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CONFORMATIONALLY-FLEXIBLE BENZAMIDE ANALOGS AS SIGMA-2 SELECTIVE LIGANDS

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The sigma-2 (σ2) receptor is an important target for the development of molecular probes in oncology because of its 10-fold higher density in proliferating tumor cells than in quiescent tumor cells, and the observation that σ2 receptor agonists are able to kill tumor cells via apoptotic and non-apoptotic mechanisms. Novel benzamide compounds are disclosed that target σ2 receptors. Their radiolabeled counterparts can be used for imaging the proliferative status of solid tumors, such as breast cancer. These compounds, when labeled with 18F, can be used as radiotracers for imaging of tumors by positron emission tomography (PET). And when labeled with 123I, they can be used for imaging of tumors by single photon emission computed tomography (SPECT).