

Diet as a strategy for primary prevention of Type 2 Diabetes mellitus

Anu Pandita¹ and Deepu Pandita²

¹Bee Enn College of Nursing, India

²Government Education Department-Jammu & Kashmir, India

Foods are functional if benefit one or more body functions, more than adequate nutritional effects, lead to improved health state and well-being and or reduction of risk of diseases. The biological cord between nutrition, biological responses and diseases is already established. For prevention of Type 2 Diabetes mellitus, low saturated fat products, vegetables, fruits, wholegrain foods, low glycemic index starchy foods are effective. The risk for developing type 2 diabetes is associated with overweight and obesity; abdominal obesity; physical inactivity; and maternal diabetes. Round 75% of the risk of type 2 diabetes is attributed to obesity-a nutritional burden.

In recent years, the prevalence of type 2 diabetes has increased alarmingly worldwide, giving diabetes the dimension of an epidemic. The type 2 Diabetes mellitus is a consequence of a complex interaction between genetic and environmental factors, largely due to changes in dietary pattern and lifestyle, and can be prevented via moderate diet and lifestyle modifications. The evidence available on functional foods till date in this field is incomplete: the major gap is the lack of diet-based intervention trials of sufficient duration to be relevant for the natural history of diseases like overweight and diabetes. A scientific survey was conducted on people of Jammu & Kashmir suffering from Type 2 Diabetes mellitus and a correlation of their dietary pattern and lifestyle was made. A major challenge is to practise this knowledge in field of public health.

panditamusic@gmail.com

Invitro screening of Pseudomonas spp for their biocontrol potential against phytopathogens of vanilla

Athul Sandheep R and M. S. Jisha

School of Biosciences, M.G University, India

Biocontrol involves harnessing disease suppressive microorganisms to improve plant growth. Disease suppression by biocontrol agents is the sustained manifestation of interactions among the plant, the pathogen, the biocontrol agent, the microbial community in and around the plant and the physical environment. In recent times biological control of plant pathogenic fungi has received a considerable attention, as it has several advantages such as possibility of multiple pathogen suppression, low cost and promotion of soil fertility. Fungal isolates in Vanilla pose a major problem in causing reduction in yield to considerable level. Fusarium oxysporum, Rhizoctonia solani and Sclerotium rolfsii were isolated from naturally infected vanilla plants and an attempt were made to minimize the damage caused by the pathogen using biocontrol agents Pseudomonas fluorescens, and Pseudomonas putida, isolated from soil and were found to be effective in controlling these diseases of Vanilla.

In the present study antagonistic Pseudomonas spp. isolated from the Vanilla rhizosphere were evaluated for the biocontrol of major fungal pathogens of Vanilla. The fungicide tolerance and In vitro compatibility of the identified biocontrol agents were determined and can be exploited for the effective management of phytopathogens of Vanilla. Antagonistic effect of Pseudomonas isolates against phytopathogens were tested by dual culture method outlined by Skidmore and Dickinson (1976). For this, 10 predominant isolates of Pseudomonas spp isolated from vanilla growing areas were used. The Pseudomonas isolate P7 showed maximum inhibition against Fusarium oxysporum (60.23%) Rhizoctonia solani (58.67%) and Sclerotium rolfsii (54.19%) and were selected for further studies. P3 showed least inhibition against Fusarium oxysporum (36.47%) and P10 showed the least inhibition against Rhizoctonia solani (34.00%). All the isolates except P2 showed inhibition against Sclerotium rolfsii (22.22%) after 5 days of inoculation. In this work, the result of dual culture revealed the rapid colonisation of the medium by Pseudomonas isolates. All Pseudomonas isolates evaluated were effective in controlling colony growth of the phytopathogens. The results reported here suggested that from the isolates of Pseudomonas used in this study, P. fluorescens (P 7) and P. putida (P 4) strains were more capable of influencing the growth of all tested pathogens in dual culture.

athulphd@gmail.com