THE SPATIAL DISTRIBUTION OF INDUCTIVE CAPACITIES IN THE NEURAL PLATE AND ARCHENTERON ROOF OF URODELES

by

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1. INTRODUCTION

In a classical paper, Spemann (1918) showed that a piece of the dorsal blastoporal lip of a young amphibian gastrula, after transplantation to the belly side of another embryo of the same age, can give rise to a secondary embryonic anlage. Repeating this experiment with heteroplastic transplantation, Spemann & Mangold (1924) could show that the neural tissue of the secondary anlage derives from material of both the donor and the host. Obviously, under the influence of the graft the ventral host ectoderm (presumptive epidermis) can develop into neural tissue, i.e., neural induction takes place. Bautzmann (1926) showed that at the young gastrula stage the material having neural inductive capacity is identical with the material which, after invagination, will form the archenteron roof. Marx (1925) implanted a piece of the archenteron roof of a gastrula into the blastocoel of another gastrula, obtaining a well-defined secondary neural plate at the ventral side of the host. The exogastrulation experiments of Holt-