Discovery of the Antitumor Drug, Cisplatin: Participants, Events and Impact

Abstract

The discovery of the antitumor drug, Cisplatin [1-5], was indeed a monumental achievement that led to the FDA-approval of an urgently needed antitumor agent that has since benefitted millions of patients afflicted with solid tumors. The discovery of the biological activity of Cisplatin occurred, somewhat serendipitously, in the early 1960's in the laboratory of Professor Barnett Rosenberg in the MSU Biophysics Department. The key event that initiated an intensive 5-year research program, leading to the discovery of the anticancer activity of Cisplatin, was the observation that normal *E. coli* bacteria were transformed into long filamentous strands when subjected to an AC electric field impressed across two "inert" platinum electrodes, clearly indicating that cell division was inhibited, but not cell growth.

On the occasion of the 40th Anniversary of the FDA-approval of Cisplatin, it is appropriate to recognize and pay tribute to the group of dedicated researchers (undergraduate, graduate, and post-doctoral students) who worked so diligently to discover the antitumor properties of Cisplatin and/or begin the development of this agent. Dr. Rosenberg, Loretta Van Camp, Andy Thomson, Tom Krigas and Eugene Grimley played pivotal roles in the discovery of Cisplatin. Over the course of the next 10 years, many researchers in Dr. Rosenberg's group discovered a second-generation platinum-based antitumor drug, Carboplatin, and worked to elucidate its mechanism of action.

This talk (1) will present a concise summary of the discovery of Cisplatin, (2) pay tribute to the discoverers and developers of Cisplatin, and (3) discuss the broader impact of this discovery.

References

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