



SDI Review Form 1.6

Journal Name:	<u>British Journal of Applied Science & Technology</u>
Manuscript Number:	Ms_BJAST_20290
Title of the Manuscript:	Electron Microscopy Documents The Microorganisms' Biodestructive Action On Polyurethane And The Production, Internalization And Vesicular Trafficking Of Nanoparticles
Type of the Article	

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound.

To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

(<http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline>)



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PART 1: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Compulsory REVISION comments	The paper is quite interesting for the field of biomedical engineering. 1. SEM images do not have the scale bar or magnification . The authors should correct this 2. "Samples of PU (Dentalur Russia, Russian Federation) with various types of surfaces were 79 analyzed" – describe exactly what samples are these. 3. It is not clear for me what kind of PU you have used - a prosthetic device made out of PU? 4. The liberation of NPs could be also valid for other plastic substrate? Why did you chose PU devices? 5. What is the main element of novelty of your paper? This subject is interesting, but it is also shown in literature by various authors.	1. For each image in the paper we provided the Horizontal Field Width (HFW) in the legend. 2. The sentence has been corrected in the attached draft. "Samples of PU used for oral prostheses (Dentalur Russia, Russian Federation) with various types of surfaces (smooth, rough) were analyzed." 3. Yes, exactly. The sample is an oral prostheses made out of polyurethane. 4. Hypothetically yes, but we need further studies in order to affirm this. We chose PU prostheses because they are widely used in odontostomatology. 5. The novelty of our work is the importance of electron microscopy analysis which is able to give shots of a really complicated process as the bacteria-polymeric material interaction. Electron microscopy images provide details of the steps of the biofilm formation, the biodestruction operated by bacteria and the destiny of the nanoparticles generated by the bacterial activity. These details allow to move into the domain of endocytosis and of cytoskeletal structures, that are typically investigated in biochemistry. Another



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		element of novelty is that from these pieces of information we can hypothesize what could happen <i>in vivo</i> and try to analyze the toxicological risks linked to an infection where <i>S. aureus</i> cells are loaded with xenobiotic nanoparticles. In literature you can find our previous papers. This manuscript reports updates of the research in the same field.
<u>Minor</u> REVISION comments	I think you have too many literature references. It is not a review paper and I think you can't compress them a little bit.	Our paper is not a review, but since it unites divers scientific areas where same topics are currently debated, we firmly believe that references are useful for the reader especially the non-professional, to comprehend passages; therefore we would like to not cut any reference.
<u>Optional/General</u> comments	The title is also a little bit complicated and difficult to follow. Maybe the auhtors have another one adapted also for easy readers, not only for professionals.	We would like to not change the title since it reports all the phases of our work. Moreover none of the other reviewers made any negative comment regarding the title.