Sayyed R*	Azetidinone (β -lactam) derivatives : An Emerging Antimicrobials	Asian J MB, BT & Environ. Sci,	12(1):109-14 Jun 2010	4.93
122.	Sayyed RZ*& Chincholkar SB	Hypochlorite digestion method for efficient recovery of PHB from <i>A. olubili</i> ,	Indian J. of Microbiology	49(3):230-32 Jul 2009	1.290
123.	Sayyed RZ* & Chincholkar SB	Siderophore producing <i>A. faecalis</i> exhibits more biocontrol potential vis-à-vis chemical fungicide	Current Microbiology	58(1):47–51 Jan 2009	1.322
124.	Sayyed RZ*, Naphade BS & Chincholkar SB	Consortium of <i>A. faecalis</i> & <i>Pseudomonas</i> for growth promotion in Groundnut	Asian J MB, BT & Environ. Sci,	11 (2):48-51 Jun 2009	4.93
125.	Sayyed RZ*& Chincholkar	Production of exo-	J. of Food Science	45(6):531-33	1.241

	SB	polysachharide (EPS) : A biopolymer from <i>A. faecalis</i>	& Technology	Jan 2008	
126.	Sayyed RZ*, Naphade B S & Chincholkar SB	Siderophore producing <i>A. faecalis</i> promoted the growth of Safed musali & Ashwagandha	J. Medicinal & Aromatic Plant Sci	29:105-108 Jul 2007	4.49
127.	Sayyed RZ*, Patel DC & Patel PR	Plant growth promoting potential of P solubilizing <i>Pseudomonas</i> occurring in acidic soil of Jalgaon	Asian J MB, BT & Environ. Sci,	4:925-928 Dec 2007	4.93
128.	Sayyed RZ* & Chincholkar SB	Purification of siderophores of <i>Alcaligenes olubilion</i> XAD	Bioresource Technology	97(8):1026-29 Jan 2006	5.561
129.	Sayyed RZ*, Badgujar MD, Chincholkar SB	Production of microbial iron chelators by Fluorescent <i>Pseudomonads</i>	Indian J of Biotechnology	4:484-490 Oct 2005	0.289
130.	Sayyed RZ* & SB Chincholkar	Production of Poly - β - hydroxy butyrate (PHB) from <i>Alcaligenes faecalis</i>	Indian J. of Microbiology	44(4)269-72 Oct 2004	1.290
131.	Jobanputra AH, Sayyed RZ, Patil GD & Chincholkar SB*	Microbial Transformation of Rifamycin: A Novel Approach to Rifamycin Derivatives.	Indian J. of Biotechnology	2(3):370-77 Oct 2003	0.289
132.	Sayyed RZ, Rasalkar AA, Chaudhari AB & Chincholkar SB*	Solid state cultivation of <i>Curvularia lunata</i> for transformation of Rifamycin B to S.	Indian J. of Experimental Biology	40:930-933 Aug 2002	1.165
133.	Al-Tawah AR, Krimirad R, Aleksanyan A, Dey A, Pati S, Al-Tawah AR, Krimirad R, Sayyed RZ*	A review of the application, modelling and simulation of drug release in agricultural science	Applied Biochemistry and Biotechnology	Accepted 2022	2.926
134.	Thomas D, Gangwane AK, Khan S, Sayyed R.Z*, Jadhav HP, Khan M, Singh V, Osama K, Gupta VK, Haque S and Poczai P	Optimization of Artificial Neural Network-Genetic Algorithm Simulated Laccase Production from <i>Bacillus</i> sp. BAB-4151: A Potential Application in Mitigation of Water Pollution	Plos One	Accepted 2022	3.240
135.	Desai A, Ruparelia J, Jha CK, Sayyed RZ, Mitra D, Priyadarshini A, Senapati A, Panneerselvam A, and Mohapatra PKD	Articulating Beneficial rhizobacteria mediated plant defenses through induced systemic resistances	Pedosphere	Accepted 2022	3.911
136.	Kapadia C, Patel N, Rana A, Vaidya H, Alfarraraj A, Ansari MJ, Gafur A, Poczai P and Sayyed RZ*	Evaluation of Plant Growth Promoting and Salinity Ameliorating Potential of Halophilic Bacteria Isolated From Saline Soil	Frontiers in Plant Sciences	Accepted 2022	5.753
137.	Sagar A, Sayyed RZ*, Ramteke PW, Ramakrishna W, Poczai P, Obaid SA, & Ansari MJ	Synergistic effect of <i>Azotobacter nigracans</i> and NPK fertilizer on agronomic and yield traits of Maize (<i>Zea mays</i> L.)	Frontiers in Plant Sciences	Accepted 2022	5.753

138.	Ali H, Hasi RY, Islam M, Haque MS, Alkhanani MF, Almalki AH, Haque S, Sayed RZ & Yeasmin T	Antioxidant, cytotoxic and apoptotic activities of the rhizome of <i>Zingiber zerumbet</i> Linn. in Ehrlich ascites carcinoma bearing Swiss albino mice	Scientific Reports	Accepted 2022	4.379
139.	Hoseini A, Salehi A, Sayed R. Z.* , Balouchi H, Moradi A, Piri R. Nasab BF, Poczai P, Ansari MJ, Obaid SA, and Datta R	Efficacy of Biological Agents and Fillers Seed Coating in Improving Drought Stress in Anise	Frontiers in Plant Sciences	Accepted 2022	5.753
140.	Sudha A*, Durgadevi D, Archana S, Muthukumar A, Suthin RT, Nakkeeran S, Poczai P, Nasif O, Ansari MJ ⁶ and Sayed RZ*	Unraveling the tripartite interaction of volatile compounds of <i>Streptomyces rochei</i> with grain mold pathogens infecting Sorghum	Frontiers in Microbiology	Accepted 2022	5.645
141.	Jabborova D* Annapurna K, Azimov A, Tyagi S, Pengani KR, Sharma S, Vikram K, Poczai P*, Nasif O, Ansari MJ and Sayed R.Z.*	Co-inoculation of Biochar and Arbuscular Mycorrhizae for Growth Promotion and Nutrient Fortification in Soybean Under Drought Conditions	Frontiers in Plant Sciences	Accepted 2022	5.753
■ In Peer Reviewed ational Journals = 12					
1	Sayed R Z & SB* Chincholkar	Siderophore uttpann karnewala <i>A. faecalis</i> : Ek shaktishakli Kawak Rog Pratibandhak	Bhartiya Vaigyanik Anusandhyan Patrika (CSIR)	II (1):74-76 Jun 2003	
2	Sayed R Z* , Patil AS, Gangurde NS, Bhamare HM	Siderophore producing <i>A. faecalis</i> : A potent Biofungicide for the control of ground Phytopathogens	Research J Biotechnology	411-413 Dec 2008	0.233
3	Rokade Y Sayed R*	Naphthelen derivatives : A new range of antimicrobilas with high therapeutic value	Rasayn J of Chemistry	2(4):972-80 Oct 2009	0.204
4	Sayed R Z* & Patel P R	Soil Microbes & Environmental Health	Int J. of Biotech & BioSci	1(1)41-66 Jan 2011	00
5	Pandya ND, Desai PV & Sayed R Z*	Antifungal and phytohormone production ability of plant growth promoting rhizobacteria associated with the rhizosphere of sugarcane	Journal of Microbial World	13(1):112-16 Jun 2011	00
6	Mahajan M G Sayed RZ* & Patil AS	Effect of seasonal variations on physicochemical conditions of Amravati reservoir of Malpur, Maharashtra	Intl J. of Biotechnol & Biosci	1(3):281-86 Jul 2011	00
7	Marathe S A, Sayed RZ & Somani V J	Impact of Bt cotton cultivation on bacterial soil micro-flora of North Maharashtra	International J of Biotech & BioSci	2(4):265-71 Jul 2012	00
8	Sayed RZ	Bioplastic for clean environment	International J of Biotech & BioSci	2(3):187-89 Jul 2012	00
9	Srivastava A, Srivastava N & Sayed R Z*	In vitro bio-control activity of <i>Trichoderma</i> species against phytopathogenic <i>A. brassicae</i> ,	International J of Biotech & BioSci	2 (1): 6-9 Oct 2012	00

10	Srivastava A, Srivastava N & Sayyed RZ	Effect of some plant extracts on the growth of <i>Alternaria</i> spp	International J of Biotech & BioSci	2(4):276-80 Oct 2012	00
11	Chaudhari S & Sayyed R Z	Isolation of Efficient Phosphate Solubilizing Micro-organisms from Soil Samples of Jalgaon, District of North Maharashtra, India	International J of Biotech & BioSci	3 (2):92-95 Apr 2014	00
12	S J Wani and R Z Sayyed	Biopolymers of Microbial Origin	International J of Biotech & BioSci	4(4):71-73 Dec 2014	00
(b) Papers in Peer Reviewed Proceedings = 24					
1	Sayyed R Z*, M S Reddy, A S Patil, N S Gangurde & Patel P R	Biocontrol potential of siderophore producing PGPR	Proceedings of Ist Asian PGPR Cong., Scientific Publ Jodhpur	33-35 Jun 2010	
2	A. Sagar, P.K. Shukla, R. Z. Sayyed & PW Ramteke	Stimulation of Seed Germination and Growth Parameters of Rice var. Sahbhagi by <i>Enterobacter cloacae</i> in Presence of Ammonia Sulphate as Substitute of ACC	PGPR : Prospects for Sustainable Agriculture Sayyed Reddy Antonious eds Springer-Nature, Singapore 2019	117-124	
3	Hameeda Bee* Mohamed Yahya Khan & RZ Sayyed	Microbial Surfactants and Their Significance in Agriculture		205-216	
4	R. Z. Sayyed, SS Shaikh, PR Patel, MS Sonawane & MS Reddy	Heavy metal resistant PGPR as a green solution to pesticide and heavy metal Pollution	Recent Trends in PGPR research For sustainable crop productivity (RZ Sayyed, MS Reddy & Ahmad-Al-Turki (Eds) Scientific Pub. India, 2016	1-7	
5	H P Jadhav, M S Sonawane, GS Badgujar & R. Z. Sayyed*	Nanobiotechnology; A new Science for human welfare	R Singh & R Z Sayyed, Excell India Publisher, New Delhi Feb 2016	22-28	
6	Sayyed RZ	Process optimization for siderophore production and evaluation of bioefficacy & root colonizing potential of <i>Alcaligenes</i> sp.		129-136	
7	SJ Wani, SS Shaikh & R. Z. Sayyed*	Biodegradable polymers of microbial Origin		137-142	
8	H.M. Bhamare and R. Z. Sayyed*	Microbial Laccase: Production and their potential applications		173-190	
9	R Z Sayyed, P R Patel, M S Reddy	Role of PGPR in bioremediation of heavy metal ions and plant growth-promotion of wheat & peanut grown in heavy metal contaminated soil	Recent Advances in Biofertilizers & Biofungicides (PGPR) for sustainable Agriculture	105-120	
10	Srivastava A, Srivastava N & Sayyed R. Z*	Bio-control Potential of <i>Trichoderma</i> Species Against <i>Alternaria brassicae</i>	Reddy, Sayyed et al Ed Cambridge Scholars Press, UK, 2014	393-400	
11	K. Vijay Krishna Kumar, - - R Z Sayyed	Efficacy of Integral® (<i>Bacillus subtilis</i> MBI 600) in sheath blight management and yield enhancement of rice		431-436	
12	S. KR. Yellareddygar - - - R.Z. Sayyed	Evaluation of biopesticides for control of <i>Xanthomonas campestris</i> pv. <i>Pelargonii</i> in geranium seedlings	3 rd Asian PGPR Conf., Manila, Philippine Apr 21-25' 2013	445-449	

		under greenhouse conditions –		
13	K.R.Yellareddygar, R. Z. Sayyed	Efficacy of various biopesticides in managing <i>Pythium</i> root rot of Petunia –		450-455
14	S S Shaikh and R Z Sayyed	PGPR : A boon for sustainable agriculture	Fundamental & Appl. Aspects for creating biosphere compatible systems	54-58
15	S J Wani and R Z Sayyed	Biodegradable polymer : Green polymers for clean environment	State Univ Russia	58-64
16	M S Reddy ----- R Z Sayyed ----- Yang Zhi ling	Commercial potential of biofertilizers and biofungicides (PGPR) for sustainable agriculture in Asia and the scope of Asian PGPR Society	Proceeding of 2 nd Asian PGPR Conference, Aug 21-24, 2011, Beijing China	3-4
17	Sayyed RZ and Reddy MS	Siderophore based heavy metal resistant green fungicides for sustainable environment	China Academic Press China	528-534
18	Panday ND, Butani NNDesia PV, Sayyed R Z	Optimization of GA ₃ biosynthesis by bacteria associated with the rhizosphere of sugarcane		443-44
19	Sayyed RZ	Search for potent bacteria for PHB production : An eco-friendly biopolymer	Proceeding of 3 rd International Biotechnol & Biodiversity Conf. Jun 9-11, Jun 2012 Johor, Malaysia	
20	Patil AS & Sayyed RZ	Screening of distillery effluent isolates for higher yields of PHB: An eco-friendly biodegradable polymer		
21	Sayyed R Z*, Jobanputra AH Chincholkar SB	<i>Curvularia lunata</i> : A versatile organism for biotransformation of organic compounds	Fungi: Diversity & Biotech, Scientific Pub., Jodhpur 2005	195-216
22	Rane M R, Sayyed R Z* & Chincholkar SB	Methods for Microbial Iron Chelator (Siderophore) Analysis	Basic & Appl. Resin Mycorrhizae IK Pub N. Delhi, 2005	475-492
23	Sayyed R Z*, Naphade B S & Chincholkar SB	Ecologically competent rhizobacteria for plant growth promotion & disease management	Recent Trends in Biotech, Scientific Pub Jodhpur 2004	1-16
24	Patil M G, Sayyed R Z, Chaudhari A B, Chincholkar SB*	Phosphate Solubilizing Microbes: A Potential Bioinoculant for Efficient Use of Phosphate Fertilizers	Bioinoculants for sustainable Agri & Forestry, Scientific Pub, Jodhpur, 2002	107-118

▪ **Book Chapters = 41**

1	Efficient Substrates for Microbial Synthesis of Biosurfactants	P Saranraj, R Z Sayyed, K J Hamzah, N Asokan, P Sivasakthivelan & ARMA Al-Tawaha	Biosurfatnats : Production and applications in Bioremediation/ Reclamation. Vol III CRC Press- Taylor & Francis group- USA R. Z. Sayyed ISBN	1-18 June 2022	978-1-032-19635-0
2	Microbial Biosurfactants: Methods of Investigation, Characterization, Current Market Value and Applications	P Saranraj, R Z Sayyed, P Sivasakthivelan, M S Hasan, A R M A Al-Tawaha and K Amala		19-34 June 2022	
3	Delving through Quorum Sensing and CRISPRi Strategies for Enhanced Surfactin Production	Ali S.A.M, Sayyed R Z, Reddy M S, Enshasy H E		59-79 June 2022	

		Hameeda B			
4	Biosurfactant Mediated Synthesis and Stabilization of Nanoparticles	Sadiq M B, Khan M R and Sayyed R Z		158-168 June 2022	
5	Microbial Fermentation Technology for Biosurfactants Production	P Saranraj, P Sivasakthivelan, K J Hamzah, M S Hasan and A R M A Tawaha	Biosurfatnats : Production and applications in Food and Agriculture Vol II CRC Press- Taylor & Francis group- USA R. Z. Sayyed, Enshasy H E ISBN	63-81 Mar 2022	9781032 216247
6	Biosurfactant—A Biomolecules and its Potential Applications Priyanka	Patel P, Bhatt S, Patel H, Marcelino L A & Sayyed R Z		133-149 Mar 2022	
7	Biosurfactants Production and Applications in Food	Zaman M, Hassan S, Fatima S, Hamid B Farooq S, Qayoom I, Alim H, Agarwa V & Sayyed R Z*		225-241 Mar 2022	
8	<i>Bacillus subtilis</i> : A Multifarious Plant Growth Promoter, Biocontrol Agent, and Bioalleviator of Abiotic Stress	Alka Sagar S. S. Yadav R. Z. Sayyed S. Sharma P. W. Ramteke	Bacilli in Agrobiotechnology Islam M.T., Rahman M., Pandey P. (eds) Bacilli in Agrobiotechnology. Bacilli in Climate Resilient Agriculture and Bioprospecting. Springer,	Feb 2022 561-580	978-3-030-85464-5
9	Trust your gut: The human gut microbiome in health and disease	H.H.Abo Nahas, Amira M.G. Darwish , H. F. Abd EL-kareem, Yousef H. Abo Nahas, S.A. Mansour, Y. H. Korra, R. Z. Sayyed, A.M. Abdel-Azeem, E M. Saied	Microbiome-Gut-Brain Axis:Implications on Health R. Z. Sayyed and Mahejibin Khan https://doi.org/10.1007/978-981-16-1626-6	Jan 2022 53-96	978-981-16-1625-9
10	Interactions of Microbiome for Gut-Brain Axis Health	D Lahiri, M Nag, A Dey, R. Z. Sayyed, R R Ray		Jan 2022 139-151	
11	Probiotics Suppress the Depression: A Look at the Possible Mechanisms of Action	L Khalili, R. Z. Sayyed		Jan 2022 327-335	
13	Impact of Probiotics in Modulation of Gut Microbiome	R Nourizadeh, B Sepehri, A Abbasi, R. Z. Sayyed, L Khalili		Jan 2022 401-409	
14	Yeast Biosurfactants Biosynthesis, Production and Application	Daniel Joe Dailin R.Z. Sayyed , and He sham El Enshasy	Biosurfatnats : Production & applications Vol I CRC Press- Taylor & Francis group- USA R. Z. Sayyed, Enshasy H E & Bee H	Oct 2021 196-221	978036 752118 9
15	Microbial Biosurfactants Sources, Classification, Properties and Mechanism of Interaction	P Saranraj, R Z Sayyed, P Sivasakthivelan, M		Oct 2021 243-265	

		D Devi, A R M A Tawaha & S Sivasakthi	ISBN 978-0-367-52118-9		
16	Biomolecular painstaking utilization and Assimilation of Phosphorus Under Indigent Stage in Agricultural Crops	S Ahmed A R Choudhury S Kumar, R J Choi, R. Z. Sayyed, TM Sa	Antioxidants in Plant-Microbe Interaction HarikeshBahadSingh HB Vaishnav A, Sayyed RZ	2021 565-588	978-981-16-1349-4
17	Biopriming and Nanopriming: Green Revolution Wings to Increase Plant Yield, Growth, and Development Under Stress Condition and Forward Dimensions	B F Nasab R.Z.Sayyed R P Ahmad F Rahmani		2021 623-655	
18	Insect Gut Bacteria and Iron Metabolism in Insect	M S. Sonawane, R C. alunkhe and RZ Sayyed	Probiotics, the Natural Microbiota in Living Organisms Fundamentals & Applications EEnshasy & Eds	343-366 July 2021	9781138493605
19	Nanoparticles: A New Threat to Crop Plants and Soil Rhizobia?	H Rasouli, J P Djordjević, R. Z. Sayyed , S Zarayneh, M Jafari, & B F Nasab	Sustainable Agriculture Reviews 41 HayatS, Pichtel, J., FaizanM, Fariduddin Q. Hayat (Eds)	201-214 Feb 2020	978-3-030-33995-1
20	Trichoderma : Biocontrol Agents for Promoting Plant Growth and Soil Health	HEA Enshasy, KK Ambehathi, Ashraf F, S Ramchuran, RZ Sayyed , D Amalin, DJ Dailin, SZ Hanapi	Agriculturally Important Fungi for Sustainable Agriculture: Vol 2: Functional annotation for crop protection	239-259 Aug 2020	978-3-030-48473-6
21	Biosynthesis of Antibiotics by PGPR and Their Roles in Biocontrol of Plant Diseases	A K Zakaria, RZ Sayyed , H E Enshasy	Plant Growth Promoting Rhizobacteria for Sustainable Stress Management Vol II Rhizobacteria in Biotic Stress Management RZ Sayyed Eds	1-36 Nov 2019	978-981-13-6985-8
22	Plant Small RNAs: Big Players in Biotic Stress Responses	M P Singh, RZ Sayyed , A Sharma		217-240 Nov 2019	
23	Interaction of Rhizobacteria With Soil Microorganisms : An Agro-Beneficiary Aspect	A S Patil*, S R Patil and R Z Sayyed		241-260 Nov 2019	
24	Plant Growth Promoting Rhizobacteria: An Overview In Agricultural Perspectives	V.P. Zope*, Hesham El Enshasy & R.Z. Sayyed		345-362 Nov 2019	
25	Plant Growth Promoting Rhizobacteria and Salinity Stress : A Journey into the Soil	B F Nasab, RZ Sayyed	Plant Growth Promoting Rhizobacteria for sustainable stress Management Vol 1 Abiotic Stress Management Sayyed, Arora & Reddy Eds	21-34 Aug 2019	978-981-13-6535-5
26	Psychrotrophic Microbes: Biodiversity, Mechanisms of Adaptation and Biotechnological Implications in Alleviation of Cold Stress in Plant	Ajar Nath Yadav R. Z. Sayyed		219-253 Aug 2019	
27	Drought Tolerant Phosphorus Solubilizing Microbes: Biodiversity and Biotechnological Applications for Alleviation of Drought Stress in Plant	Divjot Kour R.Z. Sayyed		255-308 Aug 2019	
28	Rhizobacteria : Legendary Soil Guards in Abiotic Stress Management	A Khan, RZ Sayyed* , S Seifi		327-343 Aug 2019	

29	Phytochemicals with Anticancer Potential: Methods of Extraction, Basic Structure, and Chemotherapeutic Action	G Nizami and R. Z. Sayyed	Anticancer plants: properties & application, Springer Nature Singapore MS Akhtar, MK Swamy Eds.	431-453 Jul 2018	978-981-10-8547-5
30	Role of hydrolytic enzymes of Rhizoflora in Biocontrol of Fungal Phytopathogens : An Overview	H P Jadhav, S S Shaikh and R Z Sayyed	Rhizotrophs : Plant Growth Promotion to Bioremediation Springer-Nature Springer	183-203 Sep 2017	978-981-10-4861-6
31	Plant growth promoting rhizobacteria: An eco-friendly approach for sustainable agroecosystem	Shaikh S S, Reddy MS and R Z Sayyed*	Plant Soil-Microbes Springer, Switzerland	182-201 2016	978-3-319-27453-9
32	Bacterial determinants and plant defense induction : Their role as bio-control agent in agriculture	S Patel, R Sayyed and M Saraf*	Plant soil microbes Springer, Switzerland	187-204 2016	978-3-319-29572-5
33	Environmental toxicology (water borne) effects and management	B Tabassum & R Z Sayyed	Adv. in Plant Sci Sara publications Ahmedabad	129-146 Nov 2016	978-1-73032-656-1
34	Antiquity and present scenario of plant based biopesticides in India	N Srivastava, A Srivastava & R Z Sayyed		147-150 Nov 2016	
35	Role of Plant Growth-Promoting Rhizobacteria and Their Formulation in Biocontrol of Plant Diseases	Shaikh SS and Sayyed*	Plant Microbes Symbiosis: Applied Facets : Springer, N Arora ed	337-351 2015	978-81-322-2067-1
36	Siderophore Producing PGPR for Crop Nutrition and Phytopathogen Suppression	Sayyed R Z* , Chincholkar SB, Reddy MS, & Patel PR	Bacteria in Agrobiolgy: Plant Disease Mgmt Springer-Germany	449-471 2013	978-3-642-33638-6
37	Potential of Plant Growth Promoting Rhizobacteria for Sustainable Agriculture	RZ Sayyed* , Reddy MS, Deshmukh AM, Gangurde NS	Bacteria in Agrobiolgy: Plant Probiotics, Springer, Germany	287-314 2012	978-3-642-27515-9
38	Poly - β -hydroxy butyrate (PHB) : A biodegradable polymer of microbial Origin	Gangurde NS, & Sayyed R Z*	Advances in Material Sci., CRC Press, Canada	45-59 2012	978-1926-895161
39	Methods for Microbial Iron Chelator (Siderophore) Analysis	Rane M R, Sayyed R Z* & Chincholkar SB	Basic & Appl. Resin Mycorrhizae IK Pub N. Delhi	475-492 2005	81-88237-22-7
40	<i>Curvularia lunata</i> : A versatile organism for biotransformation of organic compounds	Sayyed R Z* , Jobanputra AH Chincholkar SB	Fungi: Diversity & Biotech, Scientific Pub., Jodhpur	195-216 2005	81-7233-403-6
41	Phosphate Solubilizing Microbes: A Potential Bioinoculant for Efficient Use of Phosphate Fertilizers	Patil M G, Sayyed R Z , Chaudhari A B, Chincholkar SB*	Bioinoculants for sustainable Agri & Forestry, Scientific Pub, Jodhpur	107-118 2002	81-7233-307-2

Role in Conferences/Seminars/Symposia/Workshops

(a) Conferences Organized in India and Abroad = 15

1. **Organizing Chairman**,: 6th National Conference PGPR conference, Barkatullah University, Bhopal, 3-4 Sep 2021.
2. **Organizing Coordinator**, International Conference on Sustainable Agriculture and Ecotourism, 28-30 Aug 2021, Bali, Indonesia
3. **Organizing Co-Chairman** : 6th International PGPR Conference for Sustainable & Eco-friendly Bio-Innovations to alleviate the biotic & abiotic constraints of 21st Century's agriculture", National University of Uzbekistan Tashkent, Uzbekistan, 18-22 Aug 2019
4. **Organizing Secretary** : 5th National Conference on PGPR for Sustainable and Organic Agriculture, Acharya Nagarjuna University, Guntur 23-25 Feb 2019.
5. **Organizing Secretary** : Syllabus restructuring workshop at MSc I (MB-BT-BC), PSGVP Mandal's ASC College, Shahada. **16 Jul 2018.**
6. **Organizing Secretary** : 4th National Conference on PGPR for Sustainable Agriculture and Environment, Mizoram University, Mizoram 11-12 May 2018.
7. **Organizing Committee member**, 5th Asian PGPR Conference, Bogor, **Indonesia**, 16-19 Jul 2017.
8. **Co-organizing Secretary** : 3rd National Conference on Advances in Bio Science and Health Education, Bareilly College Bareilly 27th Feb 2016.
9. Organizing Committee member : 4th Asian PGPR Conference, 03-06 May 2015, Hanoi, **Vietnam.**
10. Organizing Committee member : 3rd Asian PGPR Conference for sustainable agriculture, 21-25 Apr 2013, Manila, **Philippines**
11. Coordinator of Farmers Meet: A parallel session of International Global Sustainable Biotech. Congress (GSBC 2014) of NMU, Jalgaon. Dec 02' 2014.
12. Organizing Secretary : National Congress on Bio-inoculants for sustainable Agriculture, 16 Feb 2010, PSGVPM's ASC College, Shahada
13. Organizing Secretary : State Level Seminar on Exploring Horizons in Microbial Biotech. Feb 16' 2008. PSGVPM's ASC College, Shahada
14. Organizing Secretary : National Seminar Emerging Trends at Interface of Biotech., 17-18 Feb 2007 PSGVPM's ASC College, Shahada.

(b) Presentations in International Conferences = 13

1. **2021 (Invited Talk and Session Chair).** 7th International Mediterranean Symposium on Medicinal and Aromatic Plant Sciences, Izmir, Turkey **18-20 Nov 2021.**
2. **2021.** 3rd International Congress on Biotechnology of Medicinal Plants and Mushrooms **(Presentation)**, Janzan University, Iran, **17-18 May 2021**
3. **2019 (Invited Talk).** Dynamism of endophytic fluorescent *Pseudomonas* for inducing systemic resistance and bio-control of fungal pathogens of medicinal plants, 6th Asian PGPR Conference, Tashkent, Uzbekistan, **18-22 Aug 2019.**
4. **2017. (Invited Talk).** Agro and Biocompatibility of hydrolytic enzyme producing PGPR, 5th Asian PGPR Conference, Bogor, Indonesia, **16-19 Jul 2017.**
5. **2016 (Poster).** Bioactive compounds of rhizobacteria for plant iron nutrition and biocontrol (Poster), 12th International Conference on Bio-resources and Bio-refineries (RRB-12), Ghent, Belgium 28 May to 01 Jun, 2016.
6. **2015. (Invited Speaker)** Heavy Metal Resistant PGPR for Iron Nutrition of all and for biocontrol of Plant diseases, 4th Asian PGPR Conf., Hanoi, **Vietnam, 3-6 May 2015.**
7. **2014. (Invited Talk).** Heavy Metal Resistant PGPR As Green Solution to Pesticide and Heavy Metal Pollution, International Conference Agriculture & Food, **Bulgaria, Jun 05-09' 2014**
8. **2013.** Role of PGPR in bioremediation of heavy metal ions and plant growth-promotion of wheat and peanut grown in heavy metal contaminated soil, 3rd Asian PGPR Conference, Manila, **Philippines, Apr 21-24, 2013.**

9. **2012.** Search for potent bacteria for PHB production : An eco-friendly biopolymer, Proceeding of 3rd International Biotechnology & Biodiversity Conference, Johor, Malaysia, **June 9-11' 2012**
10. **2012.** Screening of distillery effluent isolates for higher yields of PHB: An eco-friendly biodegradable polymer, Proceeding of 3rd International Biotechnology & Biodiversity Conference, Johor, Malaysia, **June 9-11' 2012**
11. **2012.** Heavy Metal Resistant PGPR For Biocontrol of Phytopathogens And Bioremediation of Heavy Metal Contaminated Soil, 1st World Biotechnology Conference, Dubai, **Feb 14-15' 2012.**
12. **2010** Siderophore producing PGPR as eco-friendly Bio-control agent, 3rd World congress of Industrial Biotechnology, Dalian, China, **25-27 July, 2010.**
13. **2009** Biotechnological potential of Siderophore producing microbes for sustainable Agriculture 2nd World Congress on Industrial Biotechnology, held at Seoul South Korea **05-07 April, 2009.**

(C) Countries Visited for Academic/Scientific Presentations = 23

S. Korea, China, Dubai, Sharjah, Abu Dhabi, Malaysia, Singapore, Sri Lanka, Thailand, Philippines, Bulgaria (Bourgas), Romania (Bucuresti), Hungary (Buda Pest), Czech Republic (Praha), Germany (Frankfurt, Dusseldorf, Munich), Belgium (Brussels, Ghent), Austria (Innsbruck), France (Paris), Switzerland (Interlaken, Zurich, Geneva), Italy (Rome), Vietnam (Hanoi), Hong Kong, Indonesia, Uzbekistan (Tashkent, Samarkand), Kazakhstan (Almaty). Turkey (Izmir, Bursa, Istanbul)

(D) Presentations in National/International Conferences/ in India = 35

1. **2020. (Key note speaker).** International e-conference on Emerging Innovations and Advancements in Biological Sciences Human welfare and Agriculture Research in Current Era, Kap Lab, Mathura,
2. **2020. (Invited Talk).** Production of biodegradable plastic from agro-wastes by using *Pseudomonas* and *Alcaligenes faecalis* : A green approach for Environmental Sustainability, International Conference on Environmental Sustainability : Innovations, Translational Dimensions and way Forward, BBAU, Lucknow, **10-12 Feb 2020.**
3. **2019.** Multipotent PGPR For Sustainable Biocontrol of Fungal Phytopathogens, 5th Asian National PGPR Conference, ANU, Guntur (AP), 23-25 Feb 2019.
4. **2019 (Resource Person)** PGPR for Healthy and Sustainability Agriculture and Environment, State Level Conference on Research and recent Trends in Biosciences, K K Wagh Arts, Commerce Science & Computer College, Nashik (MS), **08-09 Feb 2019.**
5. **2018 (Invited Talk)** PGPR for Sustainability of Agriculture and Environment, International conference on Advances in Agricultural, Biological and Applied Sciences for Sustainable Future (ABAS - 2018), Subharti University, Meerut (UP), **20-22 Oct 2018.**
6. **2018 (Invited Talk)** PGPR for Sustainability of Agriculture and Environment, 4th Asian National PGPR Conference, MZU, Mizoram, (Mizoram), 11-12 May 2018.
7. **2018 (Lead Lecture)** Microorganisms for Sustainability of Agriculture and Environment, International conference on Advances in Environmental and Agriculture Biotechnology, St Xavier's College, Ranchi, **17-19 Feb 2018.**
8. **2017 (Oral)** Microbial Biopolymers: A Step Towards Green Solution to Plastic Pollution, 58th Annual meeting of AMI, BBA University, Lucknow, **17-19 Nov 2017.**
9. **2016. (Key Note)** Rhizobacteria for human and plant health (Key note speaker), National Conference on Science and Technology for Betterment of Human Life, Jauhar University, Rampur, **28th Feb, 2016.**

10. **2016.(Invited Talk)** Production and purification of Chitinase (Invited talk), National Conference on Advances in Biosciences and Health Education, Bareilly College, Bareilly, **27th Feb, 2016.**
11. **2016.(Invited Talk)**, Screening of hydrolytic enzymes of rhizobacteria for biocontrol of fungal diseases of plants National Conference on Microbial Biotechnology, Gujarat University, Ahmedabad, **21st Feb, 2016.**
12. **2014.** Comparative Study of Insect Gut Microbial Communities With-in Three Insect Orders (**Oral**). International Global Sustainable Biotechnology Conference (GSBC-2014), NMU, Jalgaon, **Dec 1-5' 2014.**
13. **2014.** Screening for antifungal metabolites of PGPR (**Poster**). International Global Sustainable Biotech. Conference (GSBC-2014), NMU, Jalgaon, **Dec 1-5' 2014.**
14. **2014.** Rhizobacteria: A boon to agriculture (**Invited Talk**), National conf. Advances in Biosciences and Health Education, Bareilly College, Bareilly, **3 Mar 2014.**
15. **2013.** Antifungal Metabolites of PGPR: A Green Solution to Pesticide Pollution (**Poster**), International Conference & 54th AMI meeting, Rohtak, Haryana, **17-21 Nov 2013.**
16. **2012.** Biocontrol of Phytopathogens by heavy metal resistant PGPR. 2nd Indian group meeting on recent Developments in PGPR for Sustainable Agriculture, M S University of Baroda, Vadodara, Gujarat, **Oct. 22-23' 2012**
17. **2011.** Comparative study of insect gut microbial communities associated with four insect orders, International Conference on Microbial Biotechnology for Sustainable development, Punjab University, Chandigarh, **Nov 3-6, 2011.**
18. **2011.** Heavy metal resistant PGPR for bio-control of fungal plant pathogens, International Conference on Microbial Biotechnology for Sustainable Development, Punjab University, Chandigarh, **Nov 3-6, 2011.**
19. **2011.** Siderophore producing heavy Metal Resistant PGPR:A green bio-fungicide, International Conference on Biotechnology for Better Tomorrow (BTBT), Dr BA Marathwada University, Aurangabad, **Feb 6-9; 2011.**
20. **2010** Siderophore producing YIB ; A boon to Agriculture, national Conference, Technology Foresight in Life Science, Maulana Azad College, Aurangabad (MS), **20-21 Feb, 2010.**
21. **2010** Siderophore producing PGPR for sustainable Agriculture, National Conference, on Biotechnology, Shivaji College, Akola (MS), **06-07 Feb, 2010.**
22. **2009** Siderophore based rhizobacteria as sustainable BCA and PGPR, 5th International Conference, Plant pathology in Globalized Era, IPS Indian Agricultural Research Institute, New Delhi, **10-13 Nov, 2009.**
23. **2009** Antimicrobial activity of *Tulsi* and *pudina* extract, National Seminar, Nanotechnology for targeted drug delivery, held PSGVP Mandal's College of pharmacy, Shahada (MS), **19-20 Sept, 2009**
24. **2009** Biocontrol potential of siderophore producing PGPR, First Asian PGPR Congress for Sustainable Agriculture, held at ANGR Agriculture University, Hyderabad, **21-24 June, 2009**
25. **2008** Production and recovery of Biodegradable polymers: PHB from *Pseudomonas* sp. International conference on bio-process in food industry, Osmania University, Hyderabad (AP), **Nov 6-8, 2008**
26. **2008** Production and recovery of Biodegradable polymers: PHB from *Alcaligenes* and *Vibrio* Sp. International Conference on bio-process in food industry. Osmania University, Hyderabad (AP). **Nov 6-8, 2008**
27. **2008** Production and recovery of Biodegradable polymers: PHB from *Enterobacter* Sp. International Conference on bio-process in food industry, Osmania University, Hyderabad (AP), **Nov 6-8, 2008.**
28. **2008** Siderophore producing *A. faecalis*: A green fungicide for sustainable biocontrol of phytopathogens International Symposium on Microbial Biotechnology: Diversity, Genomics and Metagenomics, University of Delhi, Delhi, **18-20 Nov 2008.**

29. **2008** Exopolysaccharide: A biopolymer of *Alcaligenes faecalis*, International Symposium on Microbial Biotechnology: Diversity, Genomics and Metagenomics, University of Delhi, Delhi, **18-20 Nov 2008**
30. **2008** Siderophore producing *A. faecalis*: A potent biofungicide for biocontrol of groundnut phytopathogens, International Symposium on Environmental Biotechnology: Sikkim Manipal University, Sikkim, **28-30 Dec 2008**
31. **2006.** Biotechnological Potential of Siderophore producing microbes, International Conference on Exploring horizons in Biotechnology: A global venture, **S P University, V Vidyanagar (Gujarat), Nov 2-4 2006.**
32. **2003.** Biocontrol potential of siderophoregenic *A. faecalis*, International conference on Emerging frontiers at the Interface of Biology and Chemistry, RRL, CSIR, **Trivandrum, Kerala, April 28-30' 2003.**
33. **2002.** Siderophore uttpann Karnewala *Alcaligenes faecalis*; Ek shaktishaali Kawak Rog Pratibandhak, **National Science Symposium**, RRL (CSIR), **Trivandrum. Kerala, Nov. 2002**
34. **2001.** Influence of iron on growth and siderophore production in a rhizobacterium *Alcaligenes faecalis*, **National Symposium**, J. N. K. V V, **Jabalpur, 11-12 Oct. 2001**
35. **2001.** Fluorescent Pseudomonas: A Potential Bio-inoculants for increased growth and Vigor in Wheat, 42nd AMI Conference, Gulbarga Univ. Karnataka **09-11 Nov 2001.3**

(D) Participation in National/International Conferences Workshops = 35

(E) Editorial Role

- **Editor-in-Chief** - International J. Biotechnol & Biosciences ISSN 2231-0304 (2011-14)
- **Associate Editor** -
 - 1) Environmental Sustainability, Springer - <https://www.springer.com/journal/42398/editors>
 - 2) Guest Editor - Sustainability (MDPI, IF 3.251) Special issue - Recent Trends in Plant-Growth-Promoting Rhizobacteria Research for 21st Century Sustainable Agriculture
https://www.mdpi.com/journal/sustainability/special_issues/Plant-Growth-Promoting_sus
 - 3) Guest Editor for Sustainability (MDPI, IF 3.251) Special issue Rhizo-Microbiome for the Sustenance of Agro-Ecosystems in the Changing Climate Scenario
https://www.mdpi.com/journal/sustainability/special_issues/Rhizo_Microbiome
 - 4) Guest Editor –Frontiers in Microbiology (IF 4.076) Microbial Surfactant : Sustainability to circular economy <https://www.frontiersin.org/research-topics/37790/microbial-surfactants-sustainability-to-circular-bioeconomy>
 - 5) Soil Microbiome Metabolomics: A Way Forward to Sustainable Intensification
<https://www.frontiersin.org/research-topics/39075/soil-microbiome-metabolomics-a-way-forward-to-sustainable-intensification>
 - 6) Topic Editor – Frontiers in Sustainable Food System (IF 4.49) <https://www.frontiersin.org/research-topics/39075/soil-microbiome-metabolomics-a-way-forward-to-sustainable-intensification>
 - 7) Academic Editor – PeerJ (IF 2.984) - <https://peerj.com/sayyedrz/>
 - 8) Academic Editor - PLOS One (IF 3.24) - <https://journals.plos.org/plosone/static/editorial-board>
 - 8) Associate Editor -Frontiers in Microbiology- Plant Pathogen Interactions (IF 4.076)
<https://loop.frontiersin.org/people/428832/overview>
 - 9) Guest Associate Editor – Frontiers in Microbiology -Microbiotechnology section (IF 4.076)
<https://loop.frontiersin.org/people/428832/overview>
 - 10) Review Editor - Frontiers in Microbiology (IF 4.076) Section - Microbes and virus interactions with plants <https://loop.frontiersin.org/people/428832/overview>
- **Reviewer for following Journals**
 - 1) Elsevier - Process Biochemistry –

- 2) Springer (India) - Indian J Microbiology - India
- 3) Springer (India) - Journal of Food Science Technology – CFTRI Mysore, India
- 4) Elsevier - International Journal of Biological Macromolecules
- 5) Elsevier – Biocatalysis and Agricultural Biotechnology
- 6) PLOS ONE
- 7) Frontiers in Plant Science
- 8) Frontiers in Microbiology
- 9) International Journal of Biological Macromolecules
- 10) CSIR (India) - Indian Journal of Experimental Biology

▪ **Research and Development Projects Undertaken = 10**

Sl No	Title of the Project	Funding Agency (Scheme)	Grant (Lacs)	Duration
1.	DBT Star College Scheme for Strengthening of Life Sciences (Coordinator of the scheme)	DBT	104	2020-23
2.	Development of singe Technology having multi-potential of plant growth promotion, disease control and bioremediation	UGC, New Delhi (Major Project)	10.24	2012-2015
3.	Molecular approaches for improving the production of PHB	DST (Young Scientist)	20.38	2012-15
4.	College with Potential for Excellence	UGC	145	2011-13
5	Hydrobiological Studies and Assessment of Biodiversity of Zooplankton and Microbes from Dams and Lakes of Nandurbar District of Maharashtra	UGC, New Delhi (Major Project)	10.79	2010-13
6.	Development of siderophore based biocontrol agents for controlling diseases in banana	BARC DAE-BRNS (Young Scientist)	9.50	2008-11
7.	Development of Protocol for the production of EPS : A biopolymer	UGC (WRO) (Minor Project)	0.50	2008-10
8.	Development of efficient methods for production and recovery of PHB: A biodegradable polymer	UGC, New Delhi (Major Project)	6.27	2007-10
9.	Cloning of PHB synthesis genes of <i>A. eutrophus</i> in <i>E. coli</i> for the improved production of PHB	DST (Young Scientist)	11.94	2005-08
10	Production of biodegradable polymers for sustainable & eco-friendly environment	UGC (WRO) (Minor Project)	0.36	2002-04

Date: July 15, 2022

Place: Shahada

(Prof. R Z Sayyed)