A general, facile method to synthesize the \( N^2 \)-alkyl and \( N^2,N^2 \)-dialkyl derivatives of l-glutamic acid as a starting substrate is presented. The obtained compounds are shown to inhibit three different glutamine-utilizing enzymes, namely: glutaminase, \( \gamma \)-glutamyl transpeptidase, and glucosamine-6-phosphate synthase, with inhibitory constants within the millimolar range.

Key words: l-Glutamine Derivatives, Synthesis, \( N \)-Alkylamide Formation