The synthesis of linear- and (1→6)-branched β-(1→3)-D-galactans, structures found in plant arabinogalactan proteins (AGPs) is described. The synthetic strategy relies on iterative couplings of mono- and disaccharide thioglycoside donors, followed by a late stage glycosylation of heptagalactan backbone acceptors to introduce branching. A key finding from the synthetic study was the need to match protective groups in order to tune reactivity and ensure selectivity during the assembly. Carbohydrate microarrays were generated to enable the detailed epitope mapping of two monoclonal antibodies known to recognize AGPs: JIM16 and JIM133.
Scopus rating (2010): SJR 2.127 SNIP 1.169
BFI (2009): BFI-level 2
Scopus rating (2009): SJR 2.198 SNIP 1.251
Web of Science (2009): Indexed yes
BFI (2008): BFI-level 2
Scopus rating (2008): SJR 2.349 SNIP 1.217
Web of Science (2008): Indexed yes
Web of Science (2007): Indexed yes
Scopus rating (2006): SJR 2.249 SNIP 1.296
Web of Science (2006): Indexed yes
Scopus rating (2005): SJR 2.03 SNIP 1.284
Web of Science (2005): Indexed yes
Scopus rating (2004): SJR 1.956 SNIP 1.299
Web of Science (2004): Indexed yes
Scopus rating (2003): SJR 1.912 SNIP 1.333
Web of Science (2003): Indexed yes
Scopus rating (2002): SJR 2.188 SNIP 1.417
Web of Science (2002): Indexed yes
Scopus rating (2001): SJR 2.048 SNIP 1.36
Web of Science (2001): Indexed yes
Scopus rating (2000): SJR 2.024 SNIP 1.342
Web of Science (2000): Indexed yes
Scopus rating (1999): SJR 1.943 SNIP 1.339

Original language: English

Electronic versions:
AGP_Galactans_Revision_Manuscript.pdf. Embargo ended: 10/11/2018

DOIs:
10.1021/acs.joc.7b01796

Source: FindIt
Source-ID: 2392829177

Research output: Research - peer-review › Journal article – Annual report year: 2017