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On the structural possibility of pore-forming mitochondrial  $F_oF_1$  ATP synthase

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**On the structural possibility of pore-forming mitochondrial  $F_0F_1$  ATP synthase**Christoph Gerle<sup>1,2,\*</sup>

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**Abstract**

The mitochondrial permeability transition is an inner mitochondrial membrane event involving the opening of the permeability transition pore concomitant with a sudden efflux of matrix solutes and breakdown of membrane potential. The mitochondrial  $F_0F_1$  ATP synthase has been proposed as the molecular identity of the permeability transition pore. The likeliness of potential pore-forming sites in the mitochondrial  $F_0F_1$  ATP synthase is discussed and a new model, the death finger model, is described. In this model, movement of a p-side density that connects the lipid-plug of the c-ring with the distal membrane bending  $F_0$  domain allows reversible opening of the c-ring and structural cross-talk with OSCP and the catalytic  $(\alpha\beta)_3$  hexamer. This article is part of a Special Issue entitled: 19<sup>th</sup> European Bioenergetics Conference.

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