

# ***SFB 35 Colloquia in Membrane Transport***

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### **"Targeting of the peroxisomal ABC-transporter ALDP"**

Peroxisomes are ubiquitous, single membrane bound organelles, which exert a variety of metabolic reactions such as the degradation of hydrogen peroxide and of various fatty acids, or the biosynthesis of plasmalogens, docosahexaenoic acid and bile acids. Peroxisomal membrane proteins are assumed to be imported from the cytosol and the responsible targeting signals are usually recognized by the protein PEX19. The peroxisomal membrane protein ALDP belongs to the family of ABC-transporter proteins and mutations in this protein are associated with the neurodegenerative disease X-linked adrenoleukodystrophy (X-ALD). ALDP harbours a peroxisomal targeting signal and a binding site for PEX19 was identified. However, we found that mutations that destroy this interaction do not block the transport of ALDP to peroxisomes. Further investigations of the targeting process of ALDP revealed another relevant sequence and improve the understanding of the transport of peroxisomal membrane proteins.