

The purpose of this thesis is summing up the information about olfactory transduction of vertebrates. This review is divided into four parts, each part focuses on a different aspect of olfactory transduction. First there is an overview of basic electrophysiological methods used for transduction research, followed by a description of a complete transduction on a molecular level. Next is a summary of model types and their use in olfactory transduction simulation, including a detailed description of two models: One of them describes the beginning of olfactory transduction, from the odorant binding on the receptor to the cAMP production, the other deals with the negative feedback of Ca²⁺. Finally there is an overview of software products designed to create and analyze the models from the preceding section.