The concept of autoregulation of cerebral blood flow was presented in detail for the first time. The paper also summarizes the field in general and contains a thorough discussion of the methods that, at that time, were available to study CBF and CMRO, in man. [The SCI® indicates that this Paper has been cited over 400 times since 1961.]

Nielis A. Lassen
Department of Clinical Physiology
Bispebjerg Hospital
2400-Copenhagen NV
Denmark

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"This review's most lasting contribution to the understanding of cerebral circulation, and the reason for its frequent citation, is perhaps the section on autoregulation of cerebral blood flow: the fact that normally the cerebral vessels constrict when the blood pressure increases and dilate when the pressure decreases. Basic animal experiments showing this regulatory mechanism had been made by Mogens Fog in the 1930s. However, undoubtedly due to the ease with which the autoregulation is abolished by trauma or transient hypoxia, many other workers had been unable to demonstrate it. In my article, support for the autoregulation of CBF was adduced by collecting several series of studies of induced hyper and hypotension in man, showing that within limits (and with unchanged arterial pCO₂) CBF was in fact unchanged. Why were within limits (and with unchanged arterial hyper and hypotension in man, showing that collecting several series of studies of induced autoregulation of CBF was adduced by demonstrate it. In my article, support for the many other workers had been unable to abolish the autoregulation is indeed abolished! This paradox was first thought to be caused by a massive variation in intracranial pressure in the 'worst' cases. Now it appears that this is not always the case and local variations in brain tissue pressure are then invoked to explain the false autoregulation. Perhaps this is so. But no proof of the tissue pressure hypothesis is yet at hand.

"Many other aspects of this article's concepts and facts continue to be elaborated in current research. What was then (and is now) called the metabolic regulation of cerebral blood flow is fertile ground. One can by measuring blood flow in a given area reveal if it is active or inactive. We can map the areas of the brain in animals or in man during sensory perception movements, vocalization, etc., as reviewed by Lassen, Ingvar, and Skinhoj in 1978."