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Review

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A look inside odorant-binding proteins in insect chemoreception

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ABSTRACT

Detection of chemical signals from the environment through olfaction is an indispensable mechanism for maintaining an insect's life, evoking critical behavioral responses. Among several proteins involved in the olfactory perception process, the odorant binding protein (OBP) has been shown to be essential for a normally functioning olfactory system. This paper discusses the role of OBPs in insect chemoreception. Here, structural aspects, mechanisms of action and binding affinity of such proteins are reviewed, as well as their promising application as molecular targets for the development of new strategies for insect population management and other technological purposes.

Keywords: odorant-binding protein, insect, review, olfactory system, chemical communication

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