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CRESCENDO

CiRculating mEdiators of Stroke reCurrENce anD aetiOlogies

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Patients who have suffered an ischaemic stroke are at high risk for a recurrent cerebrovascular event, with a subsequent increase in morbidity and mortality. Therefore, innovative concepts and strategies in secondary stroke prevention are of major relevance. Currently, measures of stroke prevention are essentially based on the presumed aetiology which is commonly defined according to categories. This concept, however, does not sufficiently reflect the complex pathophysiology. Rather, it appears probable that circulating mediators related to the extent of acute and chronic brain damage in concert with aetiological mechanisms and underlying comorbidities influence the risk for recurrent cerebrovascular events. Knowledge of these circulating mediators may open novel avenues in therapeutic approaches for secondary stroke prevention. With the CiRculating mEdiators of Stroke reCurrENce anD aetiOlogies (CRESCENDO) consortium, we therefore aim to initiate a paradigm shift towards an integrated pathophysiology-based evaluation of cerebrovascular risk. CRESCENDO is a transnational consortium using existing large-scale biosample collections of stroke patients with deep phenotyping in order to identify and validate molecular targets for prevention of stroke recurrence. The three consortium partner sites in Hannover (Germany), Seville (Spain) and Basel/Zürich (Switzerland) will provide their specific methodological expertise and contribute samples of in total over 5,000 patients with acute ischaemic stroke. On the one hand we will investigate well-characterized biomarkers of inflammation, immunothrombosis, and stress in a hypothesis-driven approach and, on the other hand, additionally search for predictive targets of interest via a data-driven omics approach. CRESCENDO will consequently advance our understanding of stroke pathophysiology.