

University of Groningen

## Metallo drugs as protein modulators

Batista de Almeida, Andreia Filipa

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# Stellingen

Accompanying the thesis

## Metallo drugs as Protein Modulators

Andreia de Almeida

**1.** “Nothing in life is to be feared, it is only to be understood. Now is the time to understand more, so that we may fear less.”

~Marie Curie~

**2.** Aquaporins (AQP) are important drug targets but the investigation of their function still remains a challenge.

**3.** The potent inhibitory effect of Au(III) complexes against AQP makes them promising for future *in vivo* studies, as anticancer drugs.

**4.** Conformational changes observed in aquaporins upon metal binding are crucial for the mechanism of inhibition.

**5.** Glycerol is an underestimated substrate for energy production in cancer cells.

**6.** Knowledge of the physiological mechanisms of AQP gating will enable the discovery (and optimization) of selective AQPs inhibitors.

**7.** The *ex vivo* model precision-cut tissue slices is a powerful model to help disclose the role of aquaporins in the liver and other organs and tissues.

**8.** The higher toxicity of metal complexes bearing an acetylated thioglucose can be ascribed to increased uptake.

**9.** The presence of two or more metal centres in a compound can improve the cytotoxic properties and add useful properties, such as fluorescence.

**10.** “Aerodynamically, the bumble bee shouldn’t be able to fly, but the bumble bee doesn’t know it so it goes on flying anyway.”

~Mary Kay Ash~

**11.** “Quem não sabe é como quem não vê.” (“Those that do not know are like those who cannot see”)

~Popular Portuguese saying~