

**UGI BISAMIDES BASED ON PYRROLYL- β -CHLOROVINYL ALDEHYDE:
SYNTHESIS AND REACTIVITY**

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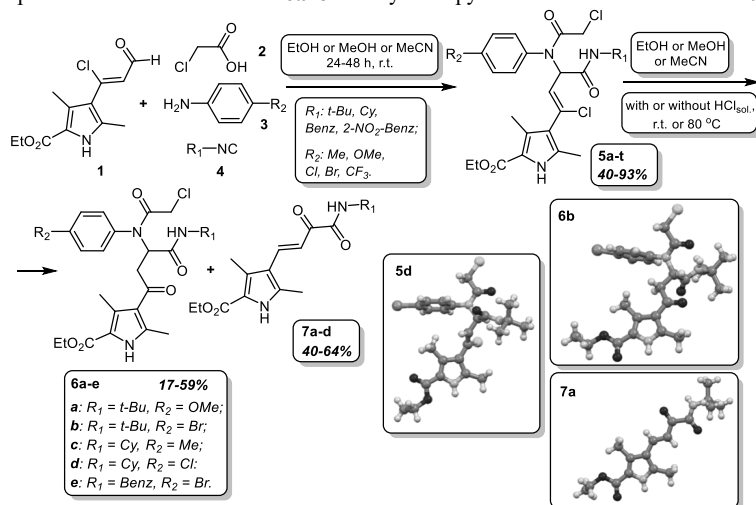
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The multicomponent Ugi reaction is a powerful tool for creating libraries of organic substances, which may include new biologically active compounds and new components of functional materials [1]. A special role is played by so-called *post-Ugi* reactions, which allow modification of functional groups and amide bonds in Ugi products [1–3].

The combination of pyrrolyl- β -chlorovinylaldehyde **1**, which is a representative of the understudied class of aldehydes in MCR [2], chloroacetic acid **2**, *para*-substituted anilines **3**, and the corresponding isocyanides **4** led to the production of Ugi bisamides **5a–t**. In turn, the presence of several functional groups in them, including an amide fragment with the potential for conversion [3], allows us to make assumptions about the high probability of *post-conversions* for these peptidomimetics. Thus, under conditions of acid hydrolysis at room temperature or heating, bisamides **5a–t** undergo autocatalytic transformation with the participation of HCl into bisamides **6a–e** and arylidenepyruvic acid amide derivatives **7a–d**.



Scheme 1. Synthesis and *post*-transformation of Ugi bisamides

1. Erik Van der Eycken Multicomponent Reactions towards Heterocycles: Concepts and Applications / Upendra K. Sharma. – Weinheim.: Wiley-VCH, 2021. – 624 p.

2. Huang, J. Ugi Reaction Followed by Intramolecular Diels–Alder Reaction and Elimination of HCl: One-Pot Approach to Arene-Fused Isoindolinones. *EurJOC*. 2017, 30, pp 4379–4388.

3. Chandgude, A. L. 2-Nitrobenzyl Isocyanide as a Universal Convertible Isocyanide. *Asian J. Org. Chem*. 2017, 6 (7), pp 798–801.

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