



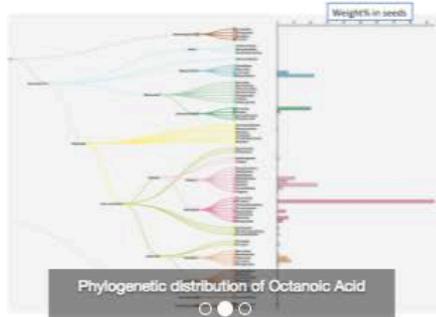
**Hundreds of fatty acids
synthesized by thousands
of plants and their phylogenetic
relationships**

This website and database are under development and are based on the superb SOFA database (sofa.mri.bund.de).

Note: *PhyloFAdb does not include data from SOFA for tocopherols, sterols, and triacylglycerol structures. Links to the original SOFA website tables are provided in PhyloFAdb for each publication. It is likely that some mistakes have been made during incorporation of SOFA information into PhyloFAdb. Please notify John Ohlrogge if you find these.*

**Hundreds of fatty acids
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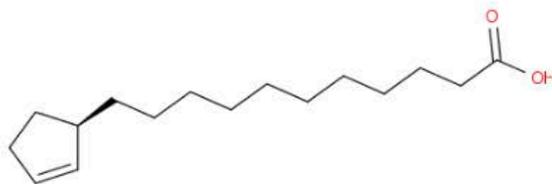
A major goal of PhyloFAdb is to allow users to easily explore relationships between unusual fatty acid structures and the plant species that produce them. Click on "Tree" from the home page provides an overview of the data coverage of the plant kingdom.



Phylogeny

Explore relationships between unusual FA structures and plants that produce them.

[View Tree](#)



Fatty Acids

Structure images and info for >330 FA. Click Name to see species that produce a FA, publications, and data. Click 'Tree' to display phylogenetic distribution of a FA

[List FA](#)



Plants

FA analysis for > 7000 plants. Click on species for graphs of FA composition, oil content, and links to publications and individual data sets.

[List Plants](#)

A brief intro to PhyloFAdb

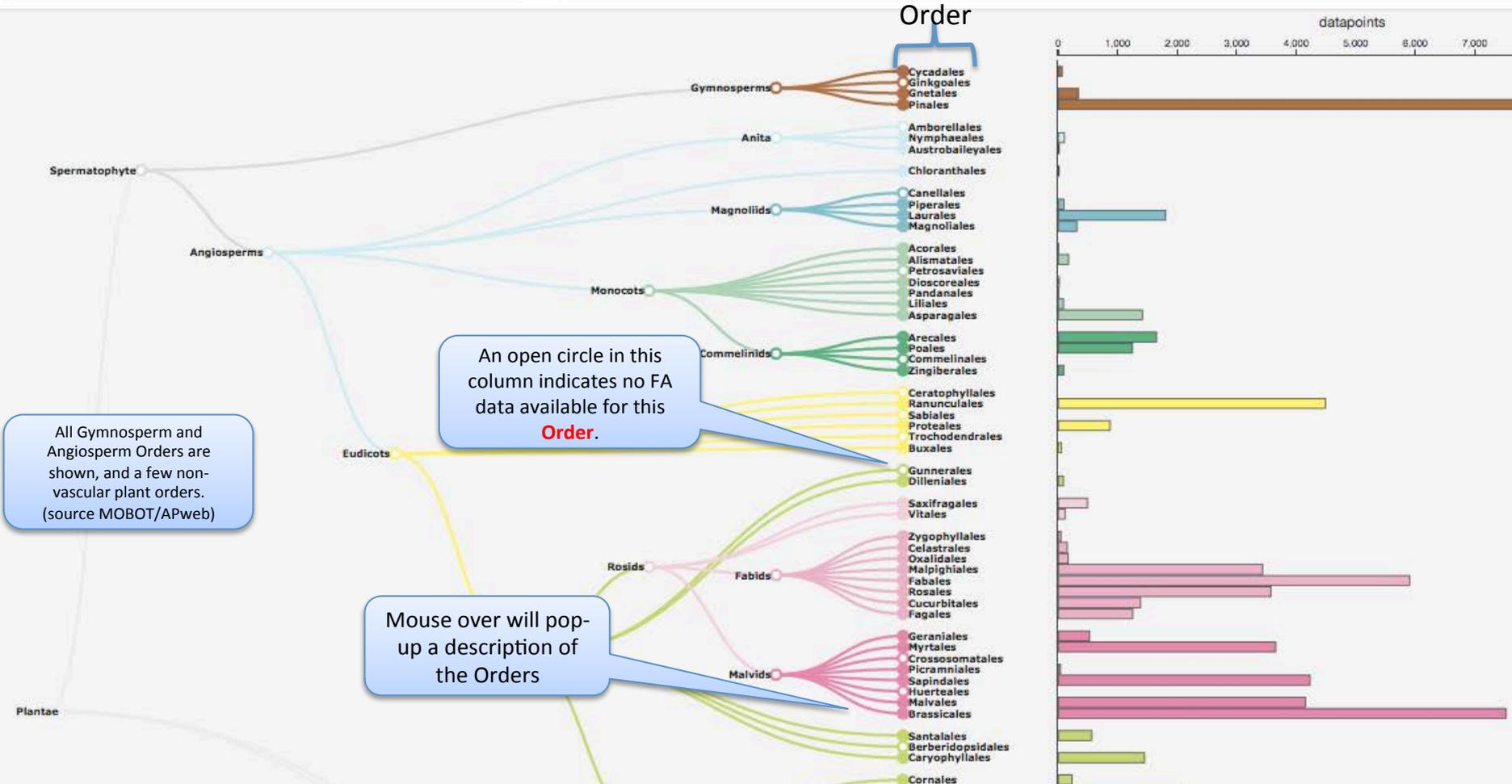
Showing the number of datapoints across all publications for a phylogenetic class.
 Select an option from boxes below to display maximum wt% of a FA, or FA within a structural group.
 Click on a node to expand or contract phylogenetic level. (Open circles on leaf nodes indicate no data available)

Category:

Molecule:

Clicking at the top on "Tree" initially shows the number of **all** FA data points available in the database for each plant **Order**.

- This roughly gives an idea of how many analyses have been performed. It is sometimes related to the number of species that have been analyzed, or the number of publications.
- This also clearly show us that some plant plant orders have been much more intensively studied than others.



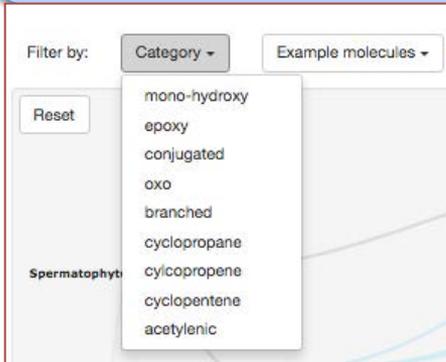
All Gymnosperm and Angiosperm Orders are shown, and a few non-vascular plant orders. (source MOBOT/APweb)

An open circle in this column indicates no FA data available for this **Order**.

Mouse over will pop-up a description of the Orders

- Two drop down boxes are available that will produce a phylogenetic tree for either a) category of fatty acid or b) selected individual fatty acids.

The drop down list for "Category" allows user to display the phylogenetic distribution of a particular functional group (e.g. epoxy, cyclopropane, etc.)



The drop down list for "Example molecules" shows:
Delta notation; common name; systematic name
This list provides faster access to some FA structures and illustrates features of PhyloFAdb

Showing the number of datapoints across all publications for a phylogenetic class.
Select an option from boxes below to display maximum wt% of a FA, or FA within a structural group.
Click on a node to expand or contract phylogenetic level. (Open circles on leaf nodes indicate no data available)

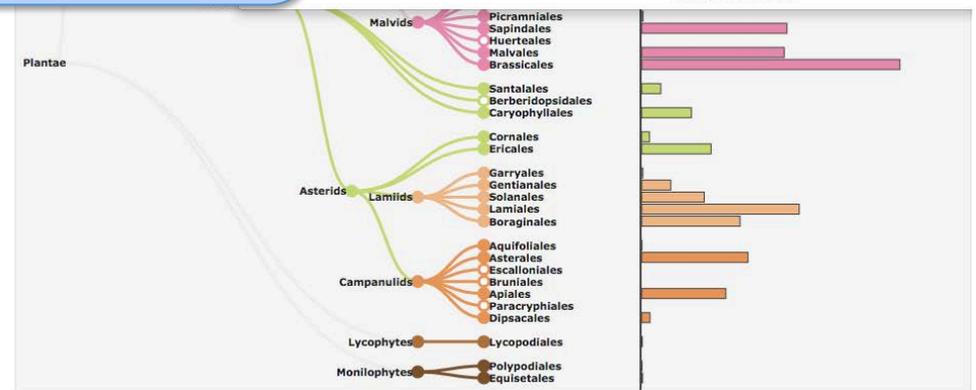
Filter by: Category Example molecules select others from Fatty Acid listing

Reset

Spermatophyte

Angiosper

8:0	Caprylic acid	Octanoic acid
10:0	Capric acid	Decanoic acid
12:0	Lauric acid	Dodecanoic acid
14:1cy	Alepric acid	2-Cyclopentene-1-nonanoic acid
16:1-delta-9c	Palmitoleic acid	9-Hexadecenoic acid, (9Z)-
18:4-delta-9,11,13,15	Parinaric acid	9,11,13,15-Octadecatetraenoic acid
18:3-delta-6c,9c,12c	gamma-Linolenic acid	6,9,12-Octadecatrienoic acid, (6Z,9Z,12Z)-
18:3-delta-9t,11t,13t	beta-Eleostearic acid	9,11,13-Octadecatrienoic acid
18:2-delta-9c,12a	Crepenynic acid	9-Octadecen-12-ynoic acid, (9Z)-
18:3-delta-9c,12c,15c		9,12,15-Octadecatrienoic acid, (9Z,12Z,15Z)-
8,9-cpe-18:1	Malvalic acid	1-Cyclopropene-1-heptanoic acid, 2-octyl-
18:1-delta-11c	Asclepic acid; cis-Vaccenic acid	11-Octadecenoic acid, (11Z)-
18:1-delta-6c	Petroselinic acid	6-Octadecenoic acid, (6Z)-
18:1-delta-5c		5-Octadecenoic acid, (5Z)-
18:1-delta-9c	Oleic acid	9-Octadecenoic acid, (9Z)-
15,16-O-18:2-delta-9c,12c		9,12-Tetradecadienoic acid, 14-(3-ethyl-2-oxira
9,10-cpe-19:1	Sterculic acid	1-Cyclopropene-1-octanoic acid, 2-octyl-
18:1-delta-12c	Coronaric acid	2-Oxiraneoctanoic acid, 3-(2Z)-2-octen-1-yl-, (
18:1-delta-9c	Dihydrosterculic acid	Cyclopropaneoctanoic acid, 2-octyl-, (1R,2S)-
18:1-delta-11c	Ricinoleic acid	9-Octadecenoic acid, 12-hydroxy-, (9Z,12R)-
18:1-delta-13c	Hormelic acid	2-Cyclopentene-1-pentadecanoic acid, (+)-
18:1-delta-15c	Nevonic acid	11-Eicosenoic acid, (11Z)-
		Eicosanoic acid
		13-Docosenoic acid, (13Z)-
		Docosanoic acid
		15-Tetracosenoic acid, (15Z)-
		Tetracosanoic acid



Showing the maximum wt% across all publications for FA: 8:0; Caprylic acid; Octanoic acid

Click on a node to expand or contract phylogenetic level. (Open circles on leaf nodes indicate no data)

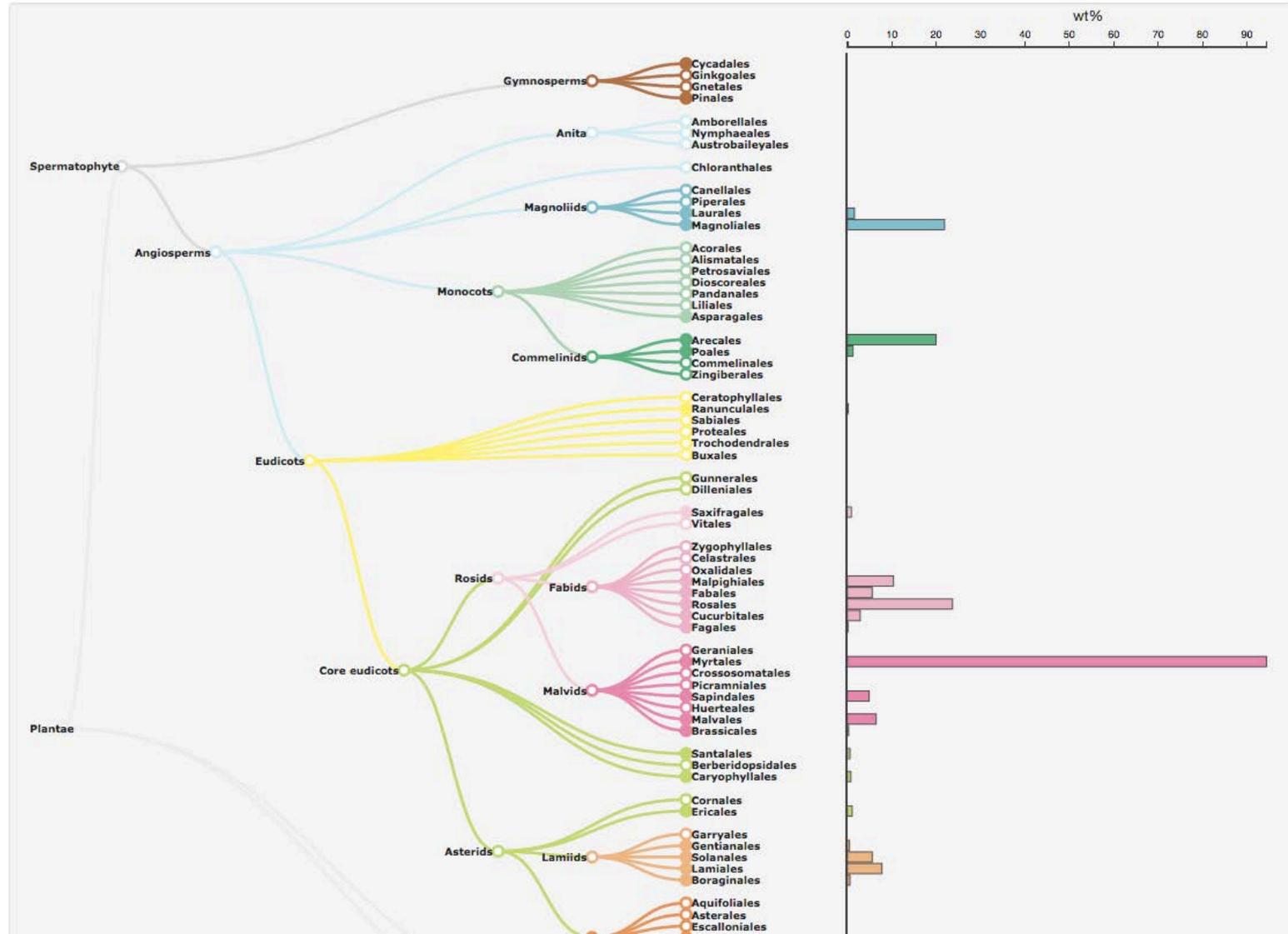
Category:

Molecule:

8:0; Caprylic acid; Octanoic acid

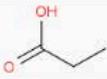
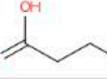
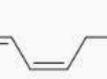
Choosing 8:0 from the drop down list displays the plant orders that have been reported to produce 8:0 and the maximum wt% reported for each order.

- Clicking on the Myrtales **Node** expands to Family and species.
- Clicking on the Bar in the graph provides species and publications.



Searching is currently based on case insensitive exact matching to any part of text. Simple query will search info in any of the columns of this page. You can also select a list of hydroxy fatty acids by searching with term 'hydroxy'. To select a list of cyclo fatty acids, search with term 'cyc'. Other general terms are: epoxy, yne, octadec, cpa, cpe, C22, etc.

The "Fatty Acids" main page provides a list of FA structures in the database. Initially it is sorted by MW and only FA with data points in the database are shown.

Structure	Phylo Tree	Systematic Name	Δ Notation	Other Names	Formula	Mass	Data Points	SOFA ID
	Tree	Formic acid	1:0		C H2 O2	46.03	1	M_001
	Tree	Acetic acid	2:0		C2 H4 O2	60.05	3	M_002
	Tree	Propanoic acid	3:0	Propionic acid acid	C3 H6 O2	74.08	2	M_003
	Tree	Butanoic acid	4:0	Butyric acid; Butyric acid; 1-Propanecarboxylic acid; Ethylacetic acid; n-Butanoic acid; n-Butyric acid	C4 H8 O2	88.11	3	M_005
	Tree	Hexanoic acid	6:0	Caproic acid; 1-Hexanoic acid; 1-Pentancarboxylic acid; Butylacetic acid; Caproic acid; Capronic acid; Pentyformic acid; n-Caproic acid; n-Hexano...	C6 H12 O2	116.16	39	M_007
	Tree	Heptanoic acid	7:0	1-Hexanecarboxylic acid;	C7 H14 O2	130.18	6	M_008
	Tree	Octenoic acid	8:1	structure ambiguous	C8H14O2	142.1	1	M_310
	Tree	Octanoic acid	8:0	Caprylic acid; 1-Heptanecarboxylic acid; Caprylic acid;	C8 H16 O2	144.21	467	M_009
	Tree	Nonenoic acid	9:1	structure ambiguous	C9H16O2	156.12	1	M_340
	Tree	Nonanoic acid	9:0	Pelargonic acid; Pelargonic acid; 1-Octanecarboxylic acid; Nononic acid; Nonylic acid; n-Nonanoic acid; n-Nonoic acid; n-Nonylic acid; n-Pelargonic ...	C9 H18 O2	158.24	12	M_010
	Tree	2,4-Decadienoic acid, (2E,4Z)-	10:2-delta-2t,4c	2,4-Decadienoic acid, (E,Z)-; Stillingic acid; trans-2-cis-4-Decadienoic acid	C10 H16 O2	168.23	5	M_014
	Tree	2-Cyclopentene-1-pentanoic acid	10:1cy	2-Cyclopentene-1-valeric acid; Aleprestic acid	C10 H16 O2	168.23	1	M_209
	Tree	2,4-Decadienoic acid, (E,E)-	10:2-delta-2t,4t		C10 H16 O2	168.23	1	M_435

Showing fatty acids 1 - 100 of 339 in total

From Fatty Acid page to phylogenetic information.....

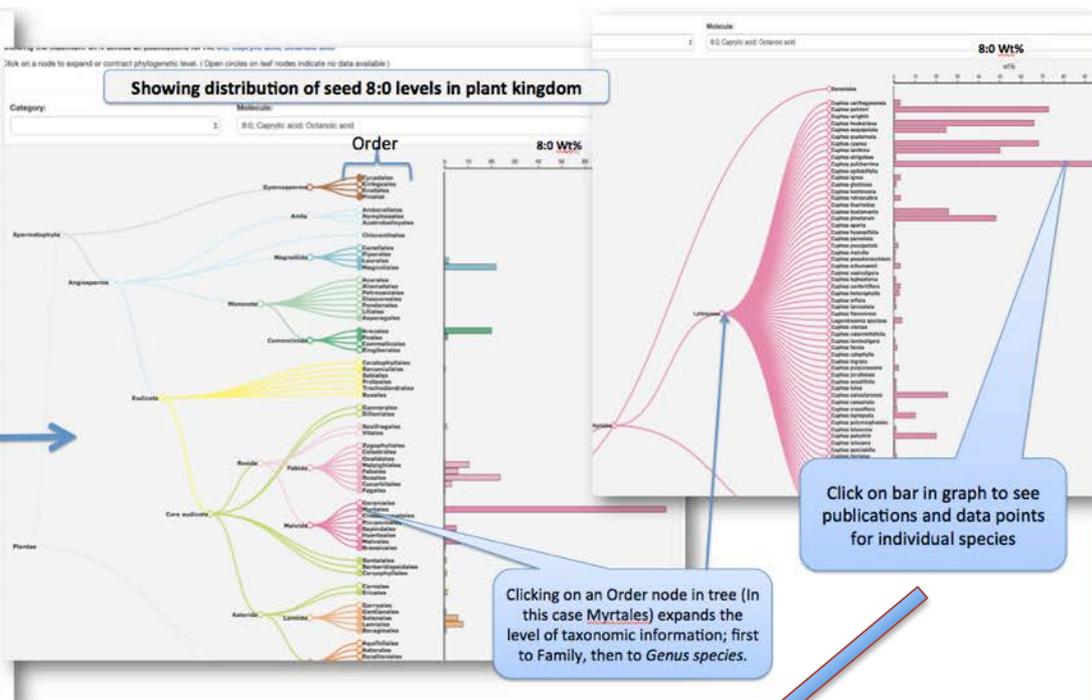
Fatty Acids
Structure shown as SMILES (copied to clipboard)

Filters: [size](#) [category](#)

The "Fatty Acids" main page includes info and links for > 330 FA structures in the database.

Structure	Systematic Name	Other Names	Formula	Molar Mass	δ -Notation	SCFA ID#	Date Posted	Phylo Tree
<chem>CC(=O)O</chem>	Formic acid		C1H2O2	46.03	1:0	M_001	1	Tree
<chem>CCC(=O)O</chem>	Propionic acid	Propionic acid acid	C3H6O2	74.08	3:0	M_002	2	Tree
<chem>CCCC(=O)O</chem>	Butanoic acid	Butyric acid; Butyric acid; 1-Propenoicbutyric acid; Ethylacetic acid; n-Butanoic acid; n-Butyric acid	C4H8O2	88.11	4:0	M_003	3	Tree
<chem>CCCCC(=O)O</chem>	Pentanoic acid	Caproic acid; 1-Hexanoic acid; 1-Pentenoicbutyric acid; Subtyroic acid; Caproic acid; Caproic acid; Pentylacetic acid; n-Caproic acid; n-Hexanoic acid	C5H10O2	116.16	5:0	M_007	38	Tree
<chem>CCCCCC(=O)O</chem>	Hexanoic acid	1-Hexenoicbutyric acid	C6H12O2	130.18	7:0	M_008	6	Tree
<chem>CCCCCCCC(=O)O</chem>	Octanoic acid	Structure ambiguous	C8H16O2	144.21	8:1	M_010	1	Tree
<chem>CCCCCCCCC(=O)O</chem>	Octanoic acid	Caprylic acid; 1-Hexanoicbutyric acid; Caprylic acid	C8H16O2	144.21	8:0	M_009	102	Tree
<chem>CCCCCCCCC(=O)O</chem>	Nonanoic acid	Structure ambiguous	C9H18O2	156.22	8:1	M_011	1	Tree
<chem>CCCCCCCCC(=O)O</chem>	Nonanoic acid	Peranoic acid; Peranoic acid; 1-Octenoicbutyric acid; Nonic acid; Nonylic acid; n-Nonanoic acid; n-Nonanoic acid; n-Nonylic acid; n-Peranoic acid	C9H18O2	156.22	9:0	M_010	12	Tree
<chem>CCCCCCCCC(=O)O</chem>	2,4-Decadecenoic acid, (E,E)-	2,4-Decadecenoic acid, (E,E); Bilingic acid; trans-2,4-Decadecenoic acid	C10H18O2	186.25	10:2 (all-E)	M_014	1	Tree
<chem>CCCCCCCCC(=O)O</chem>	3-Cyclopentene-1-pentanoic acid		C10H18O2	186.25	10:1 (1)	M_009	1	Tree
<chem>CCCCCCCCC(=O)O</chem>	2,4-Decadecenoic acid, (Z,Z)-		C10H18O2	186.25	10:2 (all-Z)	M_030	1	Tree

Clicking on "Tree" opens page that displays plant Orders reported to produce 8:0



Publications	Plant	SoFA Table	Value	Units
Graham, S. A.; Kleiman, R. (1992). Industrial Crops and Products 1 31-34	Cuphea pulcherrima	TAB_000655	94.4	GLC-Area-%

Links to underlying SOFA data tables

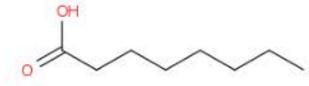
Structure	Systematic Name	Other Names	Formula	Mass
	Formic acid		C1 H2 O2	46.03
	Acetic acid		C2 H4 O2	60.05
	Propionic acid	Propionic acid	C3 H6 O2	74.08
	Butyric acid	Butyric acid; Butyric acid; 1-Propionocarboxylic acid; Ethylacetic acid; n-Butanoic acid; n-Butyric acid	C4 H8 O2	88.10
	Hexanoic acid	Caproic acid; 1-Hexanoic acid; 1-Pentylcarboxylic acid; Butyryloxyacetic acid; Capronic acid; Phenylformic acid; n-Hexanoic acid; n-Hexanoic acid	C6 H12 O2	116.16
	Heptanoic acid	1-Heptanecarboxylic acid	C7 H14 O2	130.18
	Octanoic acid	1-Octanecarboxylic acid	C8 H16 O2	144.21
	Nonanoic acid	structure ambiguous	C9 H18 O2	158.24
	Decanoic acid	structure ambiguous	C10 H20 O2	172.26

Clicking FA name brings page with links to other databases, plants that produce the FA, publications, and more..

A page for each fatty acid

Octanoic acid (C8 H16 O2)

Delta notation: 8:0
 Other Names: 1-Heptanecarboxylic acid; Caprylic acid;
 Mass: 144.21



Structure drawn at OPSIN (opsin.ch.cam.ac.uk)

External Database IDs:
 CAS registry: 124-07-2
 SOFA Mol: M_009
 Lipid Maps: LMFA01010008
 PubChem: 379
 ChEBI:

Links to other databases

inchi: InChI=1/C8H16O2/c1-2-3-4-5-6-7-8(9)10/h2-7H2,1H3,(H,9,10)/t/h9H
 stdinchi: InChI=1S/C8H16O2/c1-2-3-4-5-6-7-8(9)10/h2-7H2,1H3,(H,9,10)
 stdinchikey: WWZKQHOCKIZLMA-LU
 smiles: C(CCCCCC)(=O)O

8:0 wt% in species

Species ranked in order of highest 8:0 content

Publications reporting 8:0 in seeds

Results

1 2 3 4 5 Next Last

Displaying results 1 - 100 of 467 in total

Plant	Publication	Value	Unit
Cuphea pulcherrima	Graham, S. A.; Kleiman, R. (1992). Industrial Crops and Products 1 31-34	94.4	GLC-Area-%
Cuphea painteri	Miller, R. W.; Earle, F. R.; Wolff, I. A.; Jones, Q. (1964). Journal of the American Oil Chemists' Society 41 279-280	73.0	GLC-Area-%
Cuphea painteri	Hirsinger, F. (1980). Fette Seifen Anstrichmittel 82 385-389	70.0	GLC-Area-%
Cuphea cyanea	Graham, S. A.; Kleiman, R. (1992). Industrial Crops and Products 1 31-34	68.3	GLC-Area-%
Cuphea cyanea	Graham, S. A. (1989). Critical Reviews in Food Science and Nutrition 28 139-173	67.8	GLC-Area-%
Cuphea cyanea	Graham, S. A.; Kleiman, R. (1987). Biochemical Systematics and Ecology 15 433-439	67.8	GLC-Area-%
Cuphea hookeriana	Hirsinger, F. (1980). Fette Seifen Anstrichmittel 82 385-389	66.1	GLC-Area-%
Cuphea painteri	Roebbelen, G. (1984). Fette Seifen Anstrichmittel 86 373-379	66.0	GLC-Area-%
Cuphea hookeriana	Miller, R. W.; Earle, F. R.; Wolff, I. A.; Jones, Q. (1964). Journal of the American Oil Chemists' Society 41 279-280	65.0	GLC-Area-%
Cuphea painteri	Baumann, Horst; Bühler, Matthias; Fochern, Heinz; Hirsinger, Frank; Zobelein, Hans; Falbe, Jürgen (1988,1). Angewandte Chemie International Edition in English 27 41-62	65.0	GLC-Area-%
Cuphea painteri	Graham, S. A.; Hirsinger, F.; Robbelen, G. (1981). American Journal of Botany 68 908-917	65.0	GLC-Area-%

Note: Many publications report FA contents as 18:1, 18:2, 18:3 etc. without specifying double bond position or configuration whereas other analyses specify oleic (18:1 delta 9c), linoleic acid, etc. SOFA (and PhyloFAdb) store these data separately. *(In future user will be able to group these.)*

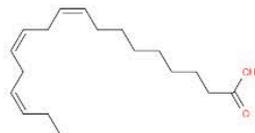
The data are also plotted separately on graphs that compile data for multiple publications. *(In future user will be able to group these)*

9,12,15-Octadecatrienoic acid, (9Z,12Z,15Z)- (C18 H30 O2)

Back Edit

Delta notation: 18:3-delta-9c,12c,15c

Other Names: 9,12,15-Octadecatrienoic acid, (Z,Z,Z)-; Linolenic acid; (9Z,12Z,15Z)-9,12,15-Octadecatrienoic acid; (Z,Z,Z)-Octadeca-9,12,15-trienoic acid; (all-Z)-9,12,15-Octadecatrienoic acid; 9,12,15-all-cis-Octadecatrienoic acid; 9-cis,12-cis,15-cis-Octadecatrienoic acid; 9Z,12Z,15Z-Octadecatrienoic acid; all-cis-9,12,15-Octadecatrienoic acid; alpha-Linolenic acid; cis,cis,cis-9,12,15-Octadecatrienoic acid; cis-9,cis-12,cis-15-Octadecatrienoic acid; cis-delta-9,12,15-Octadecatrienoic acid; -alpha--Linolenic acid



Structure drawn at OPSIN (opsin.ch.cam.ac.uk)

Mass: 278.43

External Database IDs:

CAS registry: 463-40-1
SOFA Mol: M_106
Lipid Maps: LMFA01030152
PubChem: 5280934
ChEBI:

inchi: InChI=1/C18H30O2/c1-2-3-4-5-6-7-8-9-10-11-12-13-14-15-16-17-18(19)20/h3-4,6-7,9-10H,2,5,8,11-17H2,1H3,(H,19,20)/b4-3-,7-6-,10-9-/h19H

stdinchi: InChI=1S/C18H30O2/c1-2-3-4-5-6-7-8-9-10-11-12-13-14-15-16-17-18(19)20/h3-4,6-7,9-10H,2,5,8,11-17H2,1H3,(H,19,20)/b4-3-,7-6-,10-9-

stdinchikey: DTOSIQBPPRVQHS-PDBXOCHSA-N

smiles: C(CCCCCC)C=C/C\C=C/C\C=C/C(=O)O

Results

1 2 3 4 5 ... Next Last

3083 data points
for linolenic acid

Displaying results 1 - 100 of 3083 in total

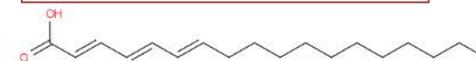
Plant	Publication	Value	Unit
Capsicum annuum	Pérez-Gálvez, Antonio; Garrido-Fernández, Juan; Mínguez-Mosquera, Ma.Isabel; Lozano-Ruiz, Mercedes; Montero-de-Espinosa, Vicente (1999,2). <i>Journal of the American Oil Chemists' Society</i> 76 205-208	77.98	GLC-Area-%

Acacia suma Banerji, R.; Chowdhury, A. R.; Misra, G.; Nigam, S. K. (1988). *Journal of the American Oil Chemists' Society* 65 1959-1960

Octadecatrienoic acid (C18H30O2)

Back Edit

Structure is ambiguous



Structure drawn at OPSIN (opsin.ch.cam.ac.uk)

Delta notation: 18:3

Other Names: structure ambiguous

Mass: 278.22

External Database IDs:

CAS registry:
SOFA Mol: M_089
Lipid Maps: ambiguous
PubChem:
ChEBI:

inchi:

stdinchi:

stdinchikey:

smiles:

Results

1 2 3 4 5 ... Next Last

2988 data points
for 18:3

Displaying results 1 - 100 of 2988 in total

Plant	Publication	Value	Unit
Acacia lenticularis	Banerji, R.; Chowdhury, A. R.; Misra, G.; Nigam, S. K. (1988). <i>Journal of the American Oil Chemists' Society</i> 65 1959-1960	80.3	GLC-Area-%
Lavandula spica	Chomova, T. V.; Asilbecova, D. T.; Gusakova, S. D.; Umarov, A. U. (1983). <i>Khimiya Prirodnikh Soedinenii</i> Non 279-283	78.9	GLC-Area-%

Plants

The initial **Plants** page is sorted alphabetically by *Genus* but users can sort on other columns

Download

1 2 3 4 5 ... Next > Last >

Search: Go

Displaying plants 1 - 100 of 7667 in total

Genus	Species	Common Name	Family	Order	Oil Content	Publications	Data points
Abelia	corymbosa		Caprifoliaceae	Dipsacales		1	9
Abelmoschus	esculentus	Okra	Malvaceae	Malvales	28.8	8	49
Abelmoschus	ficulneus		Malvaceae	Malvales	14.4	1	14
Abelmoschus	moschatus	Musk Okra	Malvaceae	Malvales	19.5	1	6
Aberia	caffra	Kei Apple	Salicaceae	Malpighiales		1	8
Abies	alba	Silver Fir	Pinaceae	Pinales	37.7	2	26
Abies	alba	Silver Fir	Pinaceae	Pinales	37.7	2	37
Abies	amabilis	Pacific Silver Fir	Pinaceae	Pinales		1	21
Abies	balsamea	Balsam Fir	Pinaceae	Pinales		2	48
Abies	borisii-regis	Bulgarian Fir, Macedonian Fir	Pinaceae	Pinales		1	26
Abies	bornumelleriana		Pinaceae	Pinales		1	28
Abies	cephalonica	Greek Fir	Pinaceae	Pinales		2	55
Abies	concolor	White Fir	Pinaceae	Pinales	41.4	2	53
Abies	delavayi	Delavay's Fir	Pinaceae	Pinales		1	29
Abies	equi-trojani	Trojan Fir	Pinaceae	Pinales		1	28
Abies	fraseri	Fraser Fir	Pinaceae	Pinales		1	29
Abies	grandis	Grand Fir	Pinaceae	Pinales		3	51
Abies	homolepis	Nikko Fir	Pinaceae	Pinales		1	18
Abies	koreana	Korean Fir	Pinaceae	Pinales		1	18
Abies	lasiocarpa	Subalpine Fir	Pinaceae	Pinales	5.6	1	2
Abies	lasiocarpa	Subalpine Fir	Pinaceae	Pinales		1	28
Abies	lowiana	Sierra White Fir	Pinaceae	Pinales	16.6	1	32
Abies	nobilis	Noble Fir	Pinaceae	Pinales	24.3	1	32
Abies	nordmanniana	Nordmann Fir, Caucasian Fir	Pinaceae	Pinales		3	69
Abies	numidica	Algerian Fir	Pinaceae	Pinales		1	22
Abies	pindrow	Pindow Fir, West Himalayan Fir	Pinaceae	Pinales		1	26
Abies	pinsapo	Spanish Fir	Pinaceae	Pinales		2	54
Abies	procera	Noble Fir	Pinaceae	Pinales		1	21
Abies	veitchii	Christmas Tree	Pinaceae	Pinales		2	39
Abroma	augustum	Devil's Cotton	Malvaceae	Malvales		1	7

All names are searchable, including those used by SOFA (which are not shown on this page).

Displaying all 2 plants

Genus Species Common Name Family Order Oil Content Publications Data point

Sesamum indicum Sesame Pedaliaceae Lamiales 44.3 33 291

Clicking on species name will bring up this page →

Sesamum indicum

Classification

Order: Lamiales
Family: Pedaliaceae
Genus: Sesamum
Species: indicum

External Link(s)

<http://www.tropicos.org/Name/24300029>

Name Resolution

TNRS Accepted data

Family: Pedaliaceae
Name: Sesamum indicum
Original SOFA Data

Family: Pedaliaceae
Name: Sesamum indicum

Plant names were updated using the Taxonomic Name Resolution Service (<http://tnrs.iplantcollaborative.org>)

Note: There may be other accepted names for a species not displayed here

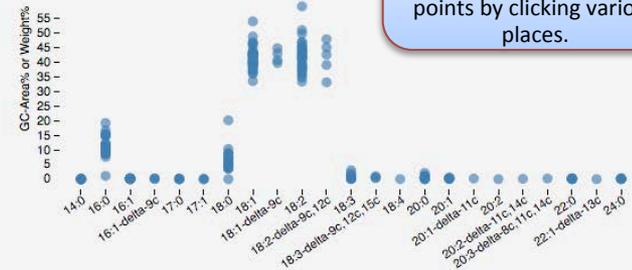
Original SOFA family and species names

Data

Data are compiled from multiple publications. Mouse over individual data points for link to data and publications.

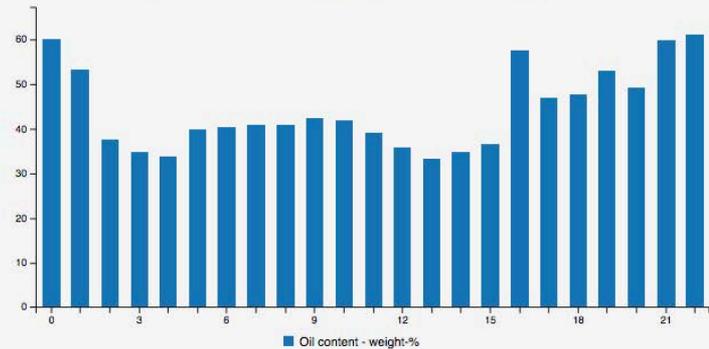
[View 33 Publications](#) | [View 291 Data Points](#)

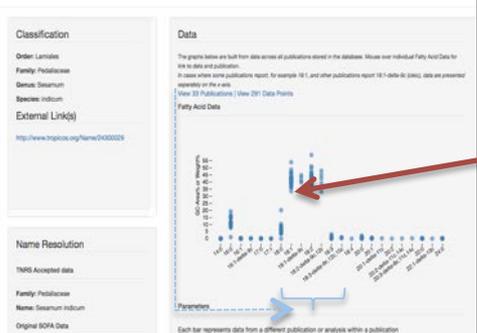
Fatty Acid Data



Parameters

Each bar represents data from a different publication or analysis within a publication





Clicking on 18:1 data points in graph brings list of publications underlying the values for 18:1

Data Points

Filtering on plant: **Sesamum indicum**

Filtering on FattyAcid: **Octadecenoic acid**

Download

Links to underlying SOFA data tables

Search:

Displaying all 36 results

Publication	Sofa Table	Value	Unit
Yermanos, D. M.; Hemstreet, S.; Saleeb, W.; Huszar, C. K. (1972). Journal of the American Oil Chemists' Society 49 20-23	TAB_007583	53.9	GLC-Area-%
Daxa, Amin; Kothari, I. L. (1989). Journal of the Oil Technologists' Association of India 21 15-16	TAB_009085	48.7	GLC-Area-%
Daxa, Amin; Kothari, I. L. (1989). Journal of the Oil Technologists' Association of India 21 15-16	TAB_009083	46.7	GLC-Area-%
Daxa, Amin; Kothari, I. L. (1989). Journal of the Oil Technologists' Association of India 21 15-16	TAB_009086	46.4	GLC-Area-%
Tiscornia, E.; Bertini, G. C. (1974). Rivista Italiana delle Sostanze Grasse 51 333-347	TAB_007585	46.4	GLC-Area-%
Daxa, Amin; Kothari, I. L. (1989). Journal of the Oil Technologists' Association of India 21 15-16	TAB_009081	45.2	GLC-Area-%
Daxa, Amin; Kothari, I. L. (1989). Journal of the Oil Technologists' Association of India 21 15-16	TAB_009084	43.6	GLC-Area-%
Daxa, Amin; Kothari, I. L. (1989). Journal of the Oil Technologists' Association of India 21 15-16	TAB_009087	43.3	GLC-Area-%
Tsatsaronis, G. C.; Boskou, D.; Kehayoglou, A. (1971). Rivista Italiana delle Sostanze Grasse 48 490-492	TAB_007582	43.1	GLC-Area-%
Dutta, Jyotirmoy; Ghosh, Anita; Ghosh, Amitabha (1968). Indian Journal of Applied Chemistry 31 218-222	TAB_007577	42.9	GLC-Area-%
Abdel Rahman, A. H. Y. (1984). Grasas Aceites 35 119	TAB_007591	42.9	GLC-Area-%
Ro, J. H. Lim, M. A. (1983). Yakhak Hoechi. 27 169	TAB_007590	42.8	GLC-Area-%
Daxa, Amin; Kothari, I. L. (1989). Journal of the Oil Technologists' Association of India 21 15-16	TAB_009082	42.7	GLC-Area-%

Plants

Plants list filtered to show *Brassica napus*

Search:

Displaying all 13 plants

Genus	Species	Common Name	Family	Order	Oil Content	Publications	Data points
Brassica	napus		Brassicaceae	Brassicales	38.4	2	4
Brassica	napus		Brassicaceae	Brassicales		2	16
Brassica	napus		Brassicaceae	Brassicales	44.3	8	56
Brassica	napus		Brassicaceae	Brassicales		1	18
Brassica	napus		Brassicaceae	Brassicales	25.0	1	15
Brassica	napus		Brassicaceae	Brassicales	34.2	1	31
Brassica	napus		Brassicaceae	Brassicales		1	13
Brassica	napus		Brassicaceae	Brassicales		1	12
Brassica	napus		Brassicaceae	Brassicales		1	12
Brassica	napus		Brassicaceae	Brassicales		1	5
Brassica	napus		Brassicaceae	Brassicales		1	8
Brassica	napus		Brassicaceae	Brassicales		1	11
Brassica	napus		Brassicaceae	Brassicales		2	36

Why are there 13 “plants” listed for *Brassica napus*?
SOFA created a separate table for every FA analysis for every plant species from every publication. If the plant species name was in any way different (spelling, variety, geographical origin, etc.) we did NOT condense these plant names. However, as shown on the sesame page, we did condense data graphically if the SOFA text for plant name was identical.

Literature

Condense using WOS UID

Simple query will search on author, title, abstract, Journal, Year, ID

Abstracts provided when we could find in electronic format

DOI is available for ~800 publications and provides link to full text

1 2 3 4 5 ... Next Last

Search: Go

Displaying pubs 1 - 100 of 1982 in total

Authors	Year	Title	Journal	Volume	Pages	DOI	UID	Data points
Abburra, R. E.; Zygadlo, J. A.; Guzman, C. A.	1992	▲ Fatty acids variation in Sapindaceae	Biochemical Systematics and Ecology	20	469-471	10.1016/0305-1978(92)90088-U	WOS:A1992JF97400009	76
Abd Alla, E. - S. A. M.	1997	None	Dtsch. Lebensm. Rundsch.	93	149-152		PFA:10011	9
Abd El Aal, M. H. Gomaa, E. G. et al.	1987	None	Fat. Sci. Technol.	89	304		PFA:10012	24
Abd-Allah, M. A. Abu Salem, F. M. Goma, M. A.	1975	None	Elelmiszervizsgalati Kozi.	21	53-57		PFA:10014	6
Abdel Rahman, A. H. Y.	1984	None	Grasas Aceites	35	119		PFA:10015	7
Abdel-M Oety, Ezzat M.	1981	▲ Biologically Active Compounds Derived from Cyclopentenyl Fatty Acids	Fette, Seifen, Anstrichmittel	83	65-70	10.1002/lipi.19810830206	WOS:A1981LG04400005	3
Abdel-Nabey, A. A.; Shehata, A. D. Y.; Ragab, M. H.; Rossell, J. B.	1991	▲ Total unsaponifiables, sterols and tocopherols of cottonseed oil from Egyptian and other varieties	Rivista Italiana delle Sostanze Grasse	68	583-587		CABI:19920316756	14
Abdel-Rahaman, A. H. Y.	1980	▲ A study on some Egyptian citrus seed oils	Grasas y Aceites	31	331-333		FSTA:1981-11-N-0557	21
Abdel-Rahaman, A.-H.Y.	1980	None	Grasas y Aceites	31	331		PFA:10018	35
Abdel-Rahim; E.A. El-Sadany, S.S. et al.	1986	None	Grasas y Aceites	37	81		PFA:10021	33
Abdel-Rahman, A. H. - Y.	1987	None	Riv. Ital. Sostanze Grasse	59	287		PFA:10022	/results?pub_id=10022
Abdel-Rahman, A. H. Y.	1982	▲ Compositional study on some Egyptian peanut varieties	Rivista Italiana delle Sostanze Grasse	59	287-288		CABI:19821440216	/results?pub_id=14814
Abdelkalkikova, K. A. Artatnova, N. A. Nikonov, K.	1983	None	Khim. Prir. Soedin	None	138		PFA:10023	13
Abdelrahaman, A. H. Y.	1980	A STUDY ON SOME EGYPTIAN CITRUS SEED OILS	Grasas Y Aceites	31	331-333		WOS:A1980KR95800004	/results?pub_id=13591
Abdelrahim, E. A.; Elsaadany, S. S.; Wasif, M. M.	1986	CHEMICAL AND PHYSICAL STUDIES ON BALANITES-AEGYPTIACA OIL	Grasas Y Aceites	37	81-85		WOS:A1986C704700005	/results?pub_id=13592

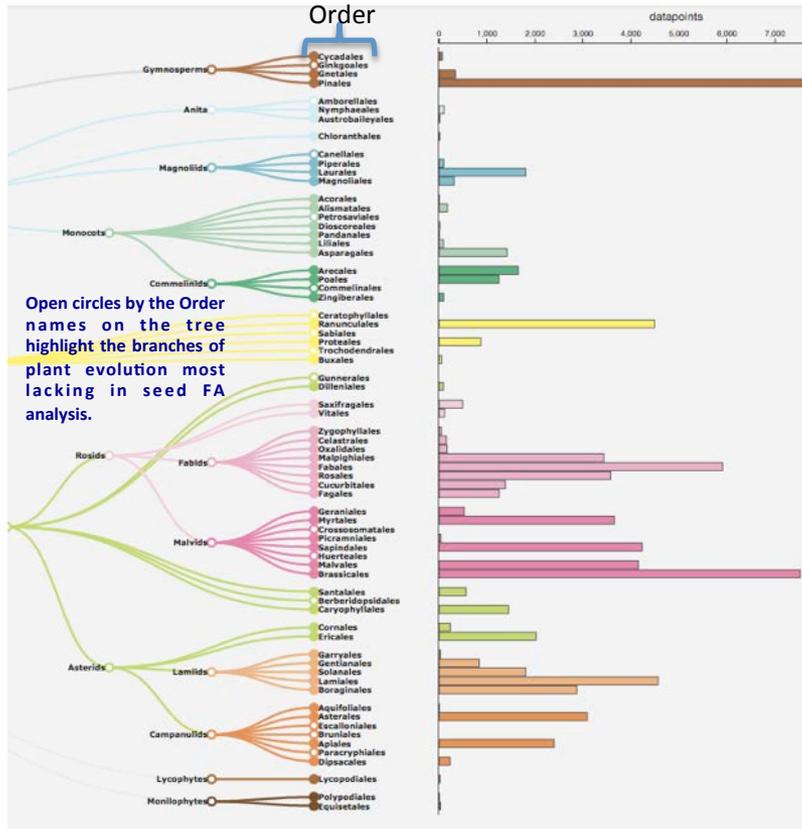
Hundreds of unpublished FA analyses from SOFA are also included

How much of the plant kingdom has been surveyed?

What branches in plant evolution are missing FA data and can we discover new plant FA structures in these branches?

Analysis of seeds of thousands of plant species has revealed the occurrence of hundreds of different fatty acid structures. Are there more unique fatty acid structures still to be discovered? Examination of all the plant species represented in PhyloFAdB-SOFA, together with recent phylogenetic information allows us to identify branches in plant evolution whose seeds may not have been analyzed for fatty acid composition.

Approximately 25% of plant orders and 50% of plant families have not been analyzed for FA composition. Therefore, many new fatty acid structures remain to be discovered.



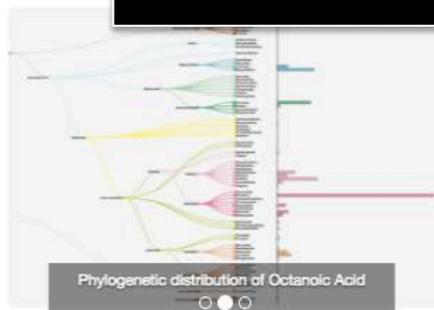
A Resource for Discovery of New Fatty Acid Structures: Plant Orders without Data in PhyloFAdB

Order	Description
Amborellales	Amborella trichopoda is only species. Molecular phylogenetics places the genus at the base of the flowering plant lineage
Berberidopsidales	Southern Hemisphere woody flowering plants.
Bruniales	Includes heath-like shrubs of S. Africa; trees and shrubs native to Andes of S. America
Canellales	Members of the magnoliids. 136 species of fragrant trees and <u>shrubs</u>
Ceratophyllales	Hornwort flowering plants
Commelinales	Spiderwort and <u>pickerelweed</u> ; mostly tropical and subtropical <u>herbs</u>
Crossosomatales	Rockflower order; woody shrubs or trees of the northern temperate regions
Escalloniales	Member of Asterids clade
Gingkoales	Only one species; Gingko biloba
Gunnerales	Contains two genera: <i>Gunnera</i> (in family Gunneraceae) and <i>Myrothamnus</i> (in family Myrothamnaceae)
Huerteales	Shrubs or small trees found in most tropical or warm temperate regions. all five of the genera are poorly known
Metteniusales	Trees, shrubs, and lianas, primarily of the tropics.
Paracryphiales	Woody shrubs and trees native to Australia, southeast Asia, and New Caledonia.
Petrosaviales	Rare leafless achlorophyllous, plants found in dark rainforests in Japan, Asia and Borneo
Sabiales	Incl. single family (Sabiaceae), considered by some as member of Proteales.
Trochodendrales	Includes wheel tree; two extant genera, of south east Asia.
Vahliales	Herbs and subshrubs that grow in Africa and the Indian subcontinent.

Hundreds of fatty acids synthesized by thousands of plants and their phylogenetic relationships

Many other features of the website and database are not described here, but can be discovered by clicking on links.

Future: Literature will be surveyed to add data from newer publications. Information will be added on genes, enzymes and pathways for synthesis of unusual fatty acids, and which pathways are still unknown.



Phylogeny

Explore relationships between unusual FA structures and plants that produce them.

View Tree



Fatty Acids

Structure images and info for >330 FA. Click Name to see species that produce a FA, publications, and data. Click 'Tree' to display phylogenetic distribution of a FA

List FA

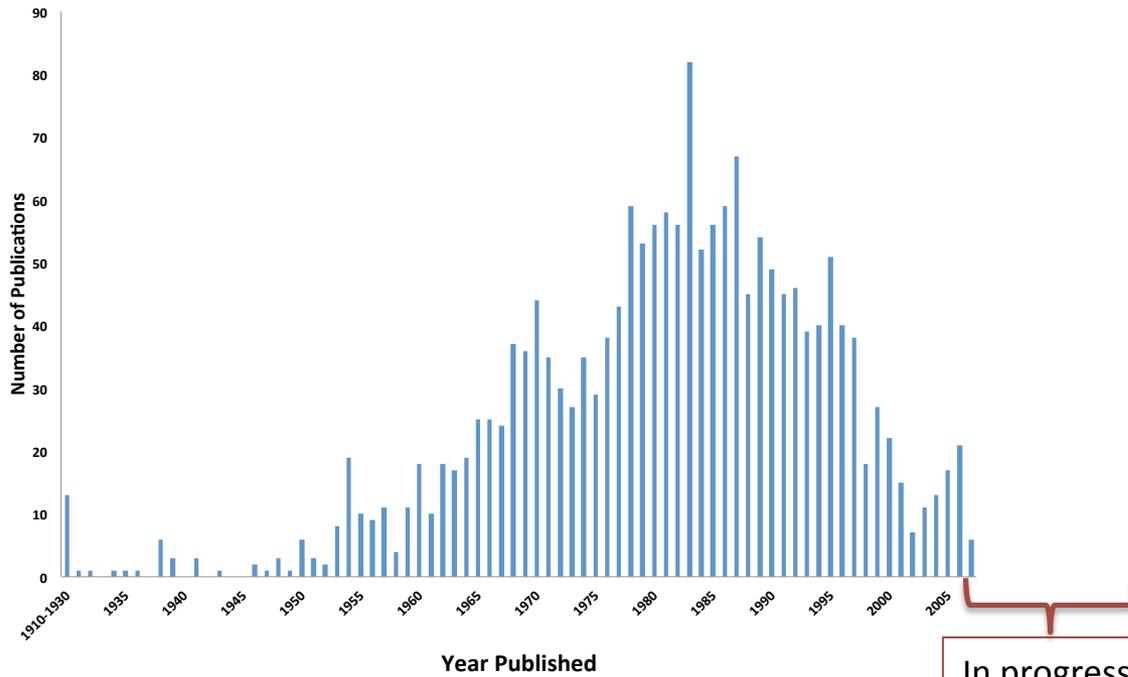


Plants

FA analysis for > 7000 plants. Click on species for graphs of FA composition, oil content, and links to publications and individual data sets.

List Plants

Publications in SOFA vs Date Published



In progress:
We are adding newer data