

**Webinar on “Scientific Achievement and Advancement of India”
under Azadi ka Amrit Mahotsav (24.09.21), IFB, Hyderabad**

Azadi Ka Amrit Mahotsav is an initiative of the Government of India to celebrate and commemorate 75 years of progressive India and the glorious history of its people, culture and achievements. Accordingly ICFRE, Dehradun assigned IFB, Hyderabad and FRCCE, Visakhapatnam to organize a series of lectures on “Scientific Achievement and Advancement of India” starting for 20th to 24th September, 2021 in online mode. Accordingly, FRCCE, Visakhapatnam organized 3 lectures on wood research, bio prospective of phytochemicals and sandal wood on 24th September 2021.

At the beginning Dr. S. Chakrabarti, Head, FRCCE welcomed the key speakers, invitees, guests, students and other participants. Then he invited the Director, IFB Dr. Ratnaker Jauhari, IFS for the inaugural speech. Dr Jauhari elaborated the importance of India’s past glorious record on different fields of research and investigation. He mentioned the contribution of Indian scientists in the field of Medicine, Astrology, Surgery, Mathematics and Astrophysics.

The first speaker of the session was Dr. Shukla, Scientist- G, IWST. He presented on Wood properties and processing including tree improvement and wood traits, quality parameters of wood like anatomical, chemical, physical and mechanical properties. Moreover he mentioned the importance of testing and evaluation of wood properties, wood processing- sawing and seasoning. He also briefed about wood density scale, importance of testing and evaluation of wood properties, focusing on selection and breeding. At last he discussed key wood traits for a range of product classes like pulp & paper, solid wood and wood composites, various imported and local timbers products available in Indian markets.

Followed by the above talk, the second presentation was given by Dr. Vineet Kumar, Scientist – G, FRI, Dehradun on “Chemical intervention for bioprospecting of phytoproducts”. In his deliberation he analyzed how chemical structures of some phytochemicals can be modified to make them usable to human as per necessity. He highlighted the chemistry of forest products in and elaborated few of his advanced research findings, which were patented:

- i. Acrylated hyaluronic acid - an ingredient of our body which is used in surgeries, arthritis patients, controlled drug delivery etc,
- ii. Saponins/sapogenins – extraction and crystallization of hederagenin by chromatography was mentioned,

- iii. Improved binding material other than bark powder of *Machilus macrantha* and *Litsea chinensis* for incense stick (agarbatti) to bind charcoal with efficient desired qualities and
- iv. Reshaping of exudate gum were all discussed during the presentation.

The third presentation of the session on “Tree improvement in Indian sandal wood achievements and prospects” was given by Dr. A. N. Arun Kumar, Scientist – F, IWST, Bangalore. He started the presentation with words “Atiparichay AdevjNa” and “Sa Mtatgamanat An Adaro Bhavati”. He described sandal wood tree usage variability in two different areas depending on its abundance and all the physical features of the tree. He mentioned the parasitic nature of sandalwood, and about spike disease of sandalwood. Role of IWST in sandalwood research with its variability studies, photographs of sandal wood seeds harvested along with tree improvement trails were discussed. Two important traits and their natural variation with inheritance were all briefed during the presentation. He pointed out the problems of past studies on sandal wood and also explained about relationship among different parameters like heart wood, girth, oil content etc. The presentation was followed by discussion among scientific team joined in the virtual meet. Altogether 42 participants joined the meet including ADG, Dr. Geeta Joshi.

