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(71) Applicant: DARWIN MOLECULAR CORPORATION [US/US]; 1631 – 220th Street, S.E., Bothell, WA 98021 (US).

(72) Inventors: VAN NESS, Jeffrey; 10020 – 49th Avenue, N.E., Seattle, WA 98125 (US). TABONE, John; 12117 N.E. 166th Place, Bothell, WA 98011 (US). GARRISON, Lori, K.; 4515 Evanston Avenue N., Seattle, WA 98103 (US).

(74) Agents: PARKER, David, W. et al.; Seed and Berry LLP, 6300 Columbia Center, 701 Fifth Avenue, Seattle, WA 98104–7092 (US).

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(54) Title: COMPOSITIONS AND METHODS FOR ENHANCING HYBRIDIZATION SPECIFICITY

(57) Abstract

Compositions and methods are provided for increasing the specificity of a probe nucleic acid for a target nucleic acid in a hybridization solution. An abasic residue, deoxyNebularine residue, or a hybotrope is used to increase specificity. A method is provided for identifying useful hybotropes, including salts, water miscible organic solvents, aprotic solvents and organic solvents, on the basis of enthalpy considerations. Hybotropic hybridization and modified oligonucleotides may be used in amplification reactions, such as PCR, sequence analysis methods, and genomic screening methods.

