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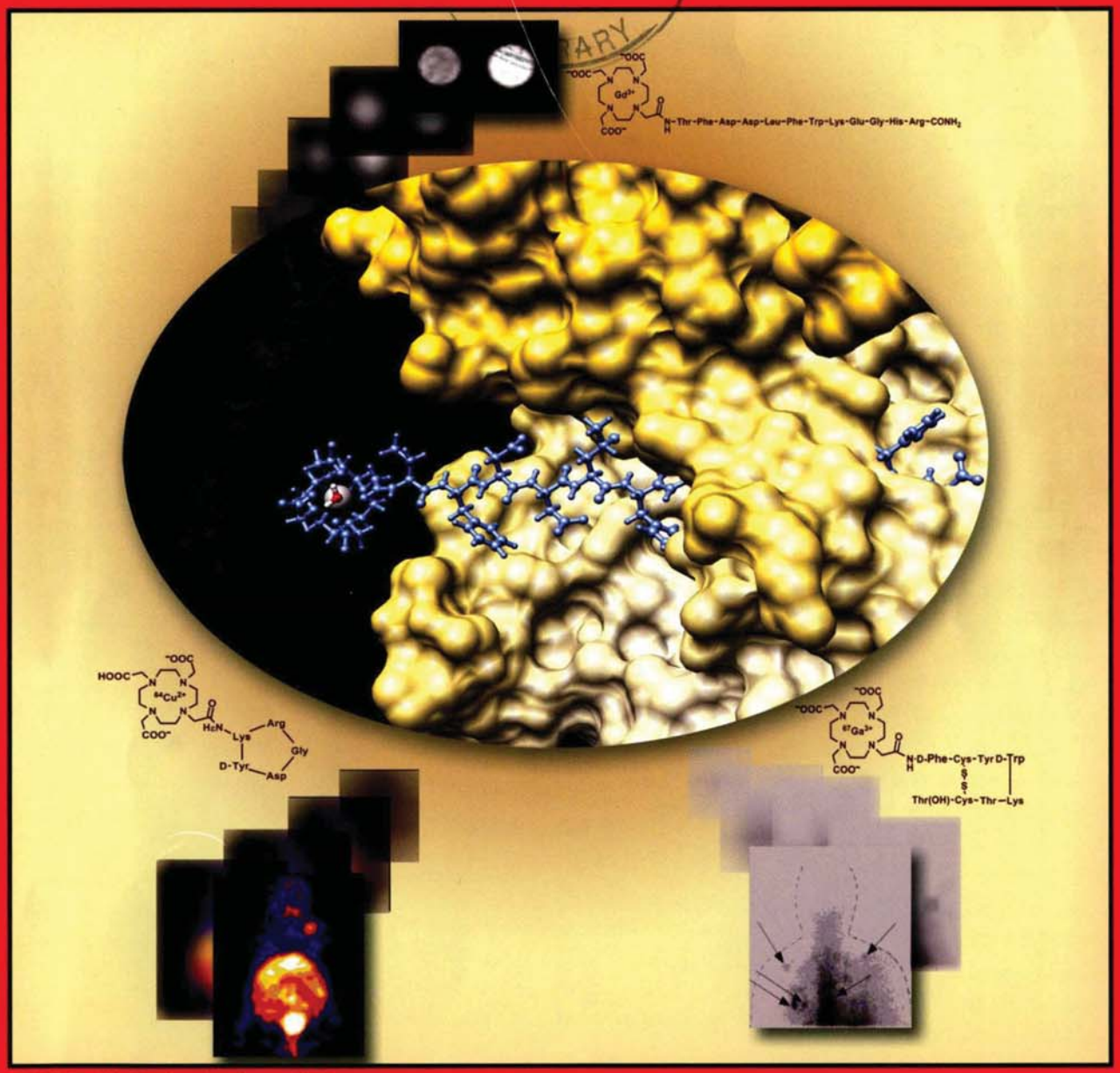

DOTA-Peptide Conjugates (see p. 391)

Bioconjugate Chemistry

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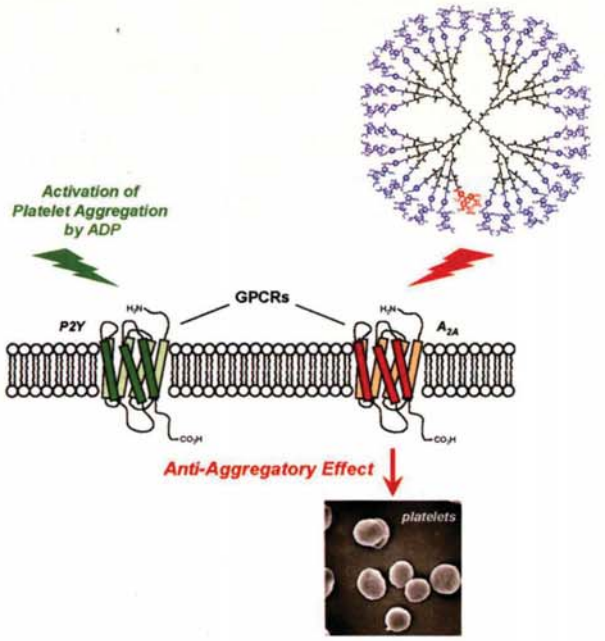
REVIEWS

COMMUNICATIONS

Activation of the A_{2A} receptor, a G protein-coupled receptor (GPCR), for extracellular adenosine, is anti-aggregatory in platelets and anti-inflammatory. PAMAM dendrimers were covalently coupled to multiple copies of an A_{2A} agonist, the nucleoside CGS21680, and characterized spectroscopically. A fluorescent PAMAM-CGS21680 conjugate **5** inhibited aggregation of washed human platelets and was internalized. We envision that our multivalent dendrimer conjugates may improve overall pharmacological profiles compared to the monovalent GPCR ligands.

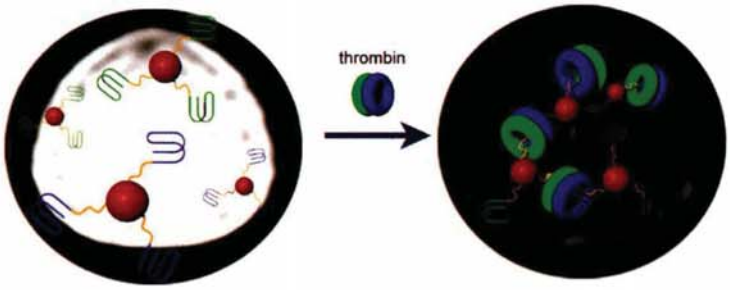


Yoonkyung Kim, Béatrice Hechler, Athena M. Klutz, Christian Gachet, and Kenneth A. Jacobson*

Bioconjugate Chem. **2008,** *19,* 406 ■

Toward Multivalent Signaling across G Protein-Coupled Receptors from Poly(amidoamine) Dendrimers

The detection of the human α-thrombin protein by MRI is reported by designing a thrombin targeted MRI contrast agent. The contrast agent is composed of thrombin aptamer functionalized superparamagnetic iron oxide nanoparticles. The detection of thrombin is based on the increase in the size of nanoparticle assembly, which leads to a change in brightness of the image. A detectable change in MR signal is observed with 25 nM thrombin in human serum.



Mehmet Veysel Yigit, Debapriya Mazumdar, and Yi Lu*

Bioconjugate Chem. **2008,** *19,* 412

MRI Detection of Thrombin with Aptamer Functionalized Superparamagnetic Iron Oxide Nanoparticles

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