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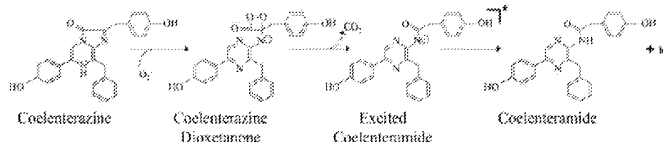
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(54) **Title:** DIAGNOSIS, MONITORING, AND TREATMENT OF CONDITIONS CHARACTERIZED BY INTRACELLULAR
FREE RADICALS

Figure 1



(57) **Abstract:** The invention features the use of coelenterazine, or a close analog, as a systemically administered real-time reporter of ROS or RNS levels in animal cell and organ settings. This real-time measurement can then be used to assess severity of free radical-dependent disease states, such as neurodegenerative diseases, post-organ transplant ischemia-reperfusion injury, acute radiation syndrome injury, and many others. The method can include real-time measurement of the therapeutic efficacy of PrC-210 as a free radical-scavenger capable of detoxifying both oxygen and nitrogen free radicals.