

グローバル COE 特別セミナー

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疾患生命工学センター

生物物理学セミナー

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(平成 19 年度)

演者: Marjan Rupnik 博士

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Slovenija

演題: The Physiology of Beta Cells in Whole Pancreas Slices

日時: 平成 19 年 12 月 10 日(月) 13:30-14:30

場所: 医学部 1 号館 2 階 N206 号室

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要旨:

The tissue slice technique has enabled major insights into neural and neuroendocrine physiology. Recently, a novel method using whole pancreas slices has been introduced to study the function of the beta cells under near physiological conditions. Using electrophysiology and optical approaches we checked the excitability, ion channel properties, electrical coupling as well as metabolic state and secretory competence in both perinatal and adult rodent beta cells. Our results emphasize the critical importance of the islet tissue integrity for the excitability and coordinated function of hormone release from beta cells. The paper will summarize recent findings on the physiology of healthy, genetically ablated (Kir6.2, Cx36) and diabetic (Goto Kakizaki) organisms.

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