Human models of headache in the search for biomarkers

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Migraine is one of the most common, costly and disabling neurological disease with complex pathophysiology. A key feature of migraine is that pharmacological triggers can initiate an attack, and this phenomenon provides a unique opportunity to explore disease biomarkers by experimentally inducing migraine attacks. Using migraine provocation models, we discovered novel signaling pathways responsible for initiation of the migraine attack. Furthermore, brain imaging demonstrated migraine specific changes during experimentally provoked attacks. This lecture summarizes existing migraine models in humans, and describes these models in the discovery of key molecular pathways and the identification of biomarkers.