

# Investigating the Phagocytosis of *Leishmania* using Confocal Microscopy

Amanda R. Paixão<sup>\*1</sup>, Beatriz R. S. Dias<sup>\*1</sup>, Luana C. Palma<sup>1</sup>, Natália M. Tavares<sup>1</sup>, Cláudia I. Brodskyn<sup>1</sup>, Juliana P. B de Menezes<sup>1</sup>, Patricia S. T. Veras<sup>1,2</sup>

<sup>1</sup>Laboratory of Host-Parasite Interaction and Epidemiology, Gonçalo Moniz Institute <sup>2</sup>National Institute of Science and Technology of Tropical Diseases - National Council for Scientific Research and Development (CNPq)

\*These authors contributed equally

## Corresponding Author

Patricia S. T. Veras  
patricia.veras@fiocruz.br

## Citation

Paixão, A.R., Dias, B.R.S., Palma, L.C., Tavares, N.M., Brodskyn, C.I., de Menezes, J.P.B., Veras, P.S.T. Investigating the Phagocytosis of *Leishmania* using Confocal Microscopy. *J. Vis. Exp.* (173), e62459, doi:10.3791/62459 (2021).

## Date Published

July 29, 2021

## DOI

10.3791/62459

## URL

jove.com/video/62459

## Materials

| Name                                                           | Company                  | Catalog Number     | Comments |
|----------------------------------------------------------------|--------------------------|--------------------|----------|
| 2-mercaptoethanol                                              | Thermo Fisher Scientific | 21985023           |          |
| AlexaFluor 488-conjugated goat anti-rabbit IgG                 | Thermo Fisher Scientific | Tem varios no site |          |
| anti-LC3 antibody                                              | Novus Biologicals        | NB600-1384         |          |
| Bovine serum albumin (BSA)                                     | Thermo Fisher Scientific | X                  |          |
| CellStripper                                                   | Corning                  | 25-056-CI          |          |
| CellTracker Red (CMTPX) Dye                                    | Thermo Fisher Scientific | C34552             |          |
| Centrifuga                                                     | Thermo Fisher Scientific |                    |          |
| Ciprofloxacin                                                  | Isofarma                 | X                  |          |
| CO2 incubator                                                  | Thermo Fisher Scientific | X                  |          |
| Confocal fluorescence microscope (Leica SP8)                   | Leica                    | Leica SP8          |          |
| Fetal Bovine Serum (FBS)                                       | Gibco                    | 10270106           |          |
| Fluorescence microscope (Olympus Lx73)                         | Olympus                  | Olympus Lx73       |          |
| Gentamicin                                                     | Gibco                    | 15750045           |          |
| Glutamine                                                      | Thermo Fisher Scientific | 35050-061          |          |
| HEPES (N- 2-hydroxyethyl piperazine-N'-2-ethane-sulfonic acid) | Gibco                    | X                  |          |
| Histopaque                                                     | Sigma                    | 10771              |          |
| M-CSF                                                          | Peptrotech               | 300-25             |          |
| NH <sub>4</sub> Cl                                             | Sigma                    | A9434              |          |
| Normal goat serum                                              | Sigma                    | NS02L              |          |
| Nucleofector 2b Device                                         | Lonza                    | AAB-1001           |          |
| Nucleofector solution                                          | Lonza                    | VPA-1007           |          |
| Paraformaldehyde                                               | Sigma                    | 158127             |          |

|                                                    |                          |           |  |
|----------------------------------------------------|--------------------------|-----------|--|
| Phalloidin                                         | Invitrogen               | A12379    |  |
| Phorbol myristate acetate (PMA)                    | Sigma                    | P1585     |  |
| Phosphate buffer solution (PBS)                    | Thermo Fisher Scientific | 10010023  |  |
| ProLong Gold Antifade kit                          | Life Technologies        | P36931    |  |
| Roswell Park Memorial Institute (RPMI) 1640 medium | Gibco                    | 11875-093 |  |
| Saponin                                            | Thermo Fisher Scientific | X         |  |
| Schneider's Insect medium                          | Sigma                    | S0146     |  |
| Sodium bicarbonate                                 | Sigma                    | S5761     |  |
| Sodium pyruvate                                    | Sigma                    | S8636     |  |
| Triton X-100                                       | Sigma                    | X         |  |