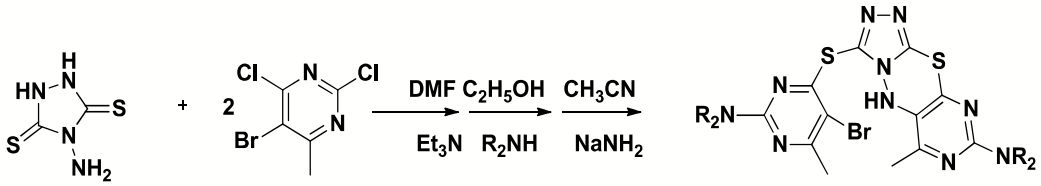
# Synthesis of new derivatives of pyrimido[5,4-*e*][1,2,4]triazolo[3,4-*b*][1,3,4]thiadiazine and stadise of their biological activities

*Tayebe Asghari*, Mehdi Bakavolia, Mohammad Rahimizadeh, Hossein Eshghi, Satare Saberi, Zahra Ebrahimpour*
*Department of Chemistry, School of Sciences, Ferdowsi University of Mashhad, 91775-1436 Mashhad, Iran*
*Email: tayebe.asghari@yahoo.com*

Due to their unique clinical applications, syntheses of pyrimidine-fused heterocycles have been intensively investigated in recent years. Pyrimidine derivatives are highly effective as hypnotic drugs, antitumor, antibacterial and anti-HIV agents, and in cancer detection [1-3].Moreover the pyrimido[4,5-e][1,3,4]thiadiazines are a class of heterocyclic compounds, which have been described as anti-hypertensives [4], with enzyme inhibitory activity on soybean 15-lipoxygenase [5]. We now describe the synthesis of some new derivatives of tricyclic pyrimido[5,4-*e*][1,2,4]triazolo[3,4-*b*][1,3,4]thiadiazines and their enzyme inhibitory activity towards 15-LO (Scheme 1).




**Scheme 1.**

**References:**

1. Aggarwal, R.; Sumran, G. *European Journal of Medicinal Chemistry*. **2011**,*46*, 3038-3046.
2. Bouscary-Desforges, G.; Bombrun, A. *Journal of Organic Chemistry*. **2012**, *77*, 243-252.
3. Mohammadizadeh, M.R.; Bahramzadeh, M. *Tetrahedron Letters*. **2010**, *51*, 5807-5809.
4. Anderson, P. L., Manning, R. E. 6-Substituted-1, 2, 4-pyrimido[4, 5-E]thiadiazine-1,1-dioxides US Patent 3, 755,312, 1973.
5. Bakavoli, M.; Seyedi, S. M.; Shiri, A.; Saberi, S. *J. of Chemical Research*. **2013**, *37*, 48-50.