The role of dendritic architecture of an identified insect motoneuron on behavioral performance

Dissertation zur Erlangung des akademischen Grades des Doktors der Naturwissenschaften (Dr. rer. nat.)

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Vorgelegt von

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Chapters 2 and 3 are based on manuscripts ready for submission.

Chapter 2:
Meseke M, Evers JF, Duch C: *Sub-dendritic synapse targeting and postembryonic dendritic geometry remodeling of an identified neuron subserve its changing behavioral role*

Chapter 3:
Meseke M, Duch C: *Dendritic remodeling but not sub-dendritic GABAergic synapse targeting is affected by blocking chloride channels during postembryonic motoneuron development*

The contribution of the different authors was as follows:

Chapter 2: This manuscript is written by Dr. Carsten Duch and me in equal shares. I did all the experiments and data evaluation apart from the multi-compartment modeling experiments which were performed by Dr. Jan Felix Evers. These parts of the manuscripts that deal with the modeling of the motoneuron are written by Dr. Jan Felix Evers under continuous discussion with Dr. Carsten Duch and me.

Chapter 3: I performed all the experiments, analysis and wrote the manuscript under continuous discussion with Dr. Carsten Duch.

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