

**REGENERATION OF BULBLET FROM BULB SCALE EXPLANTS OF LANZHOU LILY
(*LILIUM DAVIDII* VAR. *UNICOLOR*) AND ENHANCEMENT OF BULBLET GROWTH**

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REFERENCES

- BAKHSHAEI M., BABALAR M., MIRMASOUMI M., KHALIGHI A. (2010). Somatic embryogenesis and plant regeneration of *Lilium ledebourii* (Baker) Boiss., an endangered species. *Plant Cell, Tissue and Organ Culture*, 102: 229-235.
- HAN B. H., YAE B. W., YU H. J., PEAK K. Y. (2005). Improvement of *in vitro* micropropagation of *Lilium* oriental hybrid 'Casablanca' by the formation of shoots with abnormally swollen basal plates. *Scientia Horticulturae*, 103: 351-359.
- KUMAR S., AWASTHI V., KANWAR J. K. (2007). Influence of growth regulators and nitrogenous compounds on *in vitro* bulblet formation and growth in oriental lily. *Horticultural Science*, 34: 77-83.
- KUMAR S., KASHYAP M., SHARMA D. R. (2005). *In vitro* regeneration and bulblet growth from lily bulb scale explants as affected by retardants, sucrose and irradiance. *Biologia Plantarum*, 49: 629-632.
- LANGENS-GERRITS M., LILIEN-KIPNIS H., CROES T., MILLER W., KOLLÖFFEL C., DE KLERK G-J. (1997). Bulb growth in lily regenerated *in vitro*. *Acta Horticulturae*, 430: 267-273.
- LANGENS-GERRITS M. M., MILLER W. B. M., CROES A. F., DE KLERK G-J. (2003). Effect of low temperature on dormancy breaking and growth after planting in lily bulblets regenerated *in vitro*. *Plant Growth Regulation*, 40: 267-275.
- LIU X., YANG G. (2012). Adventitious shoot regeneration of oriental lily (*Lilium orientalis*) and genetic stability evaluation based on ISSR marker variation. *In Vitro Cellular & Developmental Biology-Plant*, 48: 172-179.
- MURASHIGE T., SKOOG F. (1962). A revised medium for rapid growth and bioassays with tobacco tissue cultures. *Physiologia Plantarum*, 15: 473-497.
- NHUT D. T. (2003). The control of *in vitro* direct main stem formation of *Lilium longiflorum* derived from receptacle culture, and rapid propagation by using *in vitro* stem nodes. *Plant Growth Regulation*, 40: 179-184.
- RICE R. D., ALDERSON P. G., WRIGHT N. A. (1983). Induction of bulbing of tulip shoots *in vitro*. *Scientia Horticulturae*, 20: 377-390.
- SOUMAI K. J., UPPEANDRA D. (2009). *In vitro* propagation from axenic explants of *Lilium oxypetalum* (D. Don) Baker, an endemic bulbous plant of high altitude Himalaya. *Acta Physiologiae Plantarum*, 31: 833-838.
- TAE B. A. G., ALDERSON P. G. (1990). Effect of low temperature and sucrose on bulb development and on the carbohydrate status of bulbing shoots of tulip *in vitro*. *Journal of Horticultural Science*, 65: 193-197.
- VAN AARTRIJK J., BLOM-BARNHOORN G. J. (1980). Effects of sucrose, mineral salts, and some organic substances on the adventitious regeneration *in vitro* of plantlets from bulb-scale tissue of *Lilium speciosum* 'Rubrum'. *Acta Horticulturae*, 109: 297-302.
- VARSHNEY A., DHAWAN V., SRIVASTAVA P. S. (2000). A protocol for *in vitro* mass propagation of asiatic hybrids of lily through liquid stationary culture. *In Vitro Cellular & Developmental Biology-Plant*, 36: 383-391.
- XU L. F., MA F. W., LIANG D. (2009). Plant regeneration from *in vitro* cultured leaves of Lanzhou lily (*Lilium davidii* var. *unicolor*). *Scientia Horticulturae*, 119: 458-461.