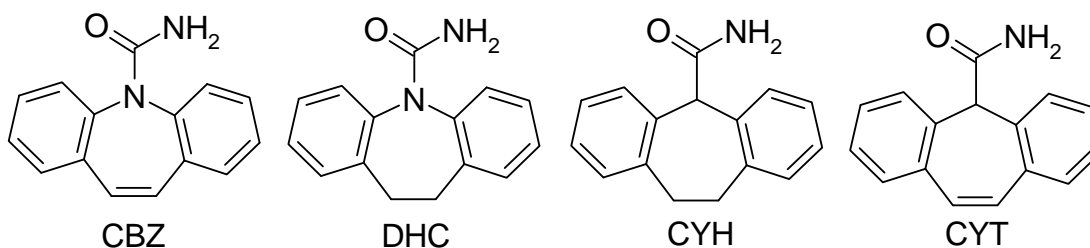


## SDPD: A KEY COMPONENT IN POPULATING THE CARBAMAZEPINE CRYSTAL STRUCTURE LANDSCAPE

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The anticonvulsant agent carbamazepine (CBZ) has received a lot of attention from both those interested in polymorphism<sup>1</sup> and those interested in crystal structure prediction (CSP).<sup>2</sup> Our own interest in CBZ spans both these disciplines; in particular, we are intrigued by the fact that predicted structures for CBZ point to the existence of a favourable C(4) catemer that has yet to be observed experimentally. Given that the C(4) catemer *is* observed amongst analogues of CBZ, the focus of our work has broadened to include these closely-related compounds, specifically dihydrocarbamazepine (DHC),<sup>3</sup> cyheptamide (CYH)<sup>4</sup> and cytenamide (CYT).<sup>5</sup>



This presentation will illustrate the relationships between these four compounds and, in particular, will highlight the role that SDPD has played in obtaining the crystal structures of various polymorphs. Evidence for the existence of CBZ in a C(4) catemeric configuration in a CBZ:DHC 1:1 solid solution will also be presented.<sup>6</sup>

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