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## Amperometric enzyme-based biosensors: refined bioanalytical tools for in vivo biomonitoring

De Lima Braga Lopes Cordeiro, Carlos

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# Propositions

1- Controlling the active surface of a microelectrode is crucial for the modulation of the performance of an amperometric enzyme-based biosensor.

*This thesis*

2- When combining self-assembled with electropolymerized membranes, we may end up with a “layer under layer”, rather than a “layer-by-layer” construction.

*This thesis (Chapters 2 and 3)*

3- In the development of biosensors for *in vivo* biomonitoring, size does matter. Miniaturizing biosensors remains a challenging task.

*This thesis*

4- It will take a while to completely unravel biofouling complexity. Acknowledging and quantifying its deleterious effect on the performance of implantable biosensors is the first step towards better biosensors for *in vivo* biomonitoring.

*This thesis (Chapters 4, 6 and 7)*

5- Intrinsic enzyme selectivity is not sufficient to make amperometric enzyme-based biosensors a reliable bioanalytical tool for *in vivo* biomonitoring.

*This thesis*

6- The proof-of-concept device is not, at all, the end. It is merely the beginning.

*This thesis*

7- Knowledge is the only instrument of production that is not subject to diminishing returns.

*J.M.Clark*

8- Chose a job you love and you will never have to work a day in your life.

*Confucius*

9- Not everything that can be counted counts, and not everything that counts can be counted.

*Unknown, although often attributed to Albert Einstein*

10- For I am the size of what I see, not my height size.

*Fernando Pessoa*