Review Form 1.6

Journal Name:	**Journal of Pharmaceutical Research International**
Manuscript Number:	**Ms_JPRI_83955**
Title of the Manuscript:	**AN OVERVIEW ON IMPLANTABLE DRUG DELIVERY SYSTEM**
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.
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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	**1. The grammar needs polishing. There are many instances of misplaced commas, missing verbs, and missing articles or qualifiers. While the sense of most of these issues is clear, it is recommended that the authors review the writing with a fresh eye and fine-toothed comb to identify all issues.** **2. There are frequent, glaring omissions of reference to the relevant figures and tables in the text itself. Every figure and every table must be mentioned in the text and cannot stand on its own.** **3. Multiple sections/subsections of the text are solely a figure or table. This is not acceptable. Every figure or table must have associated prose with it, even if only a single sentence.** **4. Some figures are captioned above the figure, some below. This must be corrected for consistency (convention is below). Similarly, caption cannot stand by themselves as a single short line; they must have some explanation of the figure itself.** **5. Capitalization in the figure captions appears to be applied randomly. Please opt for either headline- or sentence-style capitalization, not both.** **6. There are multiple instances of using an acronym before it is defined. These need to be corrected for clarity.** **Specific comments are listed her; all must be addressed:** **1. Table 1 says "advantages and disadvantages,"but not of what.** **2. Figure 1 should be turned into a table or text. It does not warrant its own, unattributed figure.** **3. Figure 3 is missing a root item at the top from which all other parts derive.** **4. Section 2.1.2 is missing pendant systems, ones in which the active pharmaceutical ingredient (API) is chemically connected to the polymer chain and are released by a biochemical scission from the polymer backbone.** **5. Section 2.1.3, swelling control systems, are a form of osmotic pump.** **6. The explanation for magnetically controlled systems, "…probably due to the compression of the polymer…" is missing the concept of mechanically disturbing the API itself; higher motion increases diffusion rates. This statement also needs its own citation.** **7. A figure explaining section 2.2.1 would help the explanation significantly.** **8. Section 2.2 itself is missing the glucose-sensing insulin pumps.** **9. Section 3, the first sentence, ignores that near-zero order API release rates can also be achieved through bioerodable/biodegradable systems as well. Furthermore, to show the kinetics described in the first paragraph, a series of equations showing the referenced relationships would significantly help the reader.** **10. Section 3.1 incorrectly references only Fickian kinetics for matrix-based systems. The authors must also explore Higuchi's work, especially with respect to the incomplete delivery of APIs from these systems, regardless the drug load. Also, the final statement, that matrix-based systems only work for molecules under 1000-Da (note the capitalization for Daltons) is false, and also requires a citation for the fact.** **11. Section 3.2 requires more clarity about surface v. bulk erosion. Surface erosion is caused more by actual polymer chain scission on the molecular level, releasing small oligomers, tetramers, trimers, dimers, and monomers. Bulk erosion is cause more by mechanical failure of the device where macroscopic pieces are released in large blocks.** **12. Figure 12 suffers from many problems. First, "biodegradable polymers" should also include bioerodable polymers, a slightly different class of polymer. Second, polyurethanes are typically only biodegradable if**	

	biodegradable/bioerodable short-chain polymers are co-incorporated into them, either as a mixture or as a copolymer; polyurethanes themselves are poorly degradable, at best. Third, polyaliphatics (typically formed by radical polymerization of alkenes and exemplified by poly (ethylene co-vinyl acetate/EVA) are completely missing; they belong in the non-degradable list. Fourth, the polyesters need to be spelled out before abbreviating them. Fifth, other block polyester copolymers, besides PLGA, are also missing. **13. Section 5.1, Compression method, should not contain any of the subheadings (solvent casting, hot melt extrusion, injection molding, or 3-D printing) because none of those are compression methods.** **14. In the section on hot melt extrusion, the authors are still missing aliphatic chains (e.g., EVA) as an option, and should be mentioned as a thermoelastic polymer (as opposed to the thermoplastics, which are the only ones noted). Furthermore, the comment about thermolabile APIs is well taken; however, this particular problem is frequently circumvented by overloading the device so that enough active drug is released as needed.** **15. The section about injection molding is incorrect in stating that the polymer's mass is decreased as a result of high heat. Heat in an of itself cannot degrade most of these molecules; however, if heated in the presence of, for example, a regular atmosphere, existing water vapor can and will destroy polyanhydrides and polyesters. But polyaliphatics and other simple non-degradable polymers are typically heat resistant.** **16. Section 6 is missing direct injection methods, e.g., a simple canula used to force a cylindrical device subcutaneously, with an incision that can be closed by a stitch or surgical glue in a simple outpatient method.** **17. Section 7 should also include other means of sterilization, e.g., ethanol treatment followed by extensive washing in sterile aqueous solutions.** **18. In section 8, the authors are missing the common use of Franz diffusion cells.** **19. There is a very bad misspelling that changes the word "solvation" into "salvation" in the "intrinsic dissolution studies" paragraph. The next paragraph also misspells "Apparatus" as "Appratus" and "attached" as "attaché."** **20. Table 2 is supplied with no explanation of what the columns mean. In fact, the items in the last column are not consistent; a measure of volume is not the same as a measure of shaking speed.** **21. Section 9 is a complete non-sequitur in that it is simply an unembellished list; it needs explanations for each item.** **22. Each item in Table 3 should have its periods removed.** **23. There are significant problems with the citations: First, R Langer should be cited as RS Langer. Second, the authors need to standardize their citation methods to either the full author names or the authors and their initials. Third, citation # 15 is identical to citation #20 and needs to be corrected appropriately. Fourth, the first name of the author in citations 15 and 20 is Eyal, not Eylan, and he should be cited as either Ron, E.; Ron, Eyal; or Eyal Ron.**	
Minor REVISION comments	As seen above, this entire manuscript needs a major overhaul. Most of the content itself is fine, but there are many errors and attributions that must be completed.	
Optional/General comments		

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PART 2:

	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)*
Are there ethical issues in this manuscript?	*(If yes, Kindly please write down the ethical issues here in details)*	

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