

## 5 Steps to writing your conclusion

The final part of your manuscript is the conclusion ... a very small but very important part. This is your final summary and brings your manuscript to a close.

As with the abstract, this is something that a reader will go straight to, and so it needs to succinctly describe the work and place it in context with what has gone before and also make suggestions for what should come thereafter.

### A good conclusion:

- Begins with a brief synopsis that summarises your key findings and is consistent with the research question (aim)
- Elaborates briefly on the potential implications of these findings ... what has your study added to this research area?
- Gives your conclusions ... and says why this is important to the reader (Make sure that your statements relate directly to your data)
- Places your conclusions in context with existing research
- Highlights unanswered questions
- Suggests further work that would build on what you have done

### DO NOT:

- introduce any new concepts/theories at this stage
- make any conclusions that are unrealistic or inappropriate (beyond the range of the data or scope of the study)



**Look at the 2 conclusions given on the following page.**

They are quite different, and neither is perfect, but both give reasonable round-ups to the paper and the research area

**Note and highlight the following components:** [not all are necessarily present]

component	PAPER 1 ✓	PAPER 2 ✓
An initial sentence placing work in context		
A synopsis of results that summarizes key findings		
The implications of the key findings		
Places the work in context (how the findings could be applied)		
Statement of advantages and/or disadvantages of the work or findings		
How the work can be applied		
Proposed next steps		

... activity continued from previous page

### PAPER 1

In the present study, we reported new nanoparticle-based Gem prodrug formulations that showed promising in vitro anticancer activity. In this regard, GemC18-loaded optimized PEG – PLA PMs as well as the drug’s self-assembled NPs were prepared and investigated in terms of physicochemical characteristics, drug release behavior and in vitro cytotoxicity effects. Chiefly, both of the formulations showed enhanced in vitro cytotoxicity compared to Gem and GemC18 solutions on pancreatic cancer cell lines suggesting that they can be effective Gem delivery systems for future clinical applications. Additionally, the drug’s self-assembled NPs showed superior in vitro cellular uptake and cytotoxicity than its PM formulation. However, it possessed less chemical stability in 10% FBS compared to the polymeric system. Of course, further in vivo anticancer activity studies should be performed in order to better compare these GemC18 delivery systems with each other as well as the conventional Gem solution. Aside from stability issues, another possible advantage of PM formulation for in vivo applications may be the feasibility of active drug targeting to the tumor site, which is the topic of our future project.

[Int J Pharm. July 2014, 468 \(1-2\): 142–151.](#)

### PAPER 2

In recent times, self-assembly nanoparticles, especially amphiphilic block copolymer micelles, have been receiving increasing attention because of their advantageous properties. In this study, we successfully encapsulated DMC using an mPEG-PCL-Phe(Boc) copolymer carrier to form micelles by a one-step thin-film hydration method. The amphiphilic copolymer itself had the ability of passively targeting tumors, and it was easy to form micelles at very low concentrations. DMC-PMs have typical shell-core structure with small particle sizes ( $17.9 \pm 0.4$  nm) and a narrow particle size distribution (PDI,  $0.045 \pm 0.011$ ), which could realize long circulation and passive targeting goals. High EE and DL characteristics demonstrated that the copolymer had obviously increased the solubility of DMC in our current study, which could meet clinical use requirements. DMC-PMs could be maintained for up to 10 days at room temperature, and showed a sustained drug release characteristic both in vitro and in vivo. Moreover, the micelles also altered most tissue distribution characteristics of DMC in vivo, especially in tumor, liver and heart tissues, which revealed significant tumor targeting, liver and heart disease cure potential. In conclusion, DMC-loaded mPEG-PCL-Phe(Boc) micelles could be regarded as an effective drug delivery system to solve the problem of DMC administration.

[Int J Nanomedicine. 2015; 10: 6395–6410.](#)



### 5 steps to develop your conclusion

		✓
<b>STEP 1</b>	(1 – 2 sentences) Place your project aim in <b>CONTEXT</b> with existing work in the research area	
<b>STEP 2</b>	(up to 5 - 6 sentences maximum) <b>SUMMARISE</b> the key findings: <ul style="list-style-type: none"> <li>• stick to your one or two key results</li> <li>• summarise the main message from your discussion</li> </ul>	
<b>STEP 3</b>	(1 – 2 sentences) Consider potential <b>IMPLICATIONS AND APPLICATIONS</b> of your findings: <ul style="list-style-type: none"> <li>• for future researchers, or</li> <li>• for application in practice</li> </ul>	
<b>STEP 4</b>	(1 sentence) Would you do <b>anything DIFFERENT</b> ? Is there any important <b>LEARNING</b> that you would like to share?	
<b>STEP 5</b>	(1 sentence) What would you suggest as the <b>NEXT STEP</b> to continue your research?	