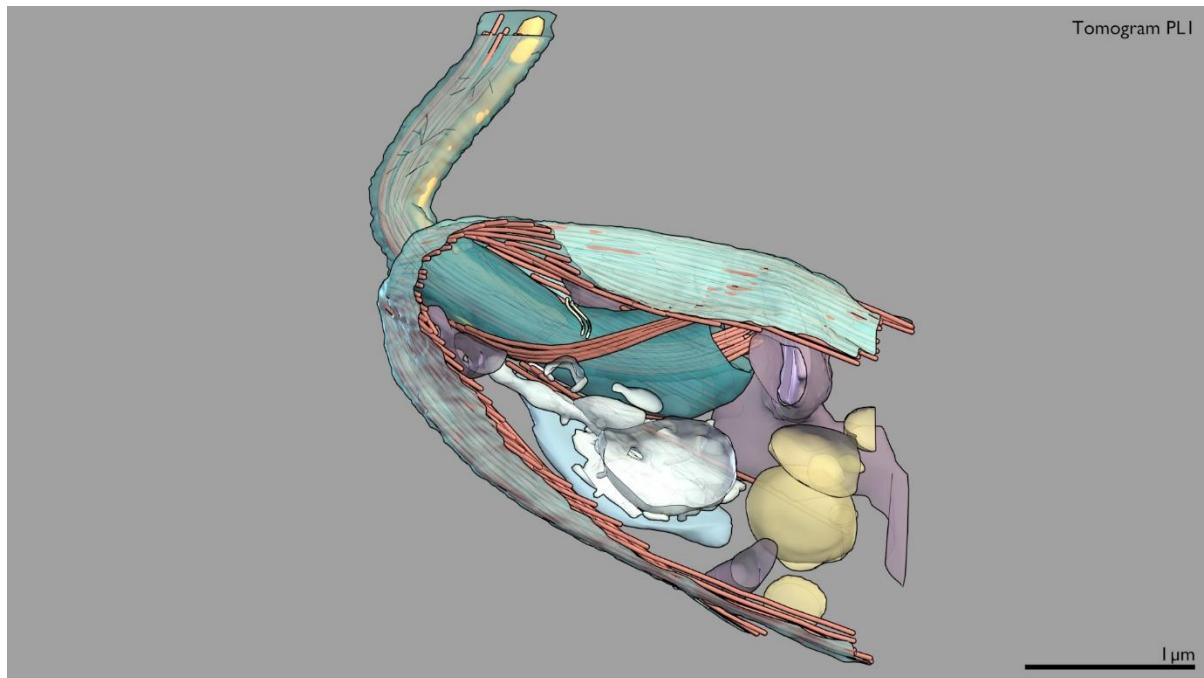


Supplementary Figure 1. *L. mexicana* cell lines for analysis of the FAZ. **(a)** Gel electrophoresis of PCR products confirming correct integration of the eYFP tagging construct in cell lines expressing eYFP fusions of *L. mexicana* FAZ proteins and SMP1-mCh. PCR using one primer in eYFP (from the tagging construct) and one in the target gene ORF (from the genome) generates an approximately 600 bp product when integration is correct. PCRs were performed with parental cell line (expressing only SMP1-mCh) gDNA (–) and gDNA after transfection and selection for the eYFP tagging construct (+). **(b)** Anti-GFP Western blot of protein samples from cell lines expressing eYFP fusions of *L. mexicana* FAZ proteins and SMP1-mCh, and the parental cell line expressing only SMP1-mCh. Bands corresponding to the tagged protein are shown with a red asterisk (*) and anti-PFR staining of the same membrane is shown as a loading control. The cell line expressing eYFP-FAZ2 had an additional band at ~40 kDa (a possible degradation product), eYFP-ClpGM6 appeared to fail to run into the gel, and no convincing band corresponding to eYFP-FAZ1 could be detected. **(c)** Anti-myc Western blot of protein samples from the cell line expressing myc-BILBO1 and SMP1-mCh, and the parental cell line expressing only SMP1-mCh. The bands corresponding to the tagged protein is shown with a red asterisk (*) and anti-PFR staining of the same membrane is shown as a loading control.

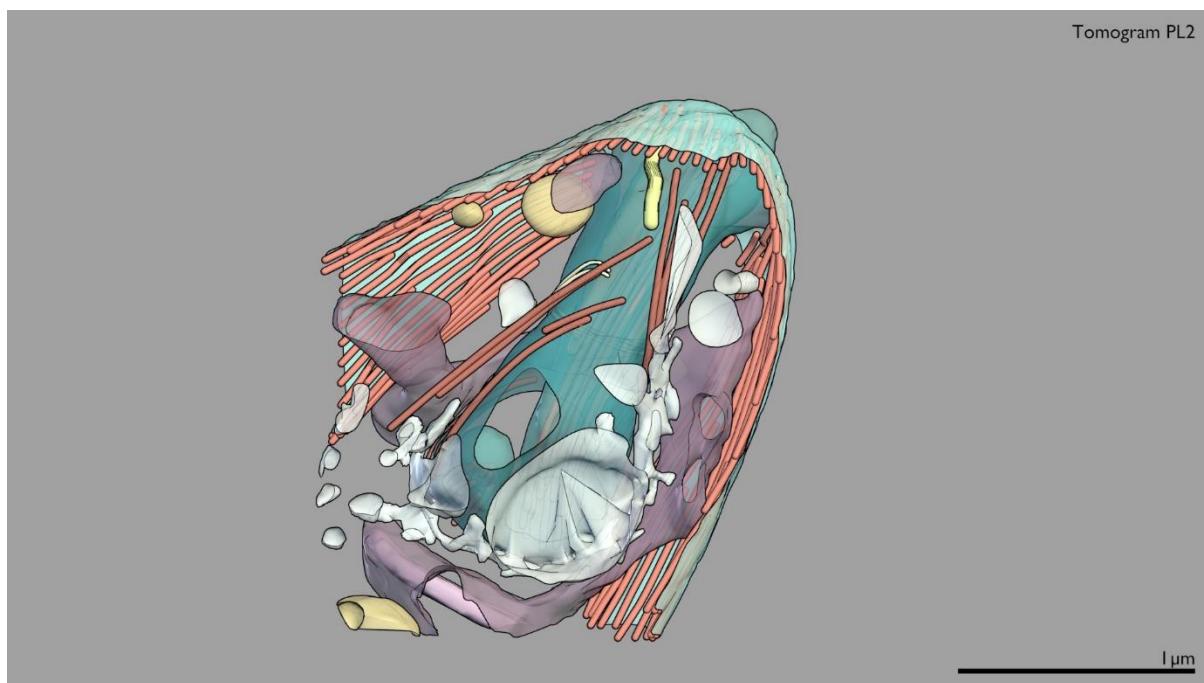
Supplementary Table 1. Summary of tomograms captured for pocket structure analysis.

Sample	Name	Resolution (nm/px)	Serial sections	Tomogram depth (nm)	Tomogram volume (μm^3)	Orientation
Exponential phase promastigote	PL1	1.534	6	896	8	Longitudinal
Exponential phase promastigote	PL2	1.101	5	719	3	Longitudinal
Exponential phase promastigote	PL3	1.534	4	626	6	Longitudinal
Exponential phase promastigote	PT1a	1.534	3	584	6	Transverse
Exponential phase promastigote	PT1b	1.534	3	419	4	Transverse
Exponential phase promastigote	PT2	1.101	4	713	3	Transverse
Amastigote in J774 macrophage	AL1	1.537	2	341	3	Longitudinal
Amastigote in J774 macrophage	AL2	2.320	3	324	7	Longitudinal
Amastigote in J774 macrophage	AL3	2.320	3	449	10	Longitudinal

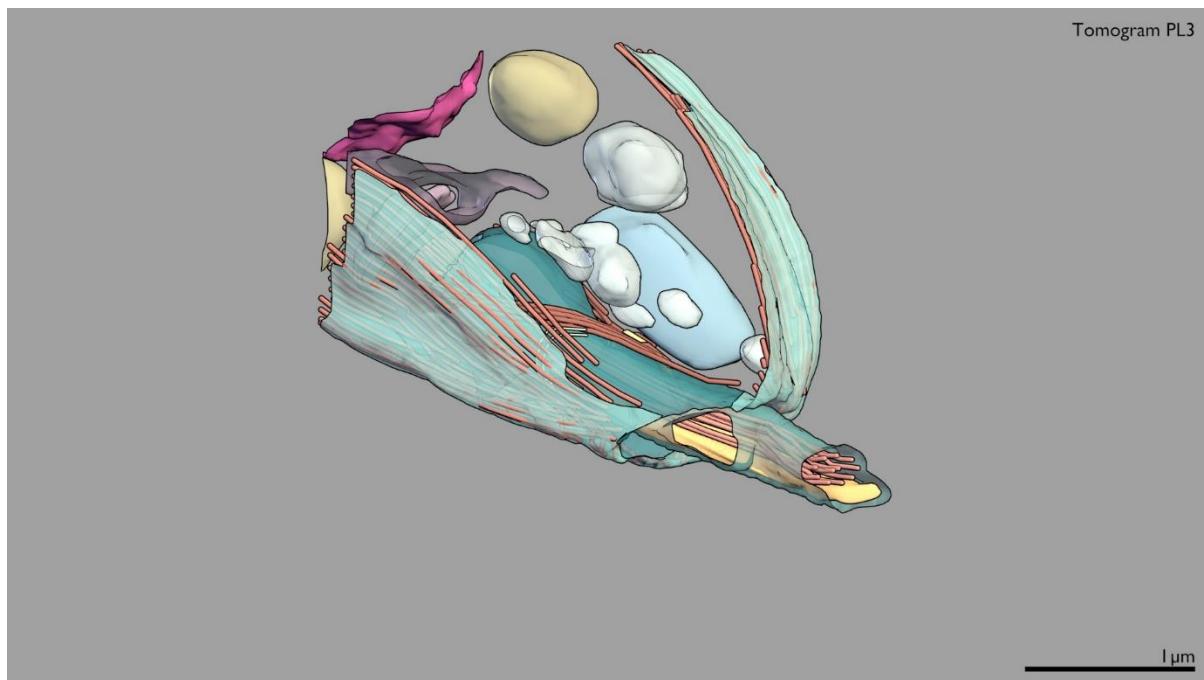
The eight supplemental movies are hosted at Figshare, and can be downloaded here:
https://figshare.com/articles/Leishmania_mexicana_promastigote_and_amastigote_flagellar_pocket_tomograms/1595927



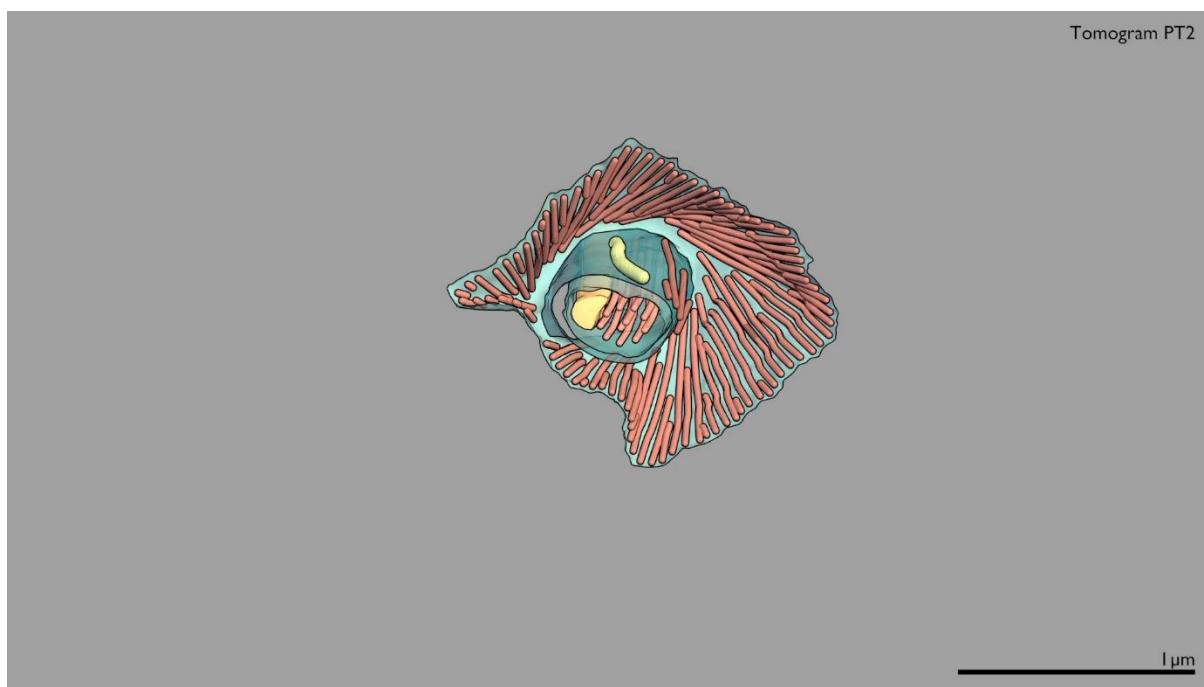
Supplemental Movie 1: Tomogram PL1. The tomographic volume and segmented model of tomogram PL1, generated from 6 serial longitudinal sections through the flagellar pocket and cell anterior of a *Leishmania mexicana* promastigote.



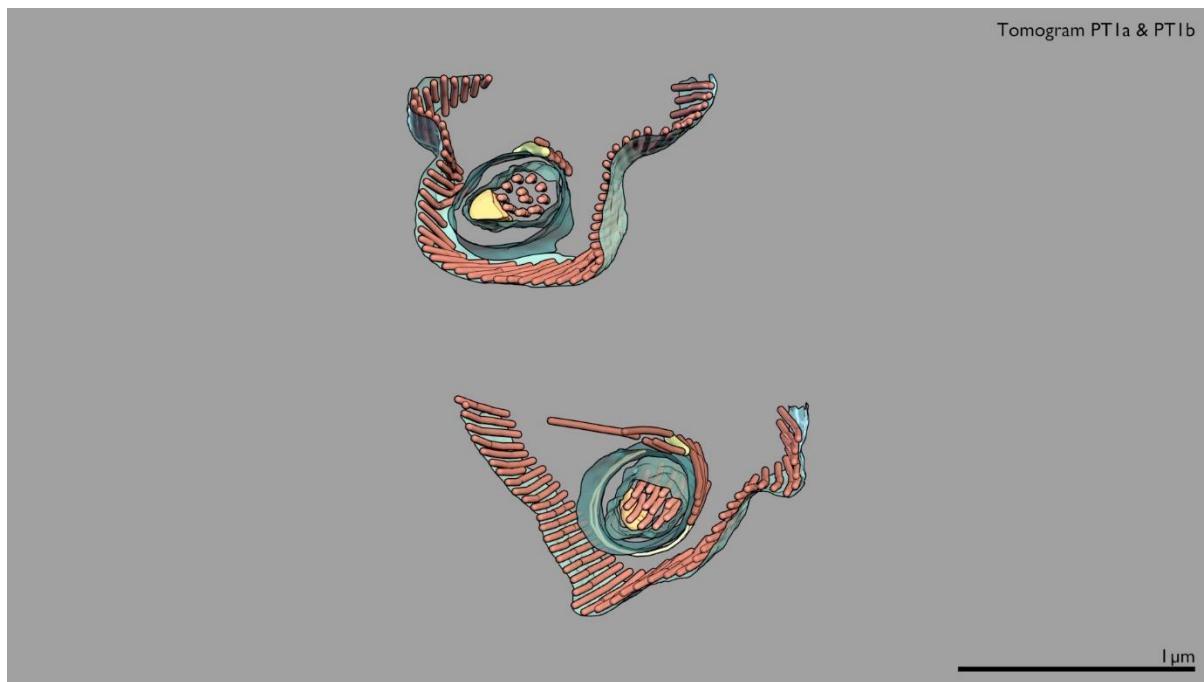
Supplemental Movie 2: Tomogram PL2. The tomographic volume and segmented model of tomogram PL2, generated from 5 serial longitudinal sections through the flagellar pocket and cell anterior of a *Leishmania mexicana* promastigote.



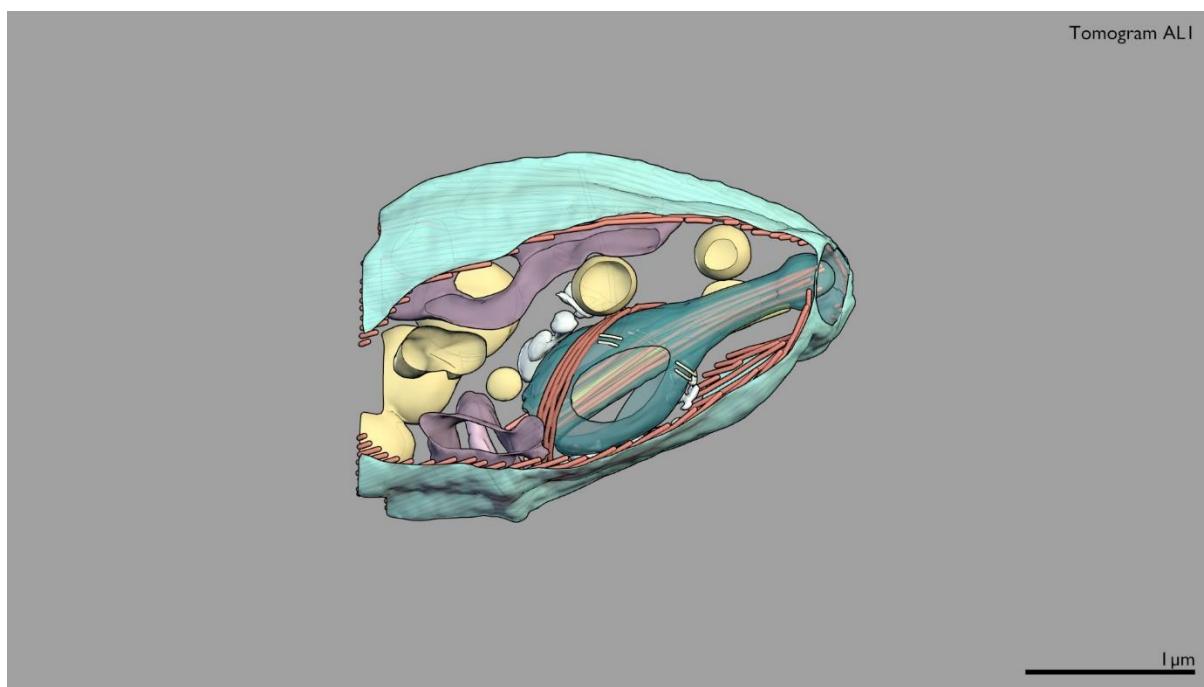
Supplemental Movie 3: Tomogram PL3. The tomographic volume and segmented model of tomogram PL3, generated from 4 serial longitudinal sections through the flagellar pocket and cell anterior of a *Leishmania mexicana* promastigote.



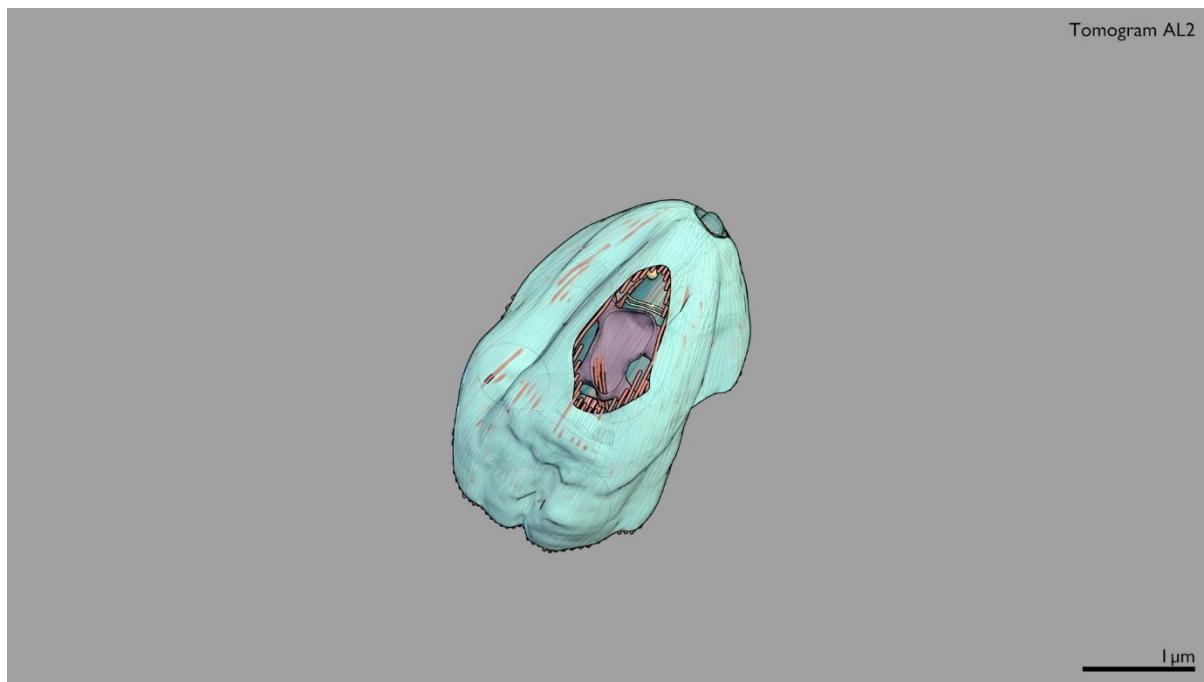
Supplemental Movie 4: Tomogram PT1. The tomographic volume and segmented model of tomogram PT1, generated from 3 serial transverse sections through the flagellar pocket and cell anterior of two *Leishmania mexicana* promastigotes.



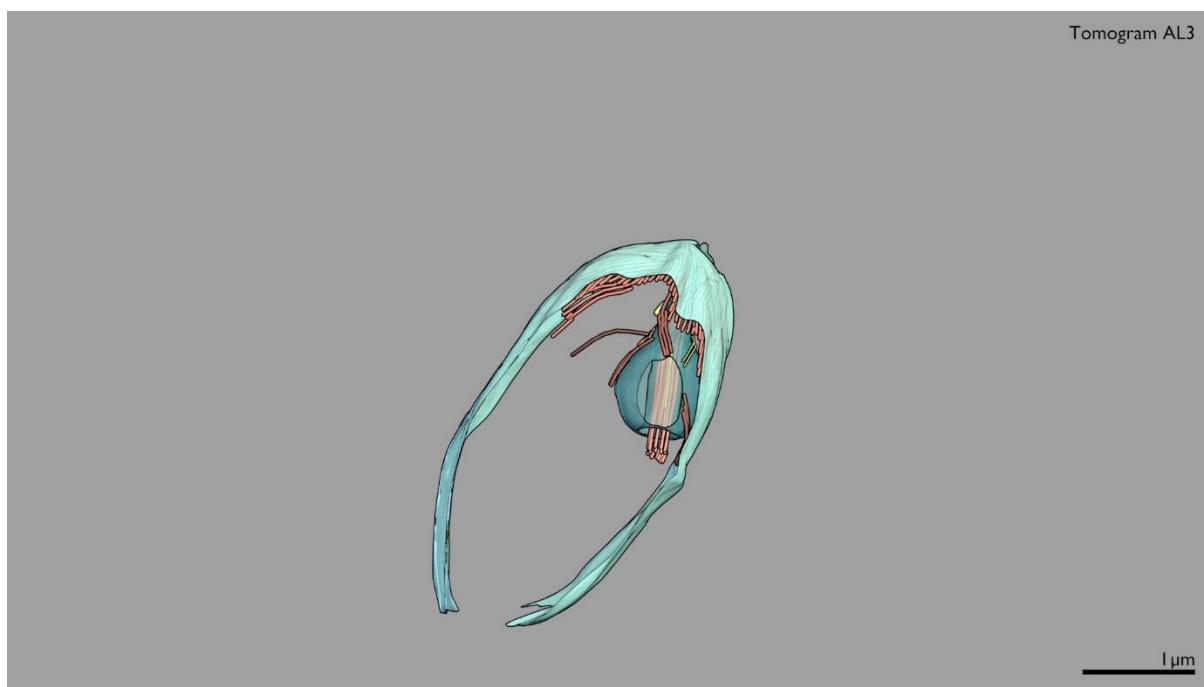
Supplemental Movie 5: Tomogram PT2. The tomographic volume and segmented model of tomogram PT2, generated from 4 serial transverse sections through the flagellar pocket and cell anterior of a *Leishmania mexicana* promastigote.



Supplemental Movie 6: Tomogram AL1. The tomographic volume and segmented model of tomogram AL1, generated from 2 serial longitudinal sections through the flagellar pocket and cell anterior of a *Leishmania mexicana* amastigote.



Supplemental Movie 7: Tomogram AL2. The tomographic volume and segmented model of tomogram AL2, generated from 3 serial longitudinal sections through the flagellar pocket and cell anterior of a *Leishmania mexicana* amastigote.



Supplemental Movie 8: Tomogram AL3. The tomographic volume and segmented model of tomogram AL3, generated from 3 serial longitudinal sections through the flagellar pocket and cell anterior of a *Leishmania mexicana* amastigote.