

CURRICULUM VITAE

Name: ANITHA N.

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Objective

- ❖ To upgrade my knowledge and skill regarding the task, and to work for the growth and wealth of the institute.
- ❖ Self-motivated with strong analytical and inter-personal skill, looking for an opportunity to build up a good career.

Professional Experience

1. Analytical techniques: Handling FPLC (AKTA Purifier), SDS-PAGE, Different Chromatographic techniques, Western Blotting.
2. Animal Handling: Handling Mice, dissection and drawing blood from mice.
3. Soxhlet extraction of different plant materials using different solvents.
4. Natural Products: Solvent Extraction of plant materials, qualitative and quantitative phytochemical analysis, *in vitro* antioxidant assays (Radical scavenging assays such as DPPH, superoxide anion, nitric oxide, hydroxyl, reducing power assay, ferrous ion chelating activity and total antioxidant capacity)
5. Screening of microorganisms and maintaining pure culture.

Research Experience

- **Ph.D. Work**

- **Studies on Monocot Plant Lectins**

Dept. of P.G. Studies and Research in Biochemistry, Jnana sahyadri, Kuvempu University, Shivamogga, India

The current research program mainly focused on screening, isolation, characterization and biological properties lectins from edible tubers which are widely consumed in central part of Western Ghat region (Shivamogga, Uttara Kannada, Dakshina Kannada and Madikeri Districts) of Karnataka.

From the results of glycan array analysis of XVL discussed in the second chapter, interesting glycan specificity was observed. XVL exhibit strong affinity towards complex N-linked glycans but not simple sugars and their derivatives. Most of the N-glycans recognized by the XVL are of expressed on the surface of the cancer cells, immune cells and insect gut epithelium. This novel sugar specificity of XVL prompted us to investigate its anticancer, Nematicidal and immunomodulatory activities. In the present study we have investigated the *in vitro* anticancer

potential of XVL against human breast cancer cell lines (MCF-7 and MDA-MB-231). The selective inhibition of the growth of MDA-MB-231 cells but not normal fibroblast cells made XVL a promising candidate for the development of antitumor drug for the treatment of triple-negative breast cancer for which presently there is no specific therapy. Owing to their ability to interact with receptor-linked glycans on the surface of immune cells, several plant lectins showed immunomodulatory effect and responsible for their anticancer activity. Thus immunomodulatory lectins have potential pharmaceutical applications or may help to identify sugar targets for new therapeutic strategies. Like other reported lectins, our preliminary immunomodulatory studies demonstrated that XVL exhibit potent immunostimulatory activity as it induces proliferation of immune cells such as WBC, PBMCs, spleen cells, bone marrow cells antibody production in a dose dependent manner. These results substantiate the anticancer potential of XVL. Root-knot nematodes are one of the major limiting factors affecting plant growth and yield. Currently, synthetic pesticides are principle means used to control the nematodes but natural products may provide a safer alternative.

Research Publications

- **Anitha, N.** and Sathisha, G.J., 2017. SCREENING OF LECTIN IN TUBERS OF ARACEAE AND PARTIAL CHARACTERIZATION OF XANTHOSOMA VIOLACEUM LECTIN (XVL).
- **Anitha, N.** and Sathisha, G.J., 2017. SCREENING OF LECTIN IN TUBERS OF ARACEAE AND PARTIAL CHARACTERIZATION OF XANTHOSOMA VIOLACEUM LECTIN (XVL).
- Vasanthraj B, **Anitha Nelliankla**, Sameer R Patil, Ghouseul Azam, Sathisha J Gonchigar; Evaluation of latex proteins for Lectin, protease, antibacterial activities and protein profiling from the genus *Artocarpus*; International Journal of Botany Studies; Volume 7, Issue 3, 2022, Page No. 251-259
- Azam, G., Jayanna, S.G., **Nelliankla, A.**, Boraiah, V., Hanumegowda, S.M., Sannaningaiah, D., Vijendra, P.D., Kumar, V. and Mahmood, R., 2021. Evaluation of in vitro antioxidant, anti-inflammatory, anticoagulant and antiplatelet potential of *Rhus mysorensis*. *Biomedicine*, 41(4), pp.724-731.
- Azam, G., Jayanna, S.G., **Nelliankla, A.**, Boraiah, V., Thippeswamy, R.G., Rudrappa, C. and Mahmood, R., 2022. Phytochemical screening and in-vitro evaluation of antiproliferative activity of extracts and fractions of *Rhus mysorensis* against human triple negative MDA-MB-231 breast cancer cells. *Biomedicine*, 42(1), pp.33-40.

Papers presented in Conference/Seminar/Workshop

- Anitha N and Sathisha G J, Isolation and partial purification of lectin from *Xanthosoma violaceum*(XVL), poster presentation at International Conference on Environment, Genes, Health and Diseases-2011” organized by Bharathiar University, Coimbatore during 9th – 11th , December, 2011.
- Anitha N and Sathisha G J, *Xanthosoma violaceum*: A promising anticancer agent against triple negative breast cancer cell MDA-MB-231, poster presentation at International

Conference on Recent trends in Agriculture, Biotechnology and Food processing, 5-7, July 2017, College of Agriculture, Hassan, Karnataka, India.

- Attended workshop in JSS College of Arts, Commerce and Science, ooty road, Mysore on Basic Techniques in Isolation, Purification and Characterization of Proteins, 10th – 13th December, 2012.
- Anitha N and Sathisha G J; Exploring Proteolytic, Anticoagulant, Fibrin(ogen)olytic Activities and Toxicity Evaluation of *Ficus drupaceae* Latex *in vitro* and *in vivo*, oral presentation on National conference held in August 2023, Tumkur University.
- Anitha N and Sathisha G J; potent Anticoagulant and Fibrinogenolytic protease isolated from *passiflora edulis* seed, oral presentation at department of biochemistry, Kuvempu university, Shankaraghatta, March, 2024.
- Anitha N and G. J. Sathisha; Potent Anticoagulant and Fibrinogenolytic protease isolated from *Passiflora edulis* Seed; National Conference on Contemporary Focus and Future Prospects in Biological Research (CFFPBR-2024), Kuvempu University.

Project Guided

Number of M.Sc. Project students Guided: 50

Project Topics:

- ✓ Screening for Anticoagulant Proteins Latex and seed samples
 - ✓ Isolation of enzymes like cellulose, keratinase and protease from different soil samples and water samples.
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Course	Board/ University	Year of Passing	% Scored
Ph.D Biochemistry	Kuvempu University, Jnana Sahyadri, Shankaraghatta - 577 451.	2017	--
M.Sc Biochemistry	Kuvempu University, Jnana Sahyadri, Shankaraghatta - 577 451.	2007	74.47%
B.Sc	Kuvempu University, Sahyadri Science College, Shivamogga - 577 203.	2005	67.55%

Biochemistry, Botany, Microbiology			
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Personal Profile

Name : Dr. Anitha N. M.Sc., Ph.D
Mobile No : +91 9164853254
Adress : Siddaruda Nagara, Bhadravathi-577 301, Shivamogga
Languages Known : English, Hindi, Kannada

Assets

- Good Analytical and Learning skills.
- Curious and eagerness to learn new things.
- Willingness to work hard with dedication.
- Good Communication and Interpersonal skill.
- Ability to work in a team as well as individually.

Computer Knowledge

- MS office.
- Internet accessing.

Declaration

I hereby declare that the information furnished above is true to the best of my knowledge and belief.

Dr. Anitha N.