

(12) PATENT APPLICATION PUBLICATION
(19) INDIA
(22) Date of filing of Application :05/07/2023

(21) Application No.202311045187 A
(43) Publication Date : 23/02/2024

(54) Title of the invention : IMPROVED AND RAPID CALLUS PRODUCTION METHOD FOR FRITILLARIA ROYLEI

(51) International classification :A01H4/00,
A01H6/56
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

(71)Name of Applicant :
1)DR. YASHWANT SINGH PARMAR UNIVERSITY OF
HORTICULTURE AND FORESTRY
Address of Applicant :Directorate of Research, Dr. Y S
Parmar University of Horticulture and Forestry, Nauni, Solan 173
230, Himachal Pradesh, India. -----
2)DR. PANKAJ KUMAR
Name of Applicant : NA
Address of Applicant : NA
(72)Name of Inventor :
1)SHAGUN SHARMA
Address of Applicant :Department of Biotechnology, College of
Horticulture, Dr. Y S Parmar University of Horticulture and
Forestry, Nauni, Solan- 173230, Himachal Pradesh, India. Solan --

2)PANKAJ KUMAR
Address of Applicant :Assistant Professor, Department of
Biotechnology, College of Horticulture, Dr. Y S Parmar
University of Horticulture and Forestry, Nauni, Solan- 173230,
Himachal Pradesh, India. Solan -----
3)ROHIT SHARMA
Address of Applicant :Assistant Professor, Department of Forest
Product and Utilization, College of Forestry, Dr. Y S Parmar
University of Horticulture and Forestry, Nauni, Solan- 173230,
Himachal Pradesh, India. Solan -----
4)RAJNISH SHARMA
Address of Applicant :Associate Professor & Head, Department of
Biotechnology, College of Horticulture, Dr. Y S Parmar
University of Horticulture and Forestry, Nauni, Solan- 173230,
Himachal Pradesh, India. Solan -----

(57) Abstract :

The present disclosure relates to rapid and efficient method for callus production and proliferation of Fritillaria roylei. The said method provides high survival rate in surface sterilization step and 100% callus induction and comprises surface sterilizing the bulb explant; transferring explants, under axenic conditions, to callus induction media (MS (full strength) + TDZ (0.5-2 mg/L) + Picloram (2-4 mg/L) + Sucrose (30g/L) + Agar (8g/L); incubating the culture vessel at 15°C and 25 temperature in the dark with a relative humidity of 70-80% for 20-25 days. The 15°C induced callus is shifted and subcultured to 25°C for proliferation, it gives a high-frequency proliferation rate, with an exponential growth in the callus biomass over initial fresh weight.. Also, if the callus is not sectioned and sub-cultured directly in fresh medium in light conditions, it forms an embryogenic callus, and then bulblets and plantlets regeneration occurs.

No. of Pages : 30 No. of Claims : 8