Exploring chemical versatility within the tautomerase superfamily

Baas, Jan

List of publications

Demethionylation of Pro-1 variants of 4-oxalocrotonate tautomerase in *Escherichia coli* by co-expression with an engineered methionine aminopeptidase.
Baas BJ, Zandvoort E, Wasiel AA, Poelarends GJ. *FEBS Open Bio*. 2014 Jul 9; 4: 651-8.

Aqueous oxidative Heck reaction as a protein-labeling strategy.
Ourailidou ME, van der Meer JY, **Baas BJ**, Jeronimus-Stratingh M, Gottumukkala AL, Poelarends GJ, Minnaard AJ, Dekker FJ. *Chembiochem*. 2014 Jan 24; 15(2):209-12.

Recent advances in the study of enzyme promiscuity in the tautomerase superfamily.
Baas BJ, Zandvoort E, Geertsema EM, Poelarends GJ. *Chembiochem*. 2013 May 27; 14(8):917-26.

An unexpected promiscuous activity of 4-oxalocrotonate tautomerase: the *cis-trans* isomerisation of nitrostyrene.
Zandvoort E, Geertsema EM, **Baas BJ**, Quax WJ, Poelarends GJ. *Chembiochem*. 2012 Sep 3; 13(13):1869-73.

Dehalogenation of an anthropogenic compound by an engineered variant of the mouse cytokine macrophage migration inhibitory factor.
Wasiel AA, **Baas BJ**, Zandvoort E, Quax WJ, Poelarends GJ. *Chembiochem*. 2012 Jun 18;13(9):1270-3.

Bridging between organocatalysis and biocatalysis: asymmetric addition of acetaldehyde to β-nitrostyrenes catalyzed by a promiscuous proline-based tautomerase.
Zandvoort E, Geertsema EM, **Baas BJ**, Quax WJ, Poelarends GJ. *Angew Chem Int Ed Engl.* 2012 Jan 27; 51(5):1240-3.

Characterization of a newly identified mycobacterial tautomerase with promiscuous dehalogenase and hydratase activities reveals a functional link to a recently diverged *cis*-3-chloroacrylic acid dehalogenase.
Baas BJ, Zandvoort E, Wasiel AA, Quax WJ, Poelarends GJ. *Biochemistry* 2011 Apr 12; 50(14): 2889-99.

Systematic screening for catalytic promiscuity in 4-oxalocrotonate tautomerase: enamine formation and aldolase activity.
Zandvoort E, **Baas BJ**, Quax WJ, Poelarends GJ. *Chembiochem* 2011 Mar 7; 12(4):602-9

Structural and functional characterization of a macrophage migration inhibitory factor homologue from the marine cyanobacterium *Prochlorococcus marinus*.
Wasiel AA, Rozeboom HJ, Hauke D, **Baas BJ**, Zandvoort E, Quax WJ, Thunissen AM, Poelarends GJ. *Biochemistry* 2010 Sep 7; 49(35): 7572-81.

Kinetic mechanism of phenylacetone monooxygenase from *Thermobifida fusca*.
Torres Pazmiño DE, **Baas BJ**, Janssen DB, Fraaije MW. *Biochemistry* 2008 Apr 1; 47(13): 4082-93.

Self-sufficient Baeyer-Villiger monooxygenases: effective coenzyme regeneration for biooxygenation by fusion engineering.
Torres Pazmiño DE, Snajdrova R, **Baas BJ**, Ghobrial M, Mihovilovic MD, Fraaije MW. *Angew. Chem. Int. Ed. Engl.* 2008; 47(12): 2275-8.