UNIVERSITI SAINS MALAYSIA
GERAN PENYELIDIKAN UNIVERSITI PENYELIDIKAN
LAPORAN AKHIR

# ELUCIDATING THE ROLES OF ANNEXIN-LIKE MOLECULES IN THE PROTOZOAN PARASITE GIARDIA INTESTINALIS: AN APPROACH TO THE CONTROL OF GIARDIASIS

PENYELIDIK

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## FORMAT PROFIL PENYELIDIKAN

Format Profil Penyelidikan adalah seperti berikut:-

i) Dalam versi Bahasa Inggeris .

ii) Laporan tidak melebihi lima (5) muka surat bagi setiap satu projek penyelidikan dan perlu disertakan gambar berkaitan projek penyelidikan.

iii) Jenis dan saiz tulisan: Tajuk – Arial, 13
Laporan – Arial, 11

iv) Antara kriteria yang perlu ada:-

- Maklumat projek penyelidikan;
- Abstract - tidak melebihi 120 patah perkataan;
- Introduction;
- Research Methodology;
- Literature Review;
- Findings;
- Conclusion;
- Achievement;
- References;
- Appendixes

# TEMPLATE
## PROFIL PENYELIDIKAN

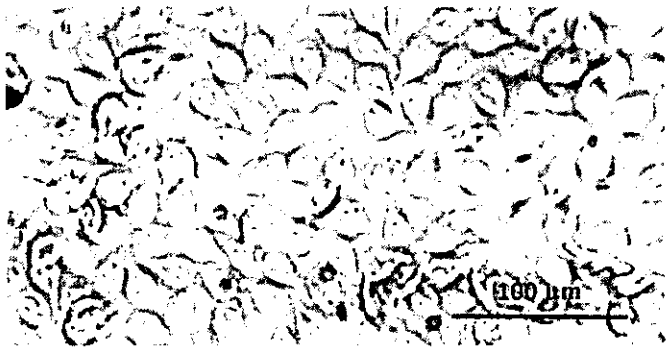


Figure: *Giardia intestinalis*

**TITLE OF RESEARCH**: Elucidating the roles of annexin-like molecules in the protozoan parasite Giardia intestinalis: An approach to the control of giardiasis

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**Field**: Medical Parasitology

**ABSTRACT (120 words)**
Giardiasis is a disease caused by protozoan parasite *Giardia intestinalis*. Herein, we sought to examine the role of alpha-giardins in response to hydrogen peroxide ($H_2O_2$) treatment in *G. intestinalis*. Results showed that *Giardia* treated with increased concentration of $H_2O_2$ demonstrated significant reduction in cell viability and significant increase reactive oxygen species production. We found that alpha-2 and alpha-3 giardin showed significant up-regulated transcriptional expression in $H_2O_2$-treated *Giardia* at 1h time-point, whereas gene expression level of alpha-7.2 and alpha-7.3 giardin up-regulated significantly at 4h time-point. Alpha-11 giardin demonstrated up-regulated gene expression at a later time-point (8h and 24h) in $H_2O_2$-treated *Giardia*. Together these findings suggest that alpha giardins could serve as potential promising target for future drug design and vaccine development.