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Licensing Opportunity

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548-A367
In situ Pancreatic perfusion in rat and mouse

Invention

Asllan Gjinovci at the University of Geneva has significantly improved the technology of pancreatic perfusion to study drug effects on endocrine and exocrine pancreas secretion.

Organs are perfused with perfusion buffer and the molecules of interest. Flow rate is kept constant at 5 ml/min (rat) or 1.5 ml/min (mouse). Pancreatic effluent and pancreatic juice are collected and analyzed by standard method.

Applications

- Perfusion of pancreas allows the testing of molecules on endocrine (insulin, glucagon, somatostatin) and exocrine (amylase, chymotrypsin) pancreatic secretion
- Drug screening, preclinical studies, ADME/TOX
- Therapeutic areas include: diabetes, obesity, metabolic disease

Compared to other techniques, the Gjinovci method displays the following advantages

- Increase analysis time: 3 to 4 hours instead of 20 minutes:
  - ➔ Allows the testing of higher number of drugs
  - ➔ Limits the quantity of animals used
  - ➔ permits the possibility of increased experimentation time
- Absence of edema due to specific surgery
- Possibility of double perfusion: pancreas and kidney
- Applicable to genetically modified animals and different species (rats, mice)
- Applicable to other organs such as liver, kidney and spleen

What we offer

➔A non-exclusive license to this method: information package + video demonstration
➔Follow-up service: Expert available for on site assistance
➔A possible collaboration for the testing of your drug by this improved pancreatic perfusion method

Publications (2 out of 38 published in peer reviewed journals)

Trimble E.R., Bruzzone R., Gjinovci A. and Renold A.E. (1985) Activity of the insulino-acinar axis in the isolated perfused rat pancreas Endocrinology 117: 1246-1252.

Maechler P., Gjinovci A. and Wollheim C.B. (2002) Implication of glutamate in the kinetics of insulin secretion in rat and mouse perfused pancreas. Diabetes. Feb;51 Suppl 1:S99-102

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Université de Genève
24, Rue Général-Dufour
1211 Geneva 4
Switzerland

Contacts

Alexandra Richardson, Ph.D.
Phone: +41(22)379 0352
E-mail: alexandra.richardson@unige.ch

Céline Lafourcade, Ph.D.
Phone: +41(22)379 0358
E-mail: celine.lafourcade@unige.ch