



I VALUTAZIONE/REVIEW

1.1 Dati del candidato per cui si sta eseguendo la valutazione / PhD student Personal Data

Cognome /

Surname

KRAUTFORST

Nome /

Name

KAROLINA

Titolo della tesi / Title of the

Thesis

Extraction of Algal Pigments and Their Encapsulation in Lyotropic Liquid Crystalline Nanoparticles for Anticancer Applications

1.2 Dati del valutatore / Evaluator's data

Nome/Name	Federica	Cognome/Surname	Sebastiani
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E-mail

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Università di appartenenza/Reviewer's

University

University of Copenhagen

Indirizzo dell'Università di appartenenza/Reviewer's University full postal address

Nørre Allè 71

Aree di ricerca/competenza / Areas of research/expertise

lipid nanoparticles, scattering

✓ Si dichiara di aver preso visione della informativa sul trattamento dei dati personali

I declare I have read the information notice on personal data treatment

1.3 Qualità scientifica / Scientific quality

Originalità dei risultati ottenuti / Originality of thesis

results

Molto buono / Very good

Rilevanza dei risultati nel contesto scientifico / Relevance of results in the scientific context

Molto buono / Very good

Rigore metodologico / Methodological accuracy

Buono / Good

Descrizione delle procedure sperimentali / Description of the experimental procedures

Sufficiente / Average

1.4 Chiarezza e sintesi della tesi / Clearness and synthesis of the thesis

Chiarezza complessiva della tesi / Overall thesis clearness

Buono / Good

Chiarezza nella presentazione dei risultati, inclusa la completezza dei dati presentati / Clearness of results presentation including completeness of figures presented

Buono / Good

Completezza delle fonti / Completeness of references

Molto buono / Very good

1.5 Valutazione complessiva della tesi / Overall evaluation of the thesis

Valutazione complessiva della tesi / Overall evaluation of the thesis

Molto buono / Very good

1.6 Valutazione / Review

Valutazione finale / Overall evaluation

Il/La dottorando/a può essere ammesso/a all'esame finale ma la tesi richiede minime correzioni/integrazioni; non è necessaria un'ulteriore valutazione da parte del/della valutatore/valutatrice.

The candidate can be admitted to the final examination but the thesis requires minor revisions; no addition review is required by the evaluator

Commenti generali sulla tesi e suggerimenti - Esplicitare con chiarezza le modifiche/integrazioni richieste

General remarks on the thesis and suggestions - Clarify the corrections/additions requested

The thesis includes an extended introduction, then the results and discussion are organised according to the 3 manuscripts (out of which one published and one accepted). The theory about the experimental methods is introduced in Chapter 2, then the following chapters report the results and discussion of the three subprojects. The first two subprojects resulted in published/accepted manuscripts which are attached as appendices, while the third does not have a corresponding appendix. The chapters on the results (3,4 and 5) do not include detailed description of materials and methods, and that is acceptable for chapter 3 and 4 which have the corresponding paper attached. Chapter 5 describes the results and discussion but does not include the full description of materials and methods, hence I recommend including that section at least for chapter 5 or the full manuscript.

Specific comments

Eq. 2.14: all parameters should be explained in the text.

Figure 2.3: the description for size exclusion chromatography should be revised, large molecule elute first.

Table 3.3. It reads “water dilution of pH 7” without mentioning what kind of buffer conditions were used to control pH, it should be specified.

Page 125. It reads “Figure 3.8 represents the cytotoxicity assay of the two empty novel TS-CUB and TS-HEX formulations examined at three different dilutions (1:300, 1:160, and 1:80) after incubation [...]” it should be mentioned what is the starting concentration.

Figure 4.5: it is not specified what was the T of the sample when taking the cryo-TEM images (T of the sample before grid preparation).

Figure 4.6: there are several panels in this figure, the panels should be labelled and described in the caption. Font size of the axis labels should be increased; it is barely readable. (valid for Fig. 5 too).

Figure 4.7: the top three images should be clearly described in the caption.

Page 148: It reads “Results presented here are in line with previously described experiments”, it should be added a reference to “previously described”.