Phytochemistry 1974 Vol 13 pp 315 to 319 Pergamon Press Printed in England

ERRATA

CHUNG-SHIH TANG (1973) Localization of benzyl glucosinolate and thioglucosidase in *Carica papaya* fruit *Phytochemistry* **12,** 769–773

Dr M G Ettlinger has kindly pointed out to me that Léon Guignard has reported in 1894 his findings on the localization of a glucosinolate and thioglucosidase in the seeds of papaya His credit on this subject should be duly acknowledged and the following references should be cited

[1] GUIGNARD, L (1894) Recherches sur certains principles actifs encore inconnus chez les Papayacees *J Botanique* **8,** 67–79 85–92

[2] GUIGNARD, L (1894) Sur quelques proprietes chimiques de la myrosine *Bull Soc Bot Fr* **41,** 418–428

CHALLICE, JAMES S (1973) Phenolic compounds of the subfamily Pomoideae a chemotaxonomic survey *Phytochemistry* **12,** 1095–1101

It is regretted that Table 1 contained printers errors and is reprinted in full overleaf

---

INGVERSEN, J and KØIE, B (1973) Lysine-rich proteins in high-lysine *Hordeum vulgare* grain *Phytochemistry* **12,** 1107–1111

The key in Fig 2 (p 1108) should read

——— Hiproly
- - - - - - - - CI 7115
– – · – – Mutant 29

HERZ, W and WAHLBERG, I (1973) Punctatin a new germacradienolide from *Liatris punctata Phytochemistry* **12,** 1421–1426

Professor Ch Tamm, Institut fur Organische Chemie, University of Basel, has drawn our attention to the fact that the name "punctatin", used by us in the above publication as the appellation of a new germacradienolide, has been preempted by a homoisoflavone [1] Consequently it seems desirable to change the name of our germacradienolide to "punctaliatrin"

[1] SIDWELL, W T L and TAMM, CH (1970) *Tetrahedron Letters* 475, see also Erratum, (1970) *Tetrahedron Letters* 1578, FINCKH, R E and TAMM, CH (1970) *Experienta* **26,** 472

TABLE 1 LEAF PHENOLICS OF POMOIDEAE SPECIES

Plant species†	Compounds*								
	Flavones**		DHC††	Flavanones‡	Flavonols§		Isochlorogenic acid‖	Catechins	
	FT	F2	Ph	FN	F7	F5P		U1	U2
Cotoneaster									
C horizontalis						t	+ +	+ +	t
C francheti					t		+	+ + (+)	+
C melanocarpa var *laxipolius*							t	+ +	
C racemiflora H							t	+ (+)	
Pyracantha									
P coccinea				(+)	(t)			+ + +	
P atalantioides					+ +			+ +	+
Mespilus									
M germanica							+ −	+ +	+
Crataegus									
C carrierei		+ (+)			+ +			+ + +	+
C orientalis var *sanguinea*		+ (+)						+ + (+)	t
Osteomeles									
O schwerinae H									
O anthyllidifolia H									
Sorbus									
(Section I Aucuparia)									
S americana							+ +	+	t
S commixta H				+ +	t		+		
S decora							+	+	+
S tianshanica				+ +			+ +	+ +	+ (+)
S aucuparia							+ +	+ +	+
S pohuashanensis							+ (+)	+ +	−
S vilmorini				+ (+)		+ +	+ +	+	
S koehneana H				t					
(Section II Cormus)									
S domestica H (2 sources)									
(Section III Aria)									
S torminalis H	+ (+)								
S intermedia	+ (+)	t				+	−	+ +	+ (+)
S aria							+	+ +	+
(Section IV Micromeles)									
S japonica								t	t
(Section I × III)									
S hybrida									
(*S aucuparia* × *S intermedia*)							+ (+)	+ +	+
S thuringiaca									
(*S aucuparia* × *S aria*)							+ +	+ +	+
Aronia									
A arbutifolia	+ + (+)	+			−	+ (+)	+ +	+ +	t
A prunifolia H	+ (+)	(+)			+ (+)		+ (−)		
A melanocarpa					+ +			+ +	+
Photinia									
P villosa								?	+ + +
P serrulata H							+		
P davidsoniae H				+ ?			t		
P flava								?	+ + +
Heteromeles									
H arbutifolia M Roem (14 sources)							+ +		+ + (+)
Stranvaesia									
S davidiana H							+ + (+)		
S davidiana var *undulata*							+ + (+)		
S nussia H					+ +		(t)		
Eriobotrya									
E japonica H									
E bengalensis H									
Raphiolepis									
R japonica H									
R indica H									
Amelanchier									
A ovalis							t	+ +	+
A asiatica H							+		
A canadensis							+	+ +	+
A laevis							+	+ +	+
Peraphyllum									
P ramosissimum H					t		+		
Malus									
(Section I Eumalus)									
M 'prunifolia Rinki'			+ + +			+		t	+
M hupehensis			+ + +			t		t	+

TABLE 1—*continued*

Plant species†	Compounds*								
	Flavones**		DHC††	Flavanones‡	Flavonols§		Isochlorogenic acid‖	Catechins	
	FT	F2	Ph	FN	F7	F5P		U1	U2
(Section II Sorbomalus)									
M fusca			+++			t			+
M toringoides			+++			t			+
(Section III Chloromeles)									
M glaucescens			+++			+			+
(Section IV Eriolobus)									
M trilobata						+			+(+)
(Section V Docyniopsis)									
M tschonoskii			+++		t	+(+)			+(+)
(Section ?)									
M Sp 'H'									++
Docynia									
D delavayi H (3 sources)			+++						
D indica H (3 sources)			+(+)						
Chaenomeles									
(Section I Euchaenomeles)									
C cathayensis							++		++?
C japonica cv 'Maulei'				(t)	+		t?	++(+)	
C speciosa cv 'Moerloosei'				++	+		+		
(Section II Pseudocydonia)									
C sinensis	++(+)	t						++(+)	
Cydonia									
C oblonga							+	++	+
C vulgaris var *vranja*							+(+)	++	+
Pyrus¶									
see Refs 8, 13, 14		pres			pres		pres	pres	pres
Hesperomeles									
H oblonga Lindl H									
H heterophylla (R & P) Hook H	++	+							
H cuneata Lindl H	+(+)	+				(+)			
H glabrata H B K H						++			
H intermedia Pittier H	++					(+)			
H ferruginea (Pers.) *Beveh* H									

* Blank space indicates that the phenolic could not be detected. Scoring code: t trace, + small amount, ++ moderate amount, +++ large amount, () reservations regarding enclosed symbol, score on low side. FT luteolin 7-rhamnosylglucoside, F2 luteolin 7-glucoside, DHC, dihydrochalkone, Ph phloridzin (phloretin 2′-glucoside), FN incompletely identified glucoside of naringenin (Williams, unpublished), F7 quercetin or kaempferol 3-triglycosides ?, F5P quercetin or kaempferol 3-monopentosides ?, U1 epicatechin, U2 catechin.

† Where the authority is not given after a given specific name, this authority will be found in Rehder,[1] where geographical origins are also listed. The origin of *Heteromeles* is given by Bailey[2] and the origins of *Chaenomeles* and *Hesperomeles* species are given by Weber[3] and Sax.[4,5] All specimens designated 'H' were obtained only as dried herbarium leaf samples from Kew, the remainder of the specimens were obtained as fresh leaf from various sources. Full details of sources and identifications of both fresh and herbarium specimens are given elsewhere.[8]

** Besides FT, a second luteolin 7-rhamnosylglucoside (F1) is present in *Pyrus* species, *Crategus carrieri*, and in *Aronia arbutifolia*. A luteolin 7-diglucoside (FV) is present in all species containing the monoside (F2) except *Crategus orientalis*, *Pyrus* species, and *Hesperomeles cuneata*, FV is present without F2 in *Sorbus torminalis*. Apigenin 7-glucoside (F3) and chrysoeriol 7-glucoside (FZ) are found in *Pyrus* species, F3 is also in *Crategus carrierei* and (FZ) in *Hesperomeles glabrata*. Flavone 4′-*O*-glucosides and a suspected luteolin 5-methyl ether (FS) are apparently restricted to *Pyrus*.[13,14] Williams has found chrysin 5-glucoside and its corresponding β-hydroxychalcone[9,10] in *Malus* bark (but not in leaf) and chrysin 7-glucoside and its corresponding β-hydroxychalcone[11,12] in *Malus* leaf and bark, these compounds could not be detected elsewhere in the Pomoideae.

†† Dihydrochalkones: phloridzin (Ph) is replaced in *Malus trilobata* and *M* sp 'H' by trilobatin (Tri) the corresponding 4′-glucoside of phloretin, Sieboldin (Sie, 3-hydroxytrilobatin) is found in *M prunifolia Rinkii* and *M* sp 'H', Williams[15,16,18,19] has also detected the following minor dihydrochalcones in *Malus*: phloretin 2′-xylosylglucoside, 4-desoxyphloretin 4′-glucoside and *p*-coumaroylphloridzin.

‡ Besides the naringenin glycoside (FN), an eriodictyol glycoside (FE) is present in all species containing FN except *Sorbus vilmorini*, *S koehneana*, *Chaenomeles japonica* and *Photinia davidsoniae*. In addition FE is present alone in *Pyracantha atalantioides*, *Hesperomeles cuneata* and *glabrata*. Williams has resported naringenin and eriodictyol 7-glucosides as present in leaf and bark of some *Malus* species[15,16] and eriodictoyl 7-glucoside as present in the bark only of *Cydonia*.[17]

§ Quercetin 4′-glucoside was detected in trace amounts in the leaf of 3 species of *Sorbus* (*S aucuparia*, *S decora* and *S commixta*), Williams[9] reported this flavonoid in the bark of some *Malus* species but could not detect it in the leaf. Williams[10] has found quercetin 5-glucoside in substantial amount as a bark constituent of a few *Malus* species. In the corresponding leaf specimens this flavonoid was detected in trace amounts only. Traces of quercetin 5-glucoside have been detected in the leaf of *Cotoneaster racemiflora* and *Pyracantha atalantioides* only. Azaleatin 3-glucoside has been found in the bark of a few *Malus* species,[18] it could not be found in the corresponding leaf, nor in the leaf of any other Pomoideae species. Quercetin or kaempferol 3-mono and diglycosides occur in all genera listed in Table 1.

‖ Chlorogenic acid occurs in all genera listed in Table 1.

¶ Arbutin (hydroquinone monoglucoside) is restricted to *Pyrus* where it is present in all species. Caffeoylcalleryanin is present in the leaf of some species only, but is ubiquitous as a bark constituent, *p*-Hydroxybenzoyl, protocatechuoyl and vanilloylcalleryanin and protocatechuic acid 3-glucoside are present only in *Pyrus calleryana* and *P koehnei*.