From protein catalogues towards targeted proteomics approaches in cereal grains

Due to their importance for human nutrition, the protein content of cereal grains has been a subject of intense study for over a century and cereal grains were not surprisingly one of the earliest subjects for 2D-gel-based proteome analysis. Over the last two decades, countless cereal grain proteomes, mostly derived using 2D-gel based technologies, have been described and hundreds of proteins identified. However, very little is still known about post-translational modifications, subcellular proteomes, and protein–protein interactions in cereal grains. Development of techniques for improved extraction, separation and identification of proteins and peptides is facilitating functional proteomics and analysis of sub-proteomes from small amounts of starting material, such as seed tissues. The combination of proteomics with structural and functional analysis is increasingly applied to target subsets of proteins. These "next-generation" proteomics studies will vastly increase our depth of knowledge about the processes controlling cereal grain development, nutritional and processing characteristics.

General information
State: Published
Organisations: Enzyme and Protein Chemistry, Department of Systems Biology, University of Regensburg
Contributors: Finnie, C., Sultan, A., Grasser, K. D.
Pages: 1145-1153
Publication date: 2011
Peer-reviewed: Yes

Publication information
Journal: Phytochemistry
Volume: 72
Issue number: 10
ISSN (Print): 0031-9422
Ratings:
BFI (2019): BFI-level 1
Web of Science (2019): Indexed yes
BFI (2018): BFI-level 1
Web of Science (2018): Indexed yes
BFI (2017): BFI-level 1
Scopus rating (2017): CiteScore 3.2 SJR 1.048 SNIP 1.478
Web of Science (2017): Impact factor 3.186
Web of Science (2017): Indexed yes
BFI (2016): BFI-level 1
Scopus rating (2016): CiteScore 3.18 SJR 1.045 SNIP 1.449
Web of Science (2016): Impact factor 3.205
BFI (2015): BFI-level 1
Scopus rating (2015): CiteScore 3 SJR 0.897 SNIP 1.374
Web of Science (2015): Impact factor 2.779
Web of Science (2015): Indexed yes
BFI (2014): BFI-level 1
Scopus rating (2014): CiteScore 3.07 SJR 1.129 SNIP 1.553
Web of Science (2014): Impact factor 2.547
BFI (2013): BFI-level 1
Scopus rating (2013): CiteScore 3.63 SJR 1.09 SNIP 1.662
Web of Science (2013): Impact factor 3.35
ISI indexed (2013): ISI indexed yes
Web of Science (2013): Indexed yes
BFI (2012): BFI-level 1
Scopus rating (2012): CiteScore 3.52 SJR 1.168 SNIP 1.783
Web of Science (2012): Impact factor 3.05
ISI indexed (2012): ISI indexed yes
Web of Science (2012): Indexed yes
BFI (2011): BFI-level 1
Scopus rating (2011): CiteScore 3.37 SJR 1.039 SNIP 1.627
Web of Science (2011): Impact factor 3.351
ISI indexed (2011): ISI indexed yes
Web of Science (2011): Indexed yes
BFI (2010): BFI-level 1
Scopus rating (2010): SJR 1.145 SNIP 1.662
Web of Science (2010): Impact factor 3.15
Web of Science (2010): Indexed yes
BFI (2009): BFI-level 1
Scopus rating (2009): SJR 1.071 SNIP 1.542
Web of Science (2009): Indexed yes
BFI (2008): BFI-level 1
Scopus rating (2008): SJR 1.057 SNIP 1.481
Web of Science (2008): Indexed yes
Scopus rating (2007): SJR 0.893 SNIP 1.395
Scopus rating (2006): SJR 1.087 SNIP 1.622
Web of Science (2006): Indexed yes
Scopus rating (2005): SJR 1.153 SNIP 1.617
Web of Science (2005): Indexed yes
Scopus rating (2004): SJR 0.815 SNIP 1.44
Web of Science (2004): Indexed yes
Scopus rating (2003): SJR 0.883 SNIP 1.485
Web of Science (2003): Indexed yes
Scopus rating (2002): SJR 0.718 SNIP 1.239
Web of Science (2002): Indexed yes
Scopus rating (2001): SJR 0.853 SNIP 1.079
Scopus rating (2000): SJR 0.903 SNIP 0.909
Web of Science (2000): Indexed yes
Scopus rating (1999): SJR 0.823 SNIP 1.062
Original language: English
Keywords: Laser capture microdissection, Redox regulation, Membrane proteins, Xylanase inhibitors, Chromosomal proteins, Amyloplasts
DOIs:
10.1016/j.phytochem.2010.11.014
Source: orbit
Source-ID: 277811
Research output: Research - peer-review : Journal article – Annual report year: 2011