

## REVIEWER'S REPORT

Manuscript No.: IJAR-56031

**Title: Intracanal Medicaments: Current Evidence and Future Directions**

### Recommendation:

Accept after major revision .....

Rating	Excel.	Good	Fair	Poor
Originality		✓		
Techn. Quality			✓	
Clarity			✓	
Significance		✓		

Reviewer Name: Dr. Sudheer Aluru

### *Detailed Reviewer's Report*

This manuscript addresses a highly relevant topic in contemporary endodontics and provides a broad overview of intracanal medicaments, ranging from established agents such as calcium hydroxide and chlorhexidine to emerging strategies involving nanotechnology, antimicrobial peptides, sustained-release systems, activation techniques, and regenerative approaches. The subject matter is timely, clinically important, and supported by a generally current and extensive reference list. The overall organization—from biological rationale to conventional therapies, newer technologies, and future directions—is logical and easy to follow.

However, in its present form the manuscript reads more like an extensive narrative summary or textbook chapter than a focused, critically analytical review article appropriate for a journal. While the scientific foundation is strong, substantial revision is required to sharpen the analytical depth, improve clarity and flow, and align the presentation with journal standards. With careful restructuring, stronger critical synthesis, and editorial polishing, the paper has good potential to become a valuable review for clinicians and researchers.

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### Major Comments

1. The manuscript does not describe how the literature was identified and selected. A short section outlining databases searched, time frame, keywords, inclusion/exclusion criteria, and types of studies considered is necessary for transparency and scholarly rigor.
2. Many sections primarily describe published studies without weighing the strength of evidence or synthesizing broader conclusions. The authors should clearly distinguish between in-vitro, animal, and clinical data, discuss conflicting findings, and highlight translational barriers such as safety, regulation, cost, and feasibility in daily practice. This is especially important in sections on nanotechnology, antimicrobial peptides, herbal agents, and sustained-release systems.
3. The current "Future Directions" reads as a list of possible research avenues. It should instead function as a critical roadmap that links proposed innovations directly to limitations of existing therapies and prioritizes approaches that appear most feasible in the near term.
4. Repeated references to calcium hydroxide as the "gold standard" should be moderated to reflect contemporary practice and acknowledged limitations.
5. The polymer-based delivery sections include very detailed laboratory data (e.g., drug concentrations and material characterization) that disrupt the narrative flow of a general review. These should be condensed in favor of clinical relevance and translational implications.
6. There are multiple grammatical and stylistic issues, repeated phrases, and abrupt transitions. Headings and subsection numbering are inconsistent, and some paragraphs are overly long and dense. Professional language editing is recommended.
7. One comparative table summarizing conventional versus emerging medicaments, their evidence base, advantages, and limitations would substantially improve clarity and impact.

### Minor Comments

- The abstract could be tightened slightly and should end with a clearer take-home message.
- The conclusion currently repeats earlier material and would benefit from a stronger synthesis explaining why the review matters and which innovations are closest to clinical application.
- Some repetition occurs across sections, particularly regarding the limitations of calcium hydroxide and the promise of nanotechnology; these could be streamlined.
- Paragraphs in several sections would benefit from being broken into shorter, more focused units for readability.
- Minor typographical errors and spacing problems after references should be corrected throughout.