Diaziridines are a class of three-membered ring heterocycles that contain one carbon and two nitrogen atoms. They are useful intermediates in the synthesis of more complex heterocyclic compounds, some of which have found applications in the pharmaceutical industry. Although several studies on the synthesis and chemistry of 1-aryldiaziridines have appeared in the chemical literature, in which the side C-N bond breaks, there are no reports that describe N-N bond cleavage to give products. We are attempting, therefore, to synthesize a variety of 1-aryldiaziridine derivatives in order to study their chemical reactivity. It is expected that this project will shed some light on how different electron donating and withdrawing groups influences the reactivity of the three-membered diaziridine ring. Furthermore, it is anticipated that these molecules may lead to some interesting new anxiolytic pharmaceuticals.

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