CLAIMS:

1. An imaging agent composition comprising :

an isolated polypeptide comprising SEQ. ID No 1; or SEQ. ID No 2~~, or a conservative variant thereof~~, conjugated with a ^{99m}Tc via a diaminedioxime chelator; wherein the isolated polypeptide binds specifically to HER2, or a variant thereof.

~~2. An imaging agent composition comprising :~~

~~an isolated polypeptide comprising SEQ. ID No 1, SEQ. ID No 2, or a conservative variant thereof, conjugated with ^{67}Ga or ^{68}Ga via a NOTA chelator; wherein the isolated polypeptide binds specifically to HER2, or a variant thereof.~~

~~3. An imaging agent composition comprising :~~

~~an isolated polypeptide comprising SEQ. ID No 1, SEQ. ID No 2, or a conservative variant thereof, conjugated with ^{18}F via a linker; wherein the linker comprises a group derived from an aminoxy group, an azido group, or an alkyne group; and wherein the isolated polypeptide binds specifically to HER2, or a variant thereof.~~

~~4~~2. The composition of claim 1, wherein the diaminedioxime chelator comprises Pn216, cPn216, Pn44, or derivatives thereof.

~~5. The composition of claim 3, wherein the ^{18}F is attached to the isolated polypeptide via the aminoxy linker at (the) N-terminus of the isolated polypeptide.~~

~~6~~3. The composition of claim ~~4~~2, wherein the ^{99m}Tc is conjugated to the isolated polypeptide via the cPn216 chelator at (the) N-terminus of the isolated polypeptide.

~~7~~4. The composition of claim 1 for use in imaging at least a portion of a subject with a diagnostic device.

85. The composition of claim 74, wherein the composition is to be used for diagnosing the subject with a HER2-associated disease condition.

~~9. The composition of claim 2 for use in imaging at least a portion of a subject with a diagnostic device.~~

~~10. The method of claim 9, fwherein the composition is to be used for diagnosing the subject with a HER2-associated disease condition.~~

~~11. The composition of claim 3 for use in imaging at least a portion of a subject with a diagnostic device.~~

~~12. The composition of claim 9, wherein the composition is to be used for diagnosing the subject with a HER2-associated disease condition.~~

136. The composition of claim 125, wherein the HER2-associated disease condition is breast cancer.

147. The method of claim 114, wherein the diagnostic device employs an imaging method selected from the group consisting of MRI, PET, SPECT, radioimaging, and combinations thereof.

158. A method for preparing a chelator conjugated polypeptide composition comprising:

(i) providing an isolated polypeptide comprising SEQ. ID No 1 or SEQ. ID No 2~~, or a conservative variant thereof~~;

(ii) reacting a diaminedioxime chelator with the polypeptide to form the chelator conjugated polypeptide.

~~16~~9. The method of claim ~~15~~8, wherein the diaminedioxime chelator is conjugated with ^{99m}Tc.

~~17. A method for preparing a ^{18}F conjugated polypeptide composition comprising:~~

~~(i) providing an isolated polypeptide comprising SEQ. ID No. 1 or SEQ. ID No. 2 or a conservative variant thereof;~~

~~(ii) reacting the polypeptide with a linker wherein the linker comprises a group derived from an aminoxy group, an azido group, or an alkyne group; and~~

~~(iii) reacting the linker with a ^{18}F moiety to form the ^{18}F conjugated polypeptide.~~