Command	Description	Input	Output	Example
Initialization	Runs the 3D Manager and initializes the macro functions			run("3D Manager");
Close	Close the 3D Manager			Ext.Manager3D_Close();
Load	Loads objects from a zip file	The file name		Ext.Manager3D_Load("My3DObjects.zip");
Save	Saves selected objects to a zip file	The file name		Ext.Manager3D_Save("My3DObjects.zip");
Segment	Thresholds and label the 3D image	The threshold interval		lowThreshold=128; Ext.Manager3D_Segment(lowThreshold, 255);
AddImage	Adds the objects in the current labeled image to the list			Ext.Manager3D_AddImage();
Count	Get the number of objects		Number of objects	Ext.Manager3D_Count(nb_obj); print("number of objects",nb_obj);
Select	Select an object (behavior depends on select mode, see monoselect and multiselect)	The object number		object=0; // 0 = first object Ext.Manager3D_Select(object);
SelectAll	Select all objects			Ext.Manager3D_SelectAll();

SelectFor	Selects objects using for syntax	Start, end and increment		// select objects 10, 12, 14 … 18
				Ext.Manager3D_SelectFor(10,20,2);

MultiSelect	MultiSelect mode, allows multiple selection			Ext.Manager3D_MultiSelect(); Ext.Manager3D_Select(0); Ext.Manager3D_Select(1); // 0 and 1 are selected
MonoSelect	MonoSelect mode, select only one object			Ext.Manager3D_MonoSelect(); Ext.Manager3D_Select(0); Ext.Manager3D_Select(1); // only 1 is selected
DeselectAll	Deselects all objects			Ext.Manager3D_DeselectAll();
Reset	Resets the 3D Manager, remove all objects			Ext.Manager3D_Reset();
GetName	Returns the name of the object	The object number	The object name	Ext.Manager3D_GetName(0, name); print("The first object is named "+name);
Rename	Renames the selected object	The new name		Ext.Manager3D_Rename("Nucleus");
Delete	Removes the selected object(s) from the list			Ext.Manager3D_Delete();
Erase	Removes the selected object(s) from the list and fill them in black in the current image			Ext.Manager3D_Erase();
FillStack	Fills the selected object(s) in the current stack with the specified RGB color	The RGB color		Ext.Manager3D_FillStack(255, 0, 0); // fills selected object in red
Fill3DViewer	Draws the selected object(s) in 3DViewer (and opens it if necessary) with the specified RGB color	The RGB color		Ext.Manager3D_Fill3DViewer(255, 0, 0); // draws in surface mode the selected object in red
List	Gets the list of voxels of the selected object(s) (value are extracted from current stack)			Ext.Manager3D_List();
Measure	Computes geometrical measurements on selected object(s) in a ResultsTable (see 3D Manager Options to select the measurements), if no objects are selected, measure all objects			Ext.Manager3D_Measure();
SaveMeasure	Saves the results from Measure (deprecated, see SaveResults)	The File Name		Ext.Manager3D_SaveMeasure("ResultsMeasure.csv");

Measure3D	Computes the 3D geometrical measurements without Results Table, parameter is the type of measure	The object number and the type of measure ("Vol", "Surf", “NbVox”, "Comp", "Feret", "Elon1", "Elon2", "DCMin", "DCMax", "DCMean", "DCSD")	The measurement	object = 0;
				Ext.Manager3D_Measure3D(object,"Vol",measure);
				print("Volume of object "+object+" = "+measure);

Centroid3D	Gets the 3D coordinates of barycenter	The object number	The 3 coordinates	Ext.Manager3D_Centroid3D(0,cx,cy,cz); print("center " : "+cx+" "+cy+" "+cz);
Feret1	Gets the first point of the 3D Feret diameter	The object number	The 3 coordinates of the Feret point	Ext.Manager3D_Feret1(0,fx,fy,fz); print("feret1 " : "+fx+" "+fy+" "+cz);
Feret2	Gets the second point of the 3D Feret diameter	The object number	The 3 coordinates of the Feret point	Ext.Manager3D_Feret1(0,fx,fy,fz); print("feret2 " : "+fx+" "+fy+" "+cz);
Bounding3D	Gets the limits of the bounding box	The object number	The 6 limits	Ext.Manager3D_Bounding3D(0,x0,x1,y0,y1,z0,z1); print("Zmin="+z0+" Zmax="+z1);
Quantif	Computes intensity measurements on selected object(s) in a ResultsTable (see 3D Manager Options to select the measurements), if no objects are selected, measure all objects			Ext.Manager3D_Quantif();
SaveQuantif	Saves the results from Quantif (deprecated, see SaveResults)	The File Name		Ext.Manager3D_SaveQuantif(“ResultsQuantif.csv”);
Quantif3D	Computes the 3D intensity measurements in the current stack without Results Table, parameter is the type of measure	The object number and the type of measure ("IntDen", "Mean", "Min", "Max", "Sigma")	The measurement	object = 0; Ext.Manager3D_Quantif3D(object,"IntDen",quantif); print("integrated density of object "+object+" = "+quantif);
MassCenter3D	Gets the 3D coordinates of mass center with values in current stack	The object number	The 3 coordinates	Ext.Manager3D_MassCenter3D(objet,cmx,cmy,cmz); print("mass center : "+cmx+" "+cmy+" "+cmz);
Distance	Computes various distances between all pairs of select objects in a ResultsTable			Ext.Manager3D_Distance();
Dist2	Computes the distances between two objects without ResultsTable, the parameter is the type of distance	The first object number, the second object number and the type of distance ("cc", "bb", "c1b2", "c2b1", "r1c2", "r2c1", "ex2c1", "ex1c2")	The measurement	Ext.Manager3D_Dist2(0,1,"bb",dist); print("Border to border distance between 0 and 1 is",dist);
CloseResult	Closes the results windows	The initial capital of the window(“Measure”,”Quantif”,”Distance”,”Coloc”,”Voxels”, “All”)		Ext.Manager3D_Measure(); Ext.Manager3D_SaveMeasure(“ResultsMeasure.csv”); Ext.Manager3D_CloseResult("M");
SaveResult	Saves the results windows	The initial capital of the window and the name of the file		Ext.Manager3D_Measure(); Ext.Manager3D_SaveResult(“M”,“ResultsMeasure.csv”);
BorderVoxel	Gets the coordinates of the voxel in the first closest to second object	The first and second objects	The coordinates of the closest border point	Ext.Manager3D_BorderVoxel(0,1,bbx,bby,bbz); print("Border to border voxel between 0 and 1 is",bbx,bby,bbz);
Closest	Computes the closest object, with	The object number	The number of	Ext.Manager3D_Closest(0,”cc”,close)

	center to center distance or border to border, within selected objects	and the distance “cc” or “bb”	the closest object	; print(“Closest center to 0 is ”+close);
Coloc	Computes the percentage of colocalisation between all pairs of selected objects in a ResultsTable			Ext.Manager3D_Coloc();
Coloc2	Computes the percentage of colocalisation between two objects, and the surface contact if selected	The first object number and the second object number	The measure	Ext.Manager3D_Coloc2(0,1,coloc1,coloc2,surf_cont); print("% Coloc ",coloc1,coloc2);
Angle	Computes the angles between 3 selected objects (based on centers)			Ext.Manager3D_Angle();