



B. V. V. Sangha's
Basaveshwar Engineering College, Bagalkote
DEPARTMENT OF BIOTECHNOLOGY
PATENTS

- 1. Application number- 201641042251; Applicant name Bharati S Meti & Shivaleela V B; Date of filing-10/12/2016; Title of invention- Cookie mix for special need; Area-Food; Date of publication-23/12/2016. Date of award- 3rd Nov 2020, Patent award No 350729**
- 2. Application number 201741034620; Applicant name Shivaleela V B & Bharati S Meti; Date of filing-28/09/2017; Title of invention – Process of purification of glycerine; Area- Chemical; Date of Publication-05/10/2018. Date of award 30 /12/2021 Patent award No 385625**
- 3. Application number- 201741034621; Applicant name Bharati S Meti & Shivaleela V B; Date of filing-28/09/2017; Title of invention- Soap preparation using organic waste for animal use to remove body pests like ticks; Area-Chemical; Date of Publication-05/10/2018 . Date of award - 08/04.2022 Patent award No 394358**
- 4. Application number 202141033369A; Applicant name Pavan Kumar, Bharati S Meti & Manjunath Girigowda; Date of filing-25/07/2021; Title of invention – Bioformulation of *Bacillus subtilis* for management of bacterial blight in pomegranate ; Area- Chemical; Date of Publication-30/07/2021. Present status- Hearing completed waiting for NBA**

Brief Details of the Patents in the Department:

1. a. The mix is specially designed to improve nutritional value and fiber content of the food.

b. The mix is made as economically viable using byproducts of the pomegranate industry. Mix avoids maida and bakery fat. No colour and flavor/essence is added, hence healthy

2. a. Glycerin is one of the byproduct produced at Biodiesel industry. It is very crude and the glycerine content varies with 40 to 45 % only. The lab scale process of glycerine purification is developed for Pongamia feedstock based biodiesel. Pongamia is commercially used feedstock for biodiesel production.

b. To make commercially viable process, byproduct utilization is important, hence an innovative process is developed to get 95 % purity of the crude glycerine

3. One of the byproduct in Pongamia based biodiesel industry is glycerine. This crude glycerine with two oils are used to formulate the soap to remove animal ticks. It is not having a colour/ fragrance and chemical, hence safe for pets and cattles. User friendly to apply and no harm to the environment also

4. Pomegranate is well grown in Bagalkot district and but bacterial blight is a problem, since it is an air borne pathogen, controlling is a challenge. A bioformulation is made using Bacillus sp and a honge oil is one of the ingredient in it.



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PUBLICATIONS

2022-23

1. A. Rozindar, DBM Virupakshaiah, B Meti, BV Kumbha (2023). Identification of potential human chymase inhibitors using molecular docking and molecular dynamics simulation (2022). Journal of Applied and Natural Science 15 (1), 1-8.
2. Megeri Tejaswini R, Meti Bharati S, Hadimani Goutami, Harke Savita. Development of Multigrain Cookies. 10 (10): PP. 104-131.
3. Swati S Gavimath and Sharada Patwari (2022). A survey study on acceptance of spirulina-based beverage mix over malted-health drink. International Journal of Research in Engineering and Science. 10 (9). PP. 439-449.
4. Goutami Hadimani , Dr. Shilpa Jigajinni , Tejaswini M. and Savita H. (2022). Development of Wheat Bran Flakes Incorporate with Pomegranate and Pumpkin Seeds. International Journal of Research in Engineering and Science. 10 (9). PP. 274-304

2021-22

1. Zareenkousar Kazi, Basavaraj S. Hungund, Jayachandra S.Yaradoddi, N. R. Banapurmath, Abdulfatah Abdu Yusuf , Karedla Lakshmi,Kishore, Manzoore Elahi M. Soudagar , T. M. Yunus Khan, Ashraf, Elfasakhany (2022). Production, Characterization, and Antimicrobial Activity of Pigment from Streptomyces Species. Journal of Nanomaterials. Volume 2022, Article ID 3962301, 8 pages
2. Kazi Zareenkousar, Hungund Basavaraj S., Desai Diksha,Banapurmath ,Nagaraj R. and Jayachandra S. Yaradoddi (2022). Potential Biomedical implications of bioactive

pigment and silver nanoparticles produced by the actinobacteria *Rhodococcus* sp. NCIM 5126. *Research Journal of Biotechnology*. Vol. 17 (5). Pages 160-169.

3. Mallikarjun Goni, Anil Kumar Desai, Niranjan Kumar, Veda Hegde, Palaksha Kanive Javaregowda, Virupakshaiah DBM (2022). Significance of altered glycosyltransferases expression levels in oral cancer. *Current Science*.
4. Preeti S Kumarmath, Anusha Kawatal, Kruti Nimbargi (2022). A Review on Extraction of Dye from *Terminalia catappa* Hull: A Substitute to Synthetic Dyes. *JETIR* 2022, Vol. 9 (2), pp 59-64.
5. Pavan Kumar, Veeresh Lokesh, Pushpa Doddaraju, Aprajita Kumari, Pooja Singh, Bharati S Meti, Jyotsana Sharma, Kapuganti Jagadis Gupta, Girigowda Manjunatha “Greenhouse and field experiments revealed that clove oil can effectively reduce bacterial blight and increase yield in pomegranate” *Food and Energy Security* (2021), Vol 10 (4) : 1-17 (e305).
6. Mallikarjun Goni, Veda Hegde, Niranjan Kumar, Anil Kumar Desai, Palaksha Kanive Javaregowda, and Virupakshaiah DBM (2021). Evaluation of oral cancer associated glycosyltransferase expression levels in peripheral blood mononucleated cells, *Advances in Cancer Biology-Metasis*, Vol. 3. pp 1-6.
7. Preeti S Kumarmath and Sharada P (2021). Assay of Antioxidants in *Bryophyllum pinnatum* under Salt Stress, *Journal of Chengdu University of Technology*, Vol. 26 (9). pp 1-8.
8. Shilpa K. Jigajinni and Bharati S. Meti (2021). Immobilization Optimization and Characterization of Immobilized Lipase from *Lysinibacillus macroides* FS1 for Biodiesel Production, *International Journal of Current Microbiology and Applied Sciences*, Vol. 10(4) pp 232-245.
9. Shilpa K. Jigajinni and Bharati S. Meti (2021). Isolation, optimization and molecular characterization of novel lipase producing *Lysinibacillus macroides* FS1 from oil reach sample for biodiesel production, *Current trends in Biotechnology and pharmacy*. Vol. 15 (5): pp 385-394.
10. Shilpa K. Jigajinni and Bharati S. Meti (2021). Identification of Effective Factors for Immobilized Lipase Catalysed Biodiesel Production from *Pongamia pinnata* Seed Oil

using Plackett-Burman Design, International Journal of Current Microbiology and Applied Sciences. Vol. 10 (9) pp 173-182.

11. Mallikarjun Goni, Palaksha Kanive Javaregowda, Vishwanath Chachadi and Virupakshaiah DBM (2021). Sialic acids: An avenue to target cancer progression, metastasis and resistance to therapy. *Forum of Clinical Oncology*. Vol. 12 (2). pp 1-9.
12. Preeti S Kumarmath and Sharada P (2021). Green approach for the synthesis of silver nanoparticles using *Bryophyllum pinnatum*, Internalization Journal of Green Pharmacy, Vol. 15 (3). pp 307-312.

2020-2021:

1. Pavan Kumar, Mahesh S. Dashyal, Pushpa Doddaraju, Bharati S. Meti & Manjunath Girigowda (2021). Differential gene responses in different varieties of pomegranate during the pathogenesis of *Xanthomonas axonopodis* pv. *Punicae*, 3 Biotech. Vol. 11(4), pp 1-17.
2. Krishnamurthy Bhat, Bharati S Meti and K Chandrasekhar (2020). Planar Inter Digital Capacitive Sensor for Real time Transesterification Progress Monitoring of Karanja (*Pongamia*) Oil, Asian Journal of Convergence in Technology. Vol. 4 (3) pp 39-46.
3. Madhumala Y, Veena S Sorganvi and Nikhita H Ingalagi (2020). Chromium Reduction using bacterial Biofilms, International Journal of Applied Sciences and Technology. Vol. 5. pp 198-202.
4. Madhumala Y, Vijayalaxmi Naganuri, Megha Mathad (2020). Bioethanol Production from Waste Banana Peel, International Research Journal of Engineering and Technology (irjet), Vol. 7, special issue, pp 124-129.
5. Madhumala Y, Goutami Hadimani, Savita Harke and Kaveri Lalaki (2020). Studies on Extraction and Applications of Prodigiosin from *Serratia Marcescens*, International Research Journal of Engineering And Technology (Irjet). Vol. 7, special issue, pp 227-231.

6. Hemalatha V B, Ajay Kumar Oli and D.B.M. Virupakshaiah (2020). Evaluating of Phage as Bio-control Agent in Enumeration of Food Borne Pathogenic *Pseudomonas aeruginosa*, J Pure Appl Microbiol Vol. 14 (3) pp 2115-2128.
7. Sharada P and Vikarahmed (2020). Alzheimer's Disease: A Progressive Neurodegeneration International Research Journal of Engineering and Technology. Vol.7 (8) pp 2742-2744.
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2019-2020:

1. Madhumala Y, Manjula Mathapati and Dr. Veena S. Soraganvi (2019). Removal of heavy metal from industrial waste water using biofilm producing bacteria International Journal of Bio-Technology and Research. Vol. 9 (2), pp 15–30.
2. Shivleela V B, Srihari Prathapaneni, SharadaP & Girigouda K (2019). “N-terminal Domain of tlyA from *Mycobacterium tuberculosis* Displayed Concentration Dependent Ordered Structure” International Journal of Current Microbiology and Applied Sciences. Vol. 8 (10) pp 1917-1925.
3. Shivaleela, Shaik Kalimulla Niazi, Sharada P & Giri Gowda K (2019). “*Mycobacterium tuberculosis* tlyA E59Q is stable compare to the native protein” International Journal of Current Microbiology and Applied Sciences. Vol. 8 (9). pp 2203-2212.

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2. Vikas C Ghattargi, Yogesh Nimonkar, Shaunak Burse, Dimple Davray, Shreyas Kumbhare, Meghana Gaikwad, Mangesh Suryavanshi, Swapnil Doijad, Bhimashankar

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 4. Vikas C. Ghattargi, Mangesh V. Suryavanshi, Swapnil Kalam, Yogesh S Shouche, Bharati S. Meti (2018). “Need to explore camel milk as probiotics” *Current Science*. Vol. 114, pp 425-426.

2017-2018:

1. Premjyoti C Patil and Bharati S Meti (2018). “Isolation of microalgae for biomass and lipid enhancement through placket-Burman Design” *Int. J.Curr. Microbiol. App. Sci* Vol. 7 (3). pp 2508-2518.
2. Madhumala Y, Vishal Managutti, Puja B Patil & Veena S Sorganvi (2017). “Comparative Study of Bioreduction of water containing Hexavalent chromium using biofilm forming and non-biofilm forming Bacteria”. *International Journal of Advanced Research Methodology in Engineering and technology*. Vol. 1 (2) pp 41- 44.
3. Anurag Bellankinamath, Ajay Katageri, Hemalata V B and Bharati S Meti (2017).“Isolation and Characterization of the Indigenous acetic acid from Western Ghats soil samples”. *International Journal of Current Microbial Application Science* Vol. 6 (9) pp 1255-1265.

CONFERENCE PAPERS

1. Shilpa K Jigajinni and Bharati S Meti , ‘Isolation optimization and molecular Characterization of novel lipase producing *Lysinibacillus macrolides* FSI from oil Rich Sample for Biodiesel Production’, 18th and 19th March, 2021. (Accepted for publication in the Journal, Current trends in Biotechnology and Pharmacy – powered by scopus,
2. Preeti S Kumarmath and Sharada P ,International Virtual Conference On :Sustainable Biotechnology. Paper titled “Antioxidant Assay of *Bryophyllum gastonis bonniere* at Salt Stress” 18th and 19th March, 2021. (Accepted for publication in the Journal, Current trends in Biotechnology and Pharmacy – powered by scopus
3. Preeti S Kumarmath and Sharada P, 2020,Green approach for the synthesis of Silver nano particles using *Bryophyllum fedtschenkoi* International Conference on Advanced Materials Science and Applications (Online)3-4 September, , 124, Ramaiah Institute of Technology, Bangalore, Karnataka, India.
4. Pavan Kumar, Manjunath G, Bharati S Meti:*Bacillus subtilis* based Bio-formulation for effective management of bacterial blight in Pomegranate. Poster presentation “International Conference on Plant Protection- in Horticulture (ICPPH-2019), - organized by ICAR-Indian Institute of Horticultural Research (IIHR), Bangalore. (July 2019).
5. Pavan kumar, Manjunath G, Bharati S Meti.*Biological management of bacterial blight of pomegranate using Bacillus subtilis based bioformulations*. “4th Edition of Global Conference on Plant Science and Molecular Biology”, London UK (September 2019).
6. Pavan Kumar, Pushpa Doddaraju, Abhishek gowda, Bharati S Meti and Manjunatha G. “Early diagnosis of bacterial blight pathogen *Xanthomonas axanopodis* pv. *punicae* in pomegranate, Poster presentation”. In National symposium on Cutting edge approaches for sustainable plant disease management and ensuring farmers’ profit”21-23 December (2018).
7. Pavan Kumar, Bharati S Meti and Manjunatha G.Clove Oil an Effective Antibiotic Agent Against Bacterial Blight of Pomegranate. Oral presentation”. In National symposium on Cutting edge approaches for sustainable plant disease management and ensuring farmers’ profit”21-23 December (2018).

LIST OF BOOKS PUBLISHED

1. Title of the Book: Marine Anti Cancer Drugs

Paperback: 72 pages

Publisher: LAP Lambert Academic Publishing (8 October 2014)

Language: English

ISBN-10: 3659610569

ISBN-13: 978-3659610561

Product Dimensions: 15 x 0.4 x 22 cm

2. Jayachandra S. Yaradoddi, Merja H Kontro, and Sharanabasava. Actinobacteria- Ecology, Diversity, Classification and Extensive Applications, Softcover ISBN 978-981-16-3355-3, eBook ISBN978-981-16-3353-9