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THE BIOSYNTHESIS OF GALACTOLIPIDS IN  
RED CLOVER (Trifolium pratense)

A thesis presented in partial fulfilment of  
the requirements for the degree of  
Master of Science  
in Biochemistry

By

Wesley Wray Bycroft

Massey University,  
New Zealand

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## ABBREVIATIONS

Acyl-MGDG	-	6-O-acyl derivative of MGDG.
ACP	-	acyl carrier protein
AES	-	automatic external standardisation
ATP	-	adenosine 5'-triphosphate
C	-	Curie
C/M	-	Chloroform-methanol solution
CoA	-	coenzyme A
cpm	-	counts per minute
DEGS	-	diethylene glycol succinate
DGDG	-	digalactosyl diglyceride
DGG	-	digalactosyl glyceride
dpm	-	disintegrations per minute
DSC	-	Differential Scanning Calorimetry
DTA	-	Differential Thermal Analysis
Gal	-	Galactose
gm	-	gram
FFA	-	free fatty acid
l	-	litre
M	-	molar
MGDG	-	monogalactosyl diglyceride
MGDGH	-	hydrogenated MGDG
MGG	-	monogalactosyl glycerol
mgm	-	milligram
m.u.	-	mass units
NaDEDTC	-	sodium diethyl dithiocarbamate
PC	-	phosphatidyl choline
PE	-	phosphatidyl ethanolamine
PG	-	phosphatidyl glycerol
PI	-	phosphatidyl inositol
POPOP	-	1,4 bis (2-(5-phenyloxazolyl))-benzene
PPO	-	2,5-diphenyl oxazole
PVP	-	polyvinyl pyrrolidone
<u>rac</u>	-	racemic
<u>sn</u>	-	stereospecific numbering
SL	-	sulfo lipid
S.P.	-	sintering point

TGDG - trigalactosyl diglyceride  
tol/EtOH/EtAc - toluene-ethanol-ethyl acetate solvent  
Tris - Tri-(hydroxymethyl) methylamine  
UDPgal - uridine 5'-diphosphate D-galactose  
v - volume

Lipid nomenclature:

For the specific structural designation of complex lipids containing a glyceryl moiety, the nomenclature suggested by the IUPAC-IUB Commission on Biochemical Nomenclature (European J. Biochem. (1967) 2, 127) has been followed. The trivial names of complex lipids have been used when it is more appropriate to do so.

Fatty acids are designated by the shorthand notation of number of carbon atoms:number of double bonds, e.g. 16:3 refers to hexadecatrienoic acid.