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**Rab7, Rab11, and Rab14: Their Role in the Vesicular Traffic of the Fibronectin Receptor (b1EhFNR) During Host-Parasite Interaction**

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*In vitro* interaction of *Entamoeba histolytica* trophozoites either with fibronectin (FN) or after host-parasite interaction in animal models, induce the redistribution of the beta1EhFNR. Trafficking of beta1integrins is important for cell adhesion and migration in higher eukaryotes and requires the participation of Rab proteins. In *E. histolytica* the machinery involved in "integrin" trafficking is not completely known. In this work we describe how Rab7, Rab11, and Rab14 participate during the mobilization of beta1EhFNR. The distribution of the beta1EhFNR and Rab proteins was analyzed by confocal microscopy to determine the localization of these molecules in trophozoites incubated on FN (100 µg/ml) (5, 15, 30, and 60 min; 5 h) or liver abscesses-recovered trophozoites (12, 24, 48, 72 and 96 h post infection). In FN-stimulated trophozoites, results revealed that Rab7, a protein that associates with secondary lysosomes, and Rab11, involved in exocytosis, associate with the beta1EhFNR and facilitate its internalization and recycling. Rab7 is mainly associated with internal vesicles that are strongly marked by the 3C10 mAb directed against the amoebic receptor, whereas Rab11, although associated with vesicles, it is highly enriched at the plasma membrane where it co-localizes with beta1EhFNR. Rab14 was found in association with beta1EhFNR, only after 1 h FN-interaction. For hepatic lesion-recovered trophozoites, the phenomenon is quite similar; however, vesicle content in these trophozoites is higher, and therefore, the association between Rab proteins and the beta1EhFNR was more evident. The association between the amoebic receptor and Rab7 and Rab11 was confirmed by FRET in a multiphotonic microscope in live amebas. In conclusion, attachment and migration, two important functions for *E. histolytica* pathogenesis may be regulated by beta1EhFNR recycling through the participation of Rab proteins, mainly Rab7 and Rab11. This work was supported by a CONACYT grant (46215). Rosario Javier Reyna is a CONACYT fellow (170184).

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