What is Claimed is:

1. An extracellular matrix-binding synthetic peptidoglycan comprising:

a) a glycan;

b) from about 1 to about 80 collagen binding peptide(s); and

c) from about 1 to about 80 hyaluronic acid binding peptide(s);

wherein the peptides of b) and c) are covalently bonded to the glycan.

2. The synthetic peptidoglycan of claim 1, wherein the glycan is dextran, chondroitin, chondroitin sulfate, dermatan, dermatan sulfate, heparan, heparin, keratin, keratan sulfate, or hyaluronic acid.

3. The synthetic peptidoglycan of claim 1, wherein the glycan is dermatan sulfate.

4. The synthetic peptidoglycan of claim 1, wherein the glycan is chondroitin sulfate.

5. The synthetic peptidoglycan of claim 1, wherein the glycan is hyaluronic acid.

6. The synthetic peptidoglycan of claim 1, wherein the peptides are covalently bonded to the glycan via a linker.

7. The synthetic peptidoglycan of claim 6, wherein the linker is N-[β-maleimidopropionic acid]hydrazide (BMPH).

8. The synthetic peptidoglycan of claim 1, wherein the synthetic peptidoglycan comprises a total of less than about 50 peptides.

9. The synthetic peptidoglycan of claim 1, wherein the synthetic peptidoglycan comprises a total of from about 10 to about 40 peptides.

10. The synthetic peptidoglycan of claim 1, wherein the synthetic peptidoglycan comprises a total of about 22 peptides.

11. The synthetic peptidoglycan of claim 1, wherein the collagen binding peptide has binding affinity to one or more of collagen types I, II, III, or IV.

12. The synthetic peptidoglycan of claim 1, wherein the collagen binding peptide comprises at least one collagen binding peptide that binds to type I collagen and at least one collagen binding peptide that binds to type II collagen.

13. The synthetic peptidoglycan of claim 1, wherein the collagen binding peptide comprises an amino acid sequence selected from the group consisting of:

i) WYRGRLGC (SEQ ID NO: 81), RRANAALKAGELYKSILYGC (SEQ ID NO: 68), RLDGNEIKRGC (SEQ ID NO: 69), AHEEISTTNEGVMGC (SEQ ID NO: 70), GCGGELYKSILY (SEQ ID NO: 71), NGVFKYRPRYFLYKHAYFYPPLKRFPVQGC (SEQ ID NO: 72), CQDSETRTFY (SEQ ID NO: 60), TKKTLRTGC (SEQ ID NO: 74), GLRSKSKKFRRPDIQYPDATDEDITSHMGC (SEQ ID NO: 75), SQNPVQPGC (SEQ ID NO: 76), SYIRIADTNITGC (SEQ ID NO: 77), SYIRIADTNIT (SEQ ID NO: 64), KELNLVYT (SEQ ID NO: 65), KELNLVYTGC (SEQ ID NO: 78), GSITTIDVPWNV (SEQ ID NO: 67), GELYKSILYGC (SEQ ID NO: 80) and GSITTIDVPWNVGC (SEQ ID NO: 66), or

ii) any peptide sequence comprising a sequence with at least about 80% sequence identity to the amino acid sequence of i).

14. The synthetic peptidoglycan of claim 1, wherein the collagen binding peptide is WYRGRLGC (SEQ ID NO: 81), RRANAALKAGELYKSILYGC (SEQ ID NO: 68), RLDGNEIKRGC (SEQ ID NO: 69), AHEEISTTNEGVMGC (SEQ ID NO: 70), GCGGELYKSILY (SEQ ID NO: 71), NGVFKYRPRYFLYKHAYFYPPLKRFPVQGC (SEQ ID NO: 72), CQDSETRTFY (SEQ ID NO: 60), TKKTLRTGC (SEQ ID NO: 74), GLRSKSKKFRRPDIQYPDATDEDITSHMGC (SEQ ID NO: 75), SQNPVQPGC (SEQ ID NO: 76), SYIRIADTNITGC (SEQ ID NO: 77), SYIRIADTNIT (SEQ ID NO: 64), KELNLVYT (SEQ ID NO: 65), KELNLVYTGC (SEQ ID NO: 78), GSITTIDVPWNV (SEQ ID NO: 67), GELYKSILYGC (SEQ ID NO: 80) or GSITTIDVPWNVGC (SEQ ID NO: 66).

15. The synthetic peptidoglycan of claim 1, wherein the collagen binding peptide is WYRGRLGC (SEQ ID NO: 81) or a peptide sequence comprising a sequence with at least about 80% sequence identity to SEQ ID NO: 81.

16. The synthetic peptidoglycan of claim 1, wherein the hyaluronic acid binding peptide comprises an amino acid sequence selected from the group consisting of:

i) GAHWQFNALTVRGG (SEQ ID NO: 2), GDRRRRRMWHRQ (SEQ ID NO: 3), GKHLGGKHRRSR (SEQ ID NO: 4), RGTHHAQKRRS (SEQ ID NO: 5), RRHKSGHIQGSK (SEQ ID NO: 6), SRMHGRVRGRHE (SEQ ID NO: 7), RRRAGLTAGRPR

(SEQ ID NO: 8), RYGGHRTSRKWV (SEQ ID NO: 9), RSARYGHRRGVG (SEQ ID NO: 10), GLRGNRRVFARP (SEQ ID NO: 11), SRGQRGRLGKTR (SEQ ID NO: 12), DRRGRSSLPKLAGPVEFPDRKIKGRR (SEQ ID NO: 13), RMRRKGRVKHWG (SEQ ID NO: 14), RGGARGRHKTGR (SEQ ID NO: 15), TGARQRGLQGGWGPRHLRGKDQPPGR (SEQ ID NO: 16), RQRRRDLTRVEG (SEQ ID NO: 17), STKDHNRGRRNVGPVSRSTLRDPIRR (SEQ ID NO: 18), RRIGHQVGGRRN (SEQ ID NO: 19), RLESRAAGQRRA (SEQ ID NO: 20), GGPRRHLGRRGH (SEQ ID NO: 21), VSKRGHRRTAHE (SEQ ID NO: 22), RGTRSGSTR (SEQ ID NO: 23), RRRKKIQGRSKR (SEQ ID NO: 24), RKSYGKYQGR (SEQ ID NO: 25), KGRYSISR (SEQ ID NO:26), RRRCGQKK (SEQ ID NO: 27), KQKIKHVVKLK (SEQ ID NO: 28), KLKSQLVKRK (SEQ ID NO: 29), RYPISRPRKR (SEQ ID NO: 30), KVGKSPPVR (SEQ ID NO: 31), KTFGKMKPR (SEQ ID NO: 32), RIKWSRVSK (SEQ ID NO:33) and KRTMRPTRR (SEQ ID NO: 34); or

ii) any peptide sequence comprising a sequence with at least about 80% sequence identity to the amino acid sequence of i).

17. The synthetic peptidoglycan of claim 1, wherein the hyaluronic acid binding peptide is GAHWQFNALTVRGG (SEQ ID NO: 2), GDRRRRRMWHRQ (SEQ ID NO: 3), GKHLGGKHRRSR (SEQ ID NO: 4), RGTHHAQKRRS (SEQ ID NO: 5), RRHKSGHIQGSK (SEQ ID NO: 6), SRMHGRVRGRHE (SEQ ID NO: 7), RRRAGLTAGRPR (SEQ ID NO: 8), RYGGHRTSRKWV (SEQ ID NO: 9), RSARYGHRRGVG (SEQ ID NO: 10), GLRGNRRVFARP (SEQ ID NO: 11), SRGQRGRLGKTR (SEQ ID NO: 12), DRRGRSSLPKLAGPVEFPDRKIKGRR (SEQ ID NO: 13), RMRRKGRVKHWG (SEQ ID NO: 14), RGGARGRHKTGR (SEQ ID NO: 15), TGARQRGLQGGWGPRHLRGKDQPPGR (SEQ ID NO: 16), RQRRRDLTRVEG (SEQ ID NO: 17), STKDHNRGRRNVGPVSRSTLRDPIRR (SEQ ID NO: 18), RRIGHQVGGRRN (SEQ ID NO: 19), RLESRAAGQRRA (SEQ ID NO: 20), GGPRRHLGRRGH (SEQ ID NO: 21), VSKRGHRRTAHE (SEQ ID NO: 22), RGTRSGSTR (SEQ ID NO: 23), RRRKKIQGRSKR (SEQ ID NO: 24), RKSYGKYQGR (SEQ ID NO: 25), KGRYSISR (SEQ ID NO: 26), RRRCGQKK (SEQ ID NO: 27), KQKIKHVVKLK (SEQ ID NO: 28), KLKSQLVKRK (SEQ ID NO: 29), RYPISRPRKR (SEQ ID NO: 30), KVGKSPPVR (SEQ ID NO: 31),

KTFGKMKPR (SEQ ID NO: 32), RIKWSRVSK (SEQ ID NO: 33) or KRTMRPTRR (SEQ ID NO: 34).

18. The synthetic peptidoglycan of claim 1, wherein the hyaluronic acid binding peptide is GAHWQFNALTVRGGGC (SEQ ID NO: 2), or a peptide sequence comprising a sequence with at least about 80% sequence identity to SEQ ID NO: 2.

19. An extracellular matrix-binding synthetic peptidoglycan comprising:

a) chondroitin sulfate;

b) from about 1 to about 80 collagen binding peptide(s); and

c) from about 1 to about 80 hyaluronic acid binding peptide(s);

wherein the peptides of b) and c) are covalently bonded to the glycan; and further wherein the collagen binding peptide(s) is WYRGRLGC (SEQ ID NO: 81), or a peptide sequence comprising a sequence with at least about 80% sequence identity to SEQ ID NO: 81, and the hyaluronic acid binding peptide(s) is GAHWQFNALTVRGGGC (SEQ ID NO: 2), or a peptide sequence comprising a sequence with at least about 80% sequence identity to SEQ ID NO: 2.

20. The synthetic peptidoglycan of claim 19, wherein the peptides are covalently bonded to the glycan via a linker.

21. The synthetic peptidoglycan of claim 20, wherein the linker is N-[β-maleimidopropionic acid]hydrazide (BMPH).

22. An extracellular matrix-binding synthetic peptidoglycan comprising:

a) chondroitin sulfate;

b) from about 5 to about 20 collagen binding peptide(s); and

c) from about 5 to about 20 hyaluronic acid binding peptide(s);

wherein the peptides of b) and c) are covalently bonded to the glycan via N-[β-maleimidopropionic acid]hydrazide (BMPH); and further wherein the collagen binding peptide(s) are WYRGRLGC (SEQ ID NO: 81), or a peptide sequence comprising a sequence with at least about 80% sequence identity to SEQ ID NO: 81, and the hyaluronic acid binding

peptide(s) are GAHWQFNALTVRGGGC (SEQ ID NO: 2), or a peptide sequence comprising a sequence with at least about 80% sequence identity to SEQ ID NO: 2.

23. A pharmaceutical composition comprising the extracellular matrix-binding synthetic peptidoglycan of any one of claims 1-22.