WHAT IS CLAIMED IS:

1. A TRAIL R2-specific recombinant multimeric scaffold comprising six TRAIL R2-specific Tn3 monomer scaffolds, wherein

(a) each Tn3 monomer scaffold comprises seven beta strands designated A, B, C, D, E, F, and G, linked to six loop regions designated AB, BC, CD, DE, EF, and FG, wherein the AB loop consists of SEQ ID NO: 35, the BC loop consists of a sequence selected from the group consisting of SEQ ID NOs: 97, 98, and 168, the CD loop consists of SEQ ID NO: 37, the DE loop consists of a sequence selected from the group consisting of SEQ ID NOs: 102, 103, and 179, the EF loop consists of SEQ ID NO: 39, and the FG loop consists of a sequence selected from the group consisting of SEQ ID NOs: 106, 108, 109, 169, and 170, wherein the A beta strand consists of IEV, the B beta strand consists of ALITW, the C beta strand consists of CELX$_1$YGI, the D beta strand consists of TTIX$_2$L, the E beta strand consists of YSI, the F beta strands consists of YEVSLIC, and the G beta strand consists of KX$_3$TFTT, wherein X$_1$ represents amino acid residue A or T, wherein X$_2$ represents amino acid residue D or G, and wherein X$_3$ represents amino acid E or G;

(b) the Tn3 monomer scaffolds are connected in a linear tandem~~,~~ format; and

(c) wherein the Tn3 monomer scaffold comprises at least one non-naturally occurring intramolecular disulfide bond, wherein the bond stabilizes the monomer scaffold.

2. The multimeric scaffold of claim 1, wherein the multimeric scaffold comprises 7 or 8 TRAIL R2-specific Tn3 monomer scaffolds.

3. The multimeric scaffold of any one of the preceding claims, wherein at least two Tn3 monomer scaffolds are connected by a linker.

4. The multimeric scaffold of claim 3, wherein the linker comprises a peptide linker.

5. The multimeric scaffold of claim 4, wherein the peptide linker comprises a $(G_xS)_y$ sequence wherein:
x and y are integers;
x = 1, 2, 3 or 4;
wherein y = 1, 2, 3, 4, 5, 6, or 7; and
optionally x = 4 and y = 1.

6. The multimeric scaffold of any one of the preceding claims, wherein the scaffold is conjugated to PEG at the N-terminus or C-terminus.

7. The multimeric scaffold of any one of the preceding claims, wherein the BC loop consists of SEQ ID NO: 97, the DE loop consists of SEQ ID NO: 179, and the FG loop consists of SEQ ID NO: 170.

8. The multimeric scaffold of any one of the preceding claims, wherein the scaffold comprises SEQ ID NO: 202, SEQ ID NO: 203, SEQ ID NO: 204, or SEQ ID NO: 167.

9. An isolated nucleic acid molecule encoding the multimeric scaffold of any one of the preceding claims.

10. An expression vector comprising the nucleic acid of claim 9.

11. A host cell comprising the vector of claim 10.

12. A method of producing a recombinant multimeric scaffold comprising culturing the host cell of claim 11 under conditions in which the multimeric scaffold encoded by the nucleic acid molecule is expressed.

13. A composition comprising the recombinant multimeric scaffold of any one of claims 1-8 in a pharmaceutically acceptable excipient.

14. Use of the composition of claim 13 in the manufacture of a medicament for preventing, treating, or ameliorating cancer in a patient in need thereof.

15. The composition of claim 13 for use in preventing, treating, or ameliorating cancer in a patient in need thereof wherein the composition is administered in an effective amount.

16. The use of claim 14, or the composition for use of claim 15, wherein said cancer is selected from lung cancer, non-Hodgkin's lymphoma, ovarian cancer, colon cancer, colorectal cancer, pancreatic cancer, and multiple myeloma.

17. The use of claim 14 or 16, or the composition for use of claim 15 or 16, wherein preventing, treating, ameliorating, or managing cancer, further comprises an additional therapy, wherein said therapy is immunotherapy, biological therapy, chemotherapy, radiation therapy, or small molecule drug therapy.