Chapter 7
Concluding Remarks

What we call the beginning is often the end.
And to make an end is to make a beginning.
The end is where we start from.
—T. S. Elliot

7.1 Concluding Remarks

In this thesis, the author rationalised that new platinum complexes which cling to the existing paradigms of targeting DNA and evaluated primarily based on the criteria of cytotoxicity are unlikely to have actual therapeutic relevance because they are unlikely to offer distinct clinical advantages over existing platinum-based agents. Instead, the author has proposed and described several ideas which reconceptualises and reinvents conventional approaches towards platinum-based anticancer drug design. One such approach was through the development of targeted platinum(IV) agents which does not act via apoptosis, as is customary, but instead selectively overwhelms targeted cells via necrosis. This strategy which was termed "targeted necrosis", is one way of outwitting the defective apoptosis pathways in many resistant cancers hampering many conventional chemotherapeutics. In addition, the author has initiated pioneering work to exploit and leverage upon the untapped immuno-modulating capacity of platinum-based agents. The author muses that many potentially promising immuno-stimulating platinum complexes synthesized in the past may have "fallen through the cracks" simply because this criterion was never considered previously. In this work, the author has demonstrated that it is possible to either via screening techniques or by careful rationale design to develop new platinum complexes which are even more (a) macrophage-activating or (b) immunogenic than current platinum agents in clinical use. This research has thus opened up a new subfield within platinum drug design which may warrant further exploration. In closing, the author hope that this dissertation may spur other researchers to relook platinum anticancer drug design and may one day, be the new beginning for the development of the next generation of platinum-based agents in clinical use.

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