BAHAGIAN PENYELIDIKAN DAN PEMBANGUNAN
CANSELORI
UNIVERSITI SAINS MALAYSIA

Laporan Akhir Projek Penyelidikan Jangka Pendek

1) **Nama Penyelidik:** Dr. Amol Sharad Dharap

Nama Penyelidik-Penyelidik Lain *(Jika berkaitan)* : Dr. Othman Mansor
Dr. Myo Than

2) **Pusat Pengajian/Pusat/Unit :** P.P.S.P.

3) **Tajuk Projek:** Are ganglion cells a normal feature of the mucosa in the gastrointestinal tract?

4) (a) **Penemuan Projek/Abstrak**

*(Perlu disediakan makluman di antara 100-200 perkataan di dalam **Bahasa Malaysia dan Bahasa Inggeris**. Ini kemudiannya akan dimuatkan ke dalam Laporan Tahunan Bahagian Penyelidikan & Pembangunan sebagai satu cara untuk menyampaikan dapatan projek tuan/puan kepada pihak Universiti).*

Intra mucosal ganglion cells are commonly believed not to occur in the normal gastointestinal tract (GIT) of human beings and animals. Such cells are described as occuring only in pathological states like the chronic bowel motility disorder and neuronal intestinal dysplasia in human beings. Reports in the recent literature state that occasional intramucosal ganglion cells are a normal finding in the human GIT. Histological sections of the GIT in eight adult, healthy guinea-pigs from oesophagus to anus using an immunological staining method - neuron specific enolase (NSE) staining. While ganglion cells were clearly observed in the submucosa and myenteric nerve plexuses throughout the GIT (oesophagus to anus) intramucosal ganglion cells were seen only in the rectum and anal canal. In the rectum, three ganglion cells were seen in three out of the 237 sections that were examined. Ganglion cells were either located in the subepithelium, upper one-third or lower one-third of the mucosa. In the anal canal, twenty-two intramucosal ganglion cells were observed in eleven out of the fifty sections that were examined. Their locations were either subepitelial or in the lower one-third of the mucosa. All the ganglion cells seen were moderate to large in size, multipolar and had a vesicular nucleus with a prominent nucleolus. Intramucosal ganglion cells were not found in the oesophagus, stomach, small intestine, caecum and colon. Based on their location and morphology the intramucosal ganglion cells in the rectum and anal canal could be sensory in function. Further detailed studies are, however, needed to determine the ultrastructure, connections, neurotransmitters and exact function of these intramucosal ganglion cells in the GIT.

(b) **Senaraikan Kata Kunci yang digunakan di dalam abstrak:**

.....	Ganglion cells
.....	mucosa
.....	gastrointestinal tract
.....	guinea-pig
.....	neuron specific enolase (NSE) staining
.....	immunoperoxidase
.....	.....
.....	.....
.....	.....
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5) **Output Dan Faedah Projek**

(a) Penerbitan (termasuk laporan/kertas seminar)

(Sila nyatakan jenis, tajuk, pengarang, tahun terbitan dan di mana telah diterbit/dibentangkan).

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A full report will also be submitted.

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(b) **Faedah-Faedah Lain Seperti Perkembangan Produk, Prospek Komersialisasi Dan Pendaftaran Paten.**
(Jika ada dan jika perlu, sila gunakan kertas berasingan).

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(c) Latihan Gunatenaga Manusia

i) Pelajar Siswaza .....

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ii) Pelajar Prasiswazah: .....

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iii) Lain-Lain : .....

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6. **Peralatan Yang Telah Dibeli:**

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UNTUK KEGUNAAN JAWATANKUASA PENYELIDIKAN UNIVERSITI

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untuk pengesahan &

tandatangan Dekan

Disahkan

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Pusat Pengajian Sains Perubatan
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