

A high-magnification electron micrograph showing a complex, yellowish, branching structure, likely a parasitic rhizoid or pseudopod, extending from a dark, irregularly shaped host cell membrane. The background is black.

parasitus

Revista de la Sociedad
Argentina de Protozoología

Vol. 2 (2023) - ISSN 2953-5751

SECRETARIOS DE REDACCIÓN

Laura Fraccaroli

Catalina Alba Soto

COMITÉ EDITOR

Catalina Alba Soto

Valeria Tekiel

Silvia A. Longhi

Patricia Romano

Cristina Vanrell

Laura Fraccaroli

Juan Burgos

Patricia Bustos

2

Sede de la Sociedad Argentina de Protozoología



Vuelta de Obligado 2490

C1428ADN – CABA, Argentina

e-mail de contacto: secretaria-sap@protozoologia.org.ar

Foto de Portada

Trichomonas vaginalis (azul) conectados por citonemas (naranja) observados por microscopía electrónica de barrido.

Créditos: Nehuen Salas (INTECH, CONICET-UNSAM, Argentina), Antonio Pereira Neves (Instituto Aggeu Maglhães, Brasil) y Natalia De Miguel (INTECH, CONICET-UNSAM, Argentina).

XXXIV REUNIÓN ANUAL DE LA SOCIEDAD ARGENTINA DE PROTOZOOLOGÍA

COMITÉ ORGANIZADOR

Presidenta	María Corvi
Miembros	Verónica Cóceres
	Natalia De Miguel
	Lucrecia Iriarte
	Cristian Martínez
	Daniela Muñoz
	Sheila Ons
	Agustina Prat

COMITÉ CIENTÍFICO

Presidente	Sergio Angel
Miembros	Fernan Agüero
	Luisa Berná
	Andra Cumino
	Paula Marcotegui
	Dadín Moore
	Juan Mucci
	Silvia Repetto
	Lorena Zonta

3

COMISIÓN DIRECTIVA

Presidenta	Catalina Alba Soto
Vice-Presidenta	Patricia Romano
Secretaria	Valeria Tekiel
Pro-Secretaria	Cristina Vanrell
Tesorera	Silvia Longhi
Pro-Tesorera	Laura Fraccaroli
Vocales	Juan Burgos
	Patricia Bustos

AUSPICIOS



UNIVERSIDAD
NACIONAL
DE LA PLATA

Universidad Nacional de La Plata



Agencia I+D+i

Agencia Nacional de Promoción
de la Investigación, el Desarrollo
Tecnológico y la Innovación

CONICET



Consejo Nacional de
Investigaciones Científicas y
Tecnológicas

4



The Company of Biologists



Mundo Sano

Mundo Sano

ÍNDICE GENERAL

Programa Científico	6
Conferencias	12
Simposios	17
Simposio I – Parásitos de interés en salud animal	18
Simposio II – Biología celular	20
Simposio III – Microparásitos en animales silvestres	23
Simposio IV – Biología molecular y bioquímica	25
Simposio V – Desarrollo de drogas antiparasitarias	28
Simposio VI – Abordajes bioinformáticos para el análisis de protozoos parásitos	30
Simposio VII – Vacunas y diagnóstico	32
Simposio VIII – Interacción parásito – célula hospedadora	34
Simposio IX – Epidemiología y vectores	37
Simposio X - Inmunología	39
Talleres	42
Comunicaciones Orales	44
Pósters	59
BMC – Biología molecular y celular	60
IPH – Interacción parásito-hospedero	86
IyV – Inmunología y vacunas	87
DyT – Diagnóstico y tratamiento	94
EyV – Epidemiología y vectores	110
PSA – Parasitología, sociedad y ambiente	115

trafficking, as demonstrated in human and yeast models. In previous research from our laboratory, we identified the *T. brucei* Vps32 ortholog (TbVps32) and observed that downregulation of TbVps32 leads to a reduction in endocytosis and affects intracellular trafficking. In our current work, we aim to further investigate the role of this protein in the PCF stage. To achieve this goal, we have established two different cell lines: one in which TbVps32 is overexpressed under a Tet-inducible regulatory system (HA-TbVps32) and another in which protein expression can be silenced using an inducible interference RNA system (TbVps32-iRNA). Using these cell lines, we have performed numerous assays to study endocytosis. Using Ultrastructure expansion microscopy (U-ExM), we have identified clear phenotypic differences between uninduced and induced parasites. In conclusion, we have shown that both overexpression and silencing of TbVps32 impairs cell proliferation and its results in severe abnormal nuclear-kinetoplast configurations.

BMC-096

Interplay between autophagy and metacyclogenesis in *Trypanosoma cruzi*, unravelling the role of TcVps34-Vps15 complex

Leiss Juan Manuel, Alonso Guillermo D. and Schoijet Alejandra C.

INGEBI –CONICET, Buenos Aires, Argentina.
aschoijet@gmail.com

Autophagy is a ubiquitous eukaryotic process that also occurs in trypanosomatid parasites. Half of the known yeast and mammalian AuTophaGy (ATG) proteins were detected in trypanosomatids, although with low sequence conservation. Interestingly, autophagy is involved in differentiation of *T. cruzi* from epimastigotes to metacytic trypomastigotes, a process called metacyclogenesis. In mammals, two kinases differentially regulate the process of autophagy: mTor and a phosphatidylinositol 3-kinase, Vps34, which

interact with a regulatory subunit, Vps15. In this work, we demonstrate that parasites overexpressing TcVps34 or TcVps15 proteins enhance both, autophagy and metacyclogenesis. TcVps34 or TcVps15 overexpressing epimastigotes were able to differentiate to metacytic forms in a higher proportion than wild type cells. Parasites overexpressing these proteins showed a more intense labeling with the autophagosome marker Atg8.1 and higher levels of monodansycadaverine (MDC) staining, a specific *in vivo* marker for autophagic vacuoles, in the intermediate forms of differentiated parasites, in comparison to control parasites. To extend this study we also performed assays with DQ-BSA, to evaluate degradative compartments. TcVps34 and TcVps15 overexpressing epimastigotes subjected to nutritional stress showed a significant increase in the number of lysosomes, as compared to controls. In addition, treatment with wortmannin, an inhibitor of autophagy, of parasites exposed to differentiation conditions impaired the autophagic response in less measure in overexpressing parasites. Finally, we are performing infection assays with these overexpressing parasites to assess whether this process is affected. Taken together, these data demonstrate the key role of phosphatidylinositol 3-phosphate pathway in autophagy, differentiation and cell cycle progression in *T. cruzi*.

BMC-097

Estudios de transcriptómica comparativa en amastigotas axénicos versus amastigotas celulares de *Trypanosoma cruzi*

Lucía Bilbao¹, Beatriz Garat², José Sotelo¹, Leticia Pérez², Pablo Smircich¹

¹Departamento de Genómica, IIBCE, Montevideo, Uruguay. ²SGF, Facultad de Ciencias, UdelaR, Montevideo, Uruguay

Trypanosoma cruzi es el agente causante de la enfermedad de Chagas, un serio problema de salud pública en gran parte de la población de