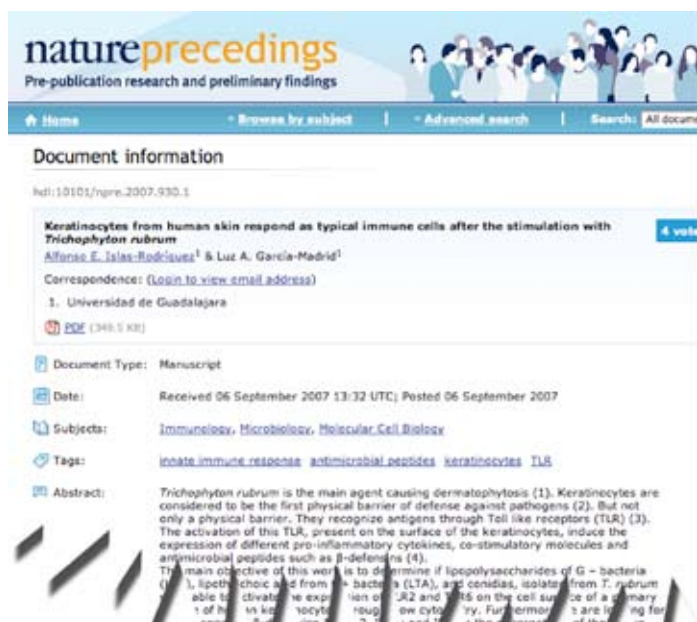


## Cartas al Editor

# Comunicación rápida

EL EQUIPO DE LA REVISTA *INVESTIGACIÓN EN SALUD*, TIENE EL GUSTO DE FELICITAR AL DR. ALFONSO ISLAS Y A LUZ ALEJANDRA GARCÍA, ESTIMADOS COLEGAS Y AMIGOS, POR LA PUBLICACIÓN DE SU TRABAJO TITULADO "KERATINOCYTES FROMS HUMAN SKIN RESPOND AS TYPICAL IMMUNE CELLS AFTER SIMULATION WITH *TRICHOPHYTON RUBRUM*", EN LA RECONOCIDA REVISTA *NATURE*, DONDE ADEMÁS FUE COLOCADO COMO DESTACADO EN EL PORTAL PORTADA.





## KERATINOCYTES FROMS HUMAN SKIN RESPOND AS TYPICAL IMMUNE CELLS AFTER SIMULATION WITH TRICHOPHYTON RUBRUM

*Trichophyton rubrum* is the main agent causing dermatophytosis (1). Keratinocytes are considered to be the first physical barrier of defense against pathogens (2). But not only a physical barrier. They recognize antigens through Toll like receptors (TLR) (3). The activation of this TLR, present on the surface of the keratinocytes, induce the expression of different pro-inflammatory cytokines, costimulatory molecules and antimicrobial peptides such as beta  $\alpha$ -defensins (4).

The main objective of this work is to determine if lipopolysaccharides of G – bacteria (LPS), lipoteichoic acid from G+ bacteria (LTA), and conidias, isolated from *T. rubrum* were able to activate the expression of TLR2 and TLR6 on the cell surface of a primary culture of human keratinocytes through Flow cytometry. Furthermore we are looking for the presence of  $\alpha$ -defensins 1 and 2, IL1b and IL-8 in the supernatant, of the above mentioned culture of cells, by Western blot. From the flow cytometry data, the preliminary results showed an important dispersion in terms of proliferation, increase in size and granularity of keratinocytes, from primary cultures of skin from healthy donors, stimulated 6 hours with conidias of *T. rubrum*, and LTA, but not when non stimulated, or stimulated with LPS (Fig 1).

When keratinocytes from primary cultures of skin from healthy donors were cultivated 48 hours, it was found dispersion in terms of proliferation, increase in size and granularity when stimulated with

conidias of *T. rubrum*, and LPS but not when non stimulated, or stimulated with LTA (Fig 2).

The keratinocytes expressed increased levels of TLR2 and TLR6 when were stimulated with LTA and less to *T. rubrum*, in the 6 hours cultures, but this last cells still showed increased size (Fig 3).

The Keratinocytes expressed increased levels of TLR2 in the 48 hours cultures when were stimulated with LPS and *T. rubrum*. (Fig 4)

Besides,  $\alpha$ -defensin-2 was detected in the supernatant of cultures of keratinocytes stimulated with LPS (Fig 5).

It can preliminary be concluded that keratinocytes from primary cultures of human skin from healthy donors, are cells that respond as typical immune cells, after stimulation with *T. rubrum*, LTA and LPS in different conditions, and that this mechanism may be very important, for the protection of local environment. .

### References

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