

A study of Selected Medicinal Plants from Azad Jammu and Kashmir and Their Nutritional, Biochemical and Medicinal Potential for Human Beings

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Statement: Azad Jammu and Kashmir has been blessed with diversity of medicinal flora of immense value. Due to the disputed nature of State of Jammu and Kashmir, the area is unexplored and natural resources are being eroded at alarming rate. The area predominantly comprises of mountains and V shaped valleys. The steep slopes do not allow cultivation practices for conventional crops. The medicinal flora requires to be explored to utilize the raw plant material in pharmaceutical industry at one hand and conservation of eroding resource base is ensured (SHAH 2007).

Methodology and Theoretical Orientation:

The present study has been designed to explore multiple medicinal plants from Azad Jammu and Kashmir for their insecticidal, anti bacterial, anti diabetic, anti oxidant activities, anti coagulant potential and mosquito repellent activities. These plants included (*Hippophar rhamnoides*), (*Eleagnus umbellate*), (*Zanthoxylum almatum*), (*Adhoca vasica*), Dandiline, (*Berberis lycium*) and (*Casaeria tomentosa*). These plants were collected from different and distant locations of Azad Jammu and Kashmir. Anti oxidant activity was estimated using DPPH while organic solvents, ethanol, methanol, acetone, ether and chloroform for extracting the biochemical ingredients. Rotary evaporator was used to evaporate the solvent. Human fresh blood samples were used to study anti diabetic effects of plant parts. .

The mineral estimation was performed according to the protocol given by (Shah et al., 2007) by acid digestion followed by using spectrophotometer

Findings:

Sea buckhorn has exhibited significant results for biochemical constituents. The antioxidants activities of plants under this study showed promising results. Cassaera tomentosa has exhibited excellent anti insecticidal properties which can lead towards

biopesticide development. *Zanthoxylum almatum* fruit extract has been found mosquito repellent. *Eleagnus umbellata* and *Berberis lycium* have shown anti diabetic and anti coagulant effects.

Conclusion and Significance:

Sea buckthorn (*Hippophae rhamnoides* L) is an important multipurpose plant in Pakistan and should be utilized to develop pharmaceutical, cosmetic, nutritional and industrial products to support the rural economy of mountain communities.

Berberis lycium and *Autum olive* have shown significant potential for anti diabetic and anti coagulant activities that will lead to clinical studies to be used in drug development in future. *Casaeria tomentosa* has exhibited remarkable potential to be used as bio-pesticide in future. *Zanthoxylum almatum* fruit has been proved best to be used in developing mosquito repellent products.