

THE OVULE AS AN ACTIVE PARTNER IN SEXUAL REPRODUCTION OF FLOWERING PLANTS

S u m m a r y

The fertility of flowering plants depends on correct course of the progamic phase (time from pollination to the pollen tube penetration into the ovule) and successful fertilization. Intercellular interactions are very important for the effective pollen tube growth in the pistil tissues. The ovule, which interacts with the male gametophyte in the final stage of progamic phase, is an active partner, attracting and supporting the pollen tube growth. To play its key role in fertilization the ovule undergoes a specific maturation pro-

cess, especially on its micropylar pole. In micropyle of the receptive ovule there are extensive intercellular spaces, filled with extracellular matrix substances important for pollen tube growth. There are present specific glycoproteins (e.g. arabinogalactan proteins – AGP), esterified pectins, and deesterified pectins, which bind calcium ions. Functions of these substances for supporting and attracting the pollen tube growth are discussed.