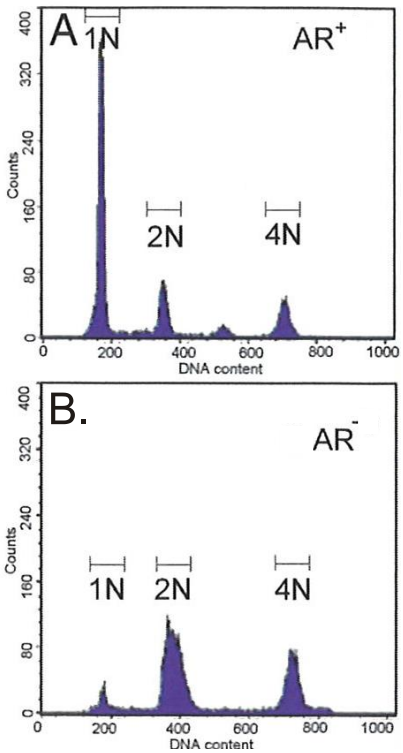
FLOW CYTOMETRIC ANALYSIS OF CELLULAR DNA CONTENT

Terms to be familiar with before you start to analyze the figure

*KO mutation * androgen receptor * flow cytometry*

The figure



Cell suspension was prepared from an organ of normal mice (AR^+, Chart A) and mice in which the gene for androgen receptor had been knocked out (AR^-, Chart B). The cells were analyzed by flow cytometry after DNA staining. Compare the charts and answer the following questions!

1. What is the principle of flow cytometry?
2. What organs were used in this study?
3. What is characteristic of the sets of chromosomes in the 1N, 2N and 4N cells?
4. What is the consequence of androgen receptor gene knock-out?

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The source of the figure

Tsai, M.-Y., Yeh, S.-D., Wang, R.-S., Yeh, S., Zhang, C., Lin, H.-Y., Tzeng, C.-R., Chang, C. (2006): Differential effects of spermatogenesis and fertility in mice lacking androgen receptor in individual tertis cells. Proc. Natl. Acad. Sci., USA, *103*, 18975-18980.

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