

**P007** The molecular and cell biological characterization of a novel type of adhering junction in transformed mesenchymal cells

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The plaque-bearing adhering junctions (AJs) of epithelial cells are commonly divided into the intermediate filament-associated desmosomes (*maculae adhaerentes*) and the microfilament-anchoring AJs, including the *puncta adhaerentia*. The molecular composition of both kinds of AJs is by and large known. By comparison, little is known as to the molecular composition of the AJs that connect the cells of mesenchymally derived tissues and tumors. In our studies of normal and SV40-transformed mesenchymally derived cells and soft tissue tumors we have identified a novel cell type-specific AJ ("*iunctura intermedia*") using biochemical, immunological and microscopical techniques. These mostly small AJs are characterized by the transmembrane glycoprotein N-cadherin, in some cells together with cadherin-11 and nectin as well as the plaque proteins  $\alpha$ - and  $\beta$ -catenin, p120<sup>ctn</sup> and plakoglobin. Surprisingly, in the malignantly transformed cells we observed the systematic addition of plakophilin-2, a plaque protein found in desmosomes and known for its junction-organizing role. Interestingly, this new cell-cell junction type was also found in some soft tissue tumors *in situ* and in cell lines derived therefrom. Further research will be necessary to elucidate the mechanisms by which plakophilin-2 influences the functions of the AJ ensemble.