

buffer) were added in steps to yield 0–2 equiv (S.I.). NMR spectra were recorded immediately after individual titration steps.

Conclusion

In summary we have identified bis-phenylethynyl amide derivatives as a potent G-quadruplex binding small molecule scaffold. These ligands show very good binding affinity, excellent quadruplex:duplex selectivity and also promising discrimination between intramolecular promoter quadruplexes. Our data suggests, such compounds induce parallel G-quadruplex structure and have potential for G-quadruplex groove recognition. We believe that the modes of G-quadruplex recognition other than via the G-tetrad stacking should be seriously considered for second generation ligands. The biological properties of these molecules are currently under investigation.

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Supporting Information Available: CD, UV and NMR spectroscopic data. This material is available free of charge via the Internet at <http://pubs.acs.org>.

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