



Supporting Information

for

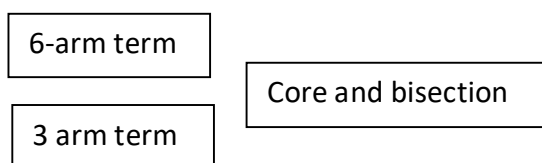
Introduction of a human- and keyboard-friendly N-glycan nomenclature

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Beilstein J. Org. Chem. **2024**, *20*, 607–620. [doi:10.3762/bjoc.20.53](https://doi.org/10.3762/bjoc.20.53)

Possible structure terms

Appendix: A few possible “structure terms”:



Terms possible in both first (6-arm) and second (3-arm) position:

| | |
|---|---|
| Gn | a GlcNAc linked to the invariant pentasaccharide core |
| U | indicates no substituent of the β -mannose. |
| A | Galactose linked to GlcNAc, linkage not specified |
| A ⁴ / A4 | Galactose β 1,4-linked to GlcNAc |
| A ³ / A3 | Galactose β 1,3-linked to GlcNAc |
| An ⁴ / An4 | GalNAc β 1,4-linked to GlcNAc |
| Na | Sialic acid linked to Gal-GlcNAc, linkages not specified |
| Na ⁶⁻⁴ / Na6-4 | Neu5Ac- α 2,6-Gal-1,4-GlcNAc- |
| Na ³⁻³ / Na3-3 | Neu5Ac- α 2,3-Gal-1,3-GlcNAc- |
| (Na ⁶ Na ³⁻³) | Neu5Ac- α 2,6(Neu5Ac- α 2,3-Gal-1,3-)GlcNAc- (as in fetuin) |
| (AF) / (A ⁴ F ³) / (A4F3) / Lx | Lewis X determinant |
| (FA) / (F ⁴ A ³) / (F4A3) / La | Lewis A determinant |
| F ²⁻³ / Lh ³ | Blood group H determinant on type I chain |
| F ²⁻⁴ / Lh ⁴ | Blood group H determinant on type II chain |
| La | Lewis A determinant = (FA) |
| Lb | Lewis B determinant = (FA) |
| Lh ³ | Blood group H determinant on type I chain = F ²⁻³ |
| Lh ⁴ | Blood group H determinant on type II chain = F ²⁻⁴ |
| Ln | LacNAc extension (Ln-, Ln ³ , Ln ⁴) |
| Lx | Lewis X determinant |
| Ly | Lewis Y determinant |
| A-Lb | alpha-Galactose bound to Lewis B = aka B Le ^b |
| An-Lh ⁴ | N-acetylgalactosamine on a blood group H scaffold = Type II blood group A |

Possible in first (6-arm) position:

| | |
|--|--|
| M | 6-arm mannose of the invariant pentasaccharide core |
| M ³ / M3 | a mannose in 3-linkage to 6-arm mannose of the core |
| M ⁶ / M6 | a mannose in 6-linkage to 6-arm mannose of the core; rare |
| [GnGn] | GlcNAc- β 1,6-(GlcNAc- β 1,2-)Man |
| [A ⁴ A ⁴] | branched 6-arm with two Gal residues (in analogy to [GnGn]) |
| [Na ⁶⁻⁴ Na ⁶⁻⁴] | branched 6-arm with two terminal sialic acids (in analogy to [GnGn]) |
| etc. | |

Possible in second (3-arm) position:

| | |
|---|---|
| M | 3-arm mannose of the invariant pentasaccharide core |
|---|---|

M² / M2 a mannose in 2-linkage to the invariant pentasaccharide core
 M²⁻² / M2-2 two mannoses in series
 [GnGn] GlcNAc-β1,4-(GlcNAc-β1,2-)Man (in analogy to [GnGn])
 [A⁴A⁴] branched 3-arm with two Gal residues (in analogy to [GnGn])
 [Na⁶⁻⁴Na⁶⁻⁴] branched 3-arm with two terminal sialic acids (in analogy to [GnGn])
 etc.

Possible in the extension positions: – if present; fucosylation before bisection

F⁶ / F6 α1,6-fucosylation of reducing end GlcNAc
 F³ / F3 α1,3-fucosylation of reducing end GlcNAc
 F³F⁶ / F3F6 difucosylation of reducing end GlcNAc
 X β1,2-xylosylation of the β-mannose (written before fucosylation)
 bi indicates presence of a bisecting GlcNAc
 A-bi bisecting LacNAc
 (AF)-bi bisecting Lewis X

Order of extension terms:

[1] Xyl – [2] substituents of reducing GlcNAc (3 before 6) – [3] bisecting GlcNAc

Non-sugar substituents

ac acetyl
 me methyl
 pc phosphocholine
 pe phosphoethanolamine
 po phosphate
 su sulfate
