Close

Web of Science
Page 1 (Records 1 -- 1)

[1]

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Record 1 of 1

Title: Immunoproteomic analysis of antibody response to cell wall-associated proteins of Candida tropicalis

Author(s): Lee, PY (Lee, P. Y.); Gam, LH (Gam, L. H.); Yong, VC (Yong, V. C.); Rosli, R (Rosli, R.); Ng, KP (Ng, K. P.); Chong, PP (Chong, P. P.)

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Abstract: Aims: This study was conducted to identify antigenic proteins of Candida tropicalis that are targeted by the host immune system.
Methods and Results: An immunoproteomic approach was used to discover antigens from cell wall of C. tropicalis that were recognized by sera from experimentally infected mice. This resulted in the identification of twelve distinct proteins, of which ten have been previously reported as antigens of Candida albicans. For the remaining two proteins, Idh2p has been described as an antigen of Candida parapsilosis, whereas Kgd2p is revealed for the first time as an antigenic protein for Candida species. These two antigens were expressed as recombinant proteins in Escherichia coli and were shown to be specifically recognized by sera from infected host on Western blot.
Conclusions: The present work investigated immunoproteome of C. tropicalis and identified several biomarker candidate antigens, with Kgd2p as a novel immunogenic protein that could be associated with pathogenesis of C. tropicalis.
Significance and Impact of the Study: Findings from this study help to improve current understanding on host response to C. tropicalis infection and provide new insights into immune-pathogenesis of C. tropicalis. Besides, the immunogenic proteins could be considered as targets for the development of immunodiagnostic assay and/or vaccine.

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Addresses: [Lee, P. Y.; Chong, P. P.] Univ Putra Malaysia, Fac Med & Hlth Sci, Dept Biomed Sci, Serdang 43400, Selangor, Malaysia.
[Gam, L. H.] Univ Sains Malaysia, Sch Pharmaceut Sci, George Town, Malaysia.
[Yong, V. C.] Taylors Univ, Sch Biosci, Subang Jaya, Selangor, Malaysia.
[Rosli, R.] Univ Putra Malaysia, Fac Med & Hlth Sci, Dept Obstet & Gynaecol, Serdang 43400, Selangor, Malaysia.
[Ng, K. P.] Univ Malaya, Fac Med, Dept Med Microbiol, Kuala Lumpur, Malaysia.
[Chong, P. P.] Natl Univ Singapore, Ctr Translat Med, Translat Infect Dis Program, Singapore 117548, Singapore.

Reprint Address: Chong, PP (reprint author), Univ Putra Malaysia, Fac Med & Hlth Sci, Dept Biomed Sci, Serdang 43400, Selangor, Malaysia.

E-mail Addresses: cpp@upm.edu.my

Author Identifiers:

Author	ResearcherID Number	ORCID Number
Yong, Phelim	M-5961-2015	0000-0002-5817-7381
Chong, Pei Pei		0000-0002-8229-3593

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Web of Science
Page 1 (Records 1 -- 1)

[1]

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