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Shirai et al.

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(54) **PATCHES CONTAINING TULOButEROL**

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Takako Sueda, Aki-gun (JP)

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

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(22) PCT Filed: **Jun. 16, 2004**

B. D. Kim et al., "The penetration enhancement of β 2-selective agonist, tulobuterol, across the hairless mouse skin", Proceedings—28th International Symposium on Controlled Release of Bioactive Materials and 4th Consumer & Diversified Products Conference, vol. 1, pp. 167 to 168, 2001.

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(51) **Int. Cl.**
A61F 13/02 (2006.01)

(52) **U.S. Cl.** **424/448; 424/449**

(58) **Field of Classification Search** None
See application file for complete search history.

(57) **ABSTRACT**

A patch containing tulobuterol in the low concentration and having the stable release-controllability, prepared by laminating an adhesive layer consisting of a rubber, an adhesive resin and a plasticizer on a backing, wherein 1 to 4 w/w % of tulobuterol in the lower concentration as an active ingredient and 0.1 to 3 w/w % of a higher fatty acid as a drug-releasing controlling agent are contained in the adhesive layer.

4 Claims, 4 Drawing Sheets

Noven Pharmaceuticals, Inc.

FIG 1

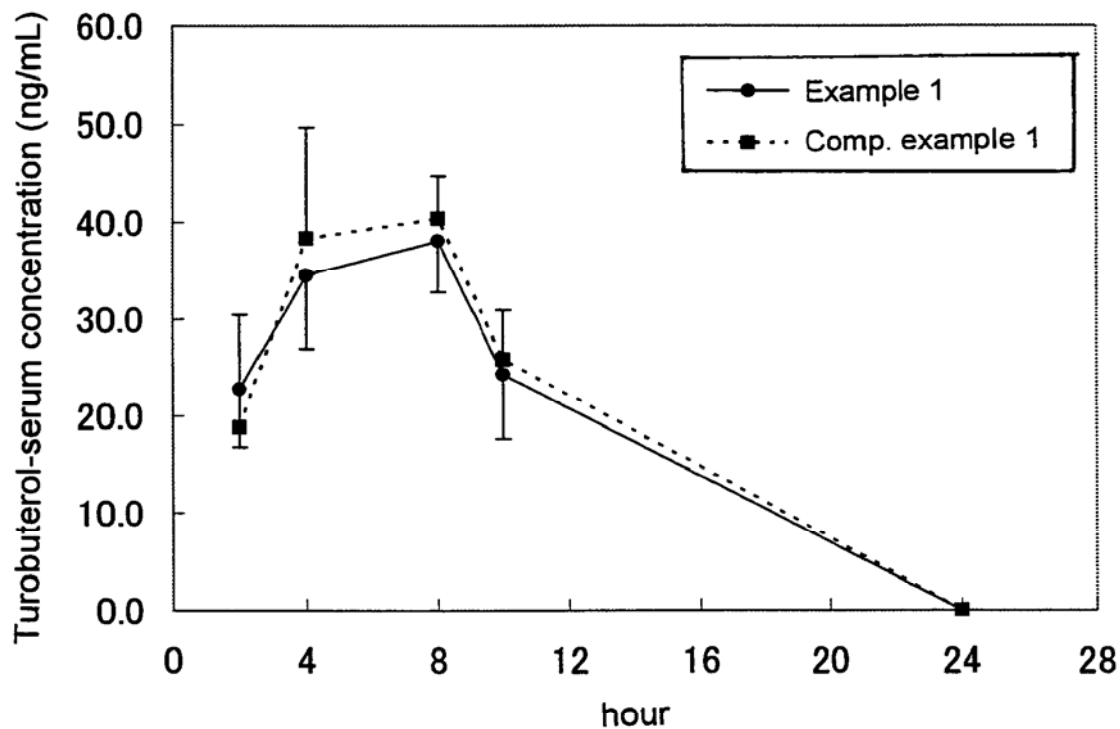


FIG 2

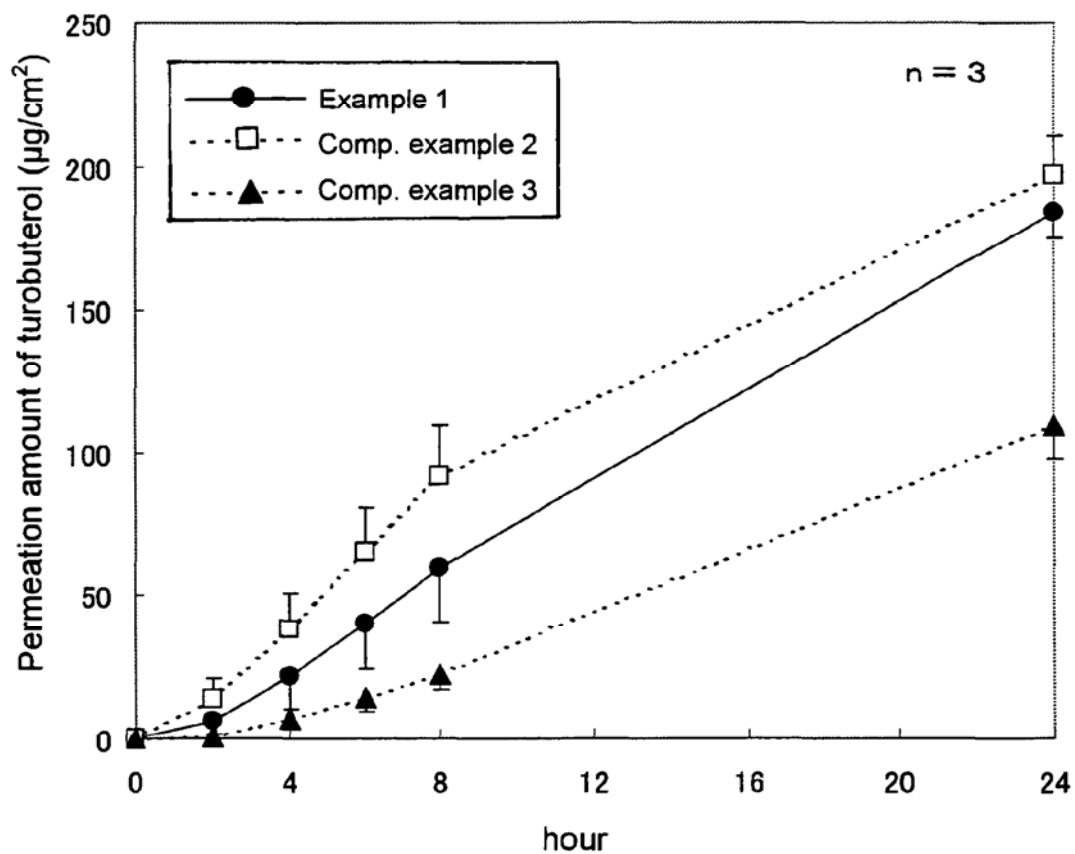


FIG 3

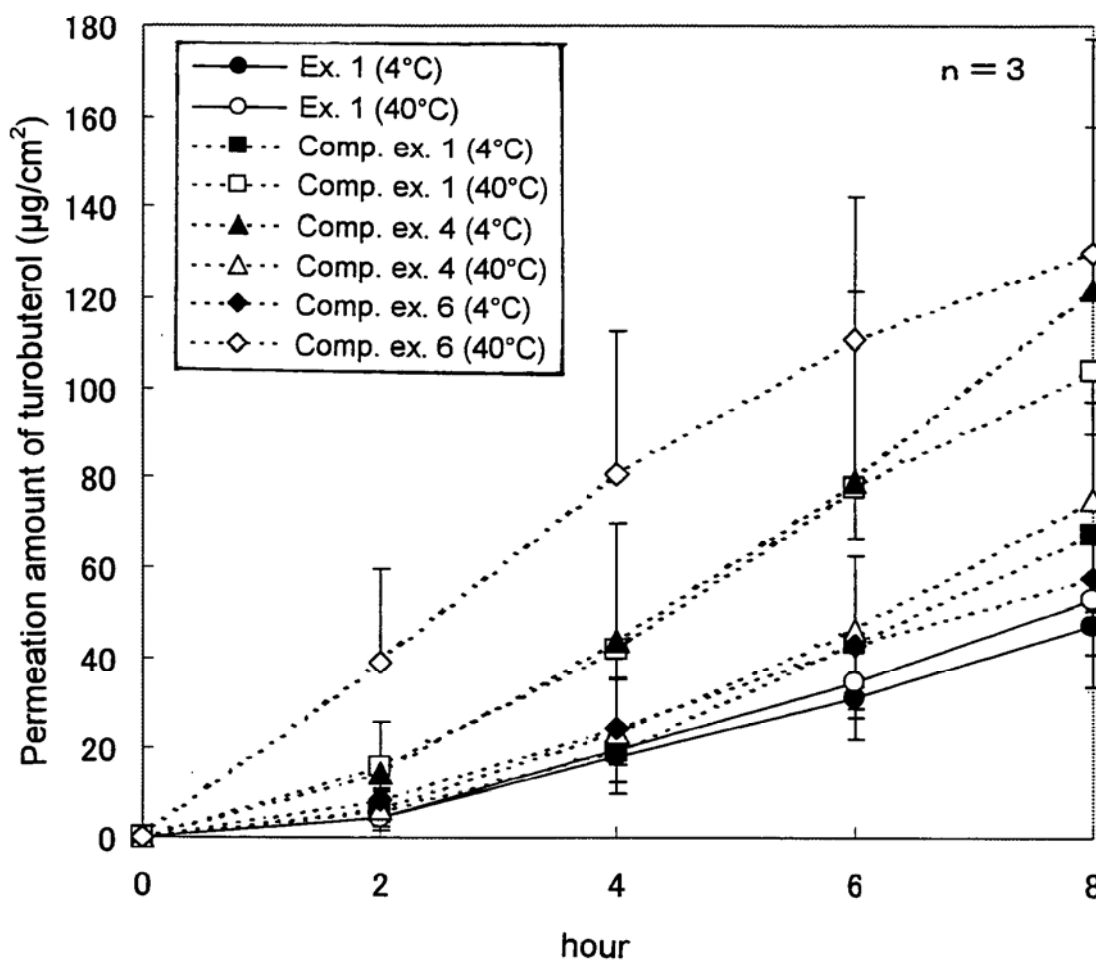
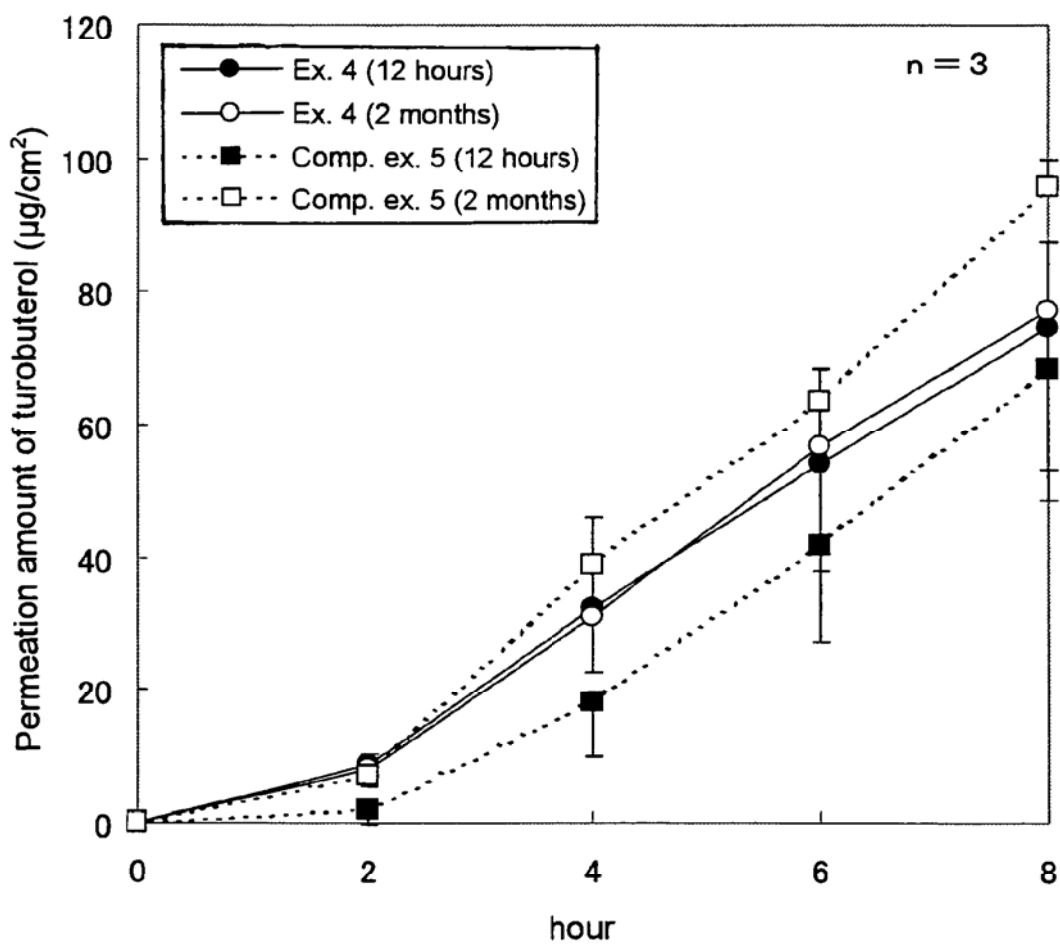


FIG 4



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