

**BLUE LIPOSOMES FOR IDENTIFICATION OF THE
SENTINEL LYMPH NODES IN PIGS****M. Dieter, R. Schubert, P. Hirnle**

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ABSTRACT

Effective preoperative staining of regional lymph nodes improves their intraoperative identification and thus the selectivity of sentinel node lymphadenectomy. Unfortunately, aqueous Patent Blue V (PBV) often fails to provide the requisite intensity and duration of contrast (1,2). A comparative study of staining characteristics of PBV in aqueous solution with those of liposomally encapsulated PBV was carried out on 7 female pigs with an average weight of 40 kg. The liposomes, consisting of lecithin and cholesterol in a molar ratio of 3:1, were produced by an extrusion technique using membranes with thicknesses of 5 μ m, 1.2 μ m, 0.4 μ m and 0.2 μ m. In each instance, a 0.5-ml depot containing 25 ± 0.4 mg of PBV/ml was injected into each of the four upper and lower mammary glands in aqueous solution on the left side and in a liposomal preparation on the right side. Stained lymph nodes of the groin, pelvis and neck were identified after 3, 6, 12 or 24 hours, then excised and photographed. Their PBV concentrations were measured by spectrophotometry. In all cases, the liposome preparations provided greater intensity and a longer duration than the aqueous solution. Liposomal PBV compared with aqueous PBV can therefore be recommended for better preoperative lymph node staining and identification of "sentinel" lymph nodes.