of these bisbenzylisoquinoline alkaloids on vasorelaxant activities are under investigation.

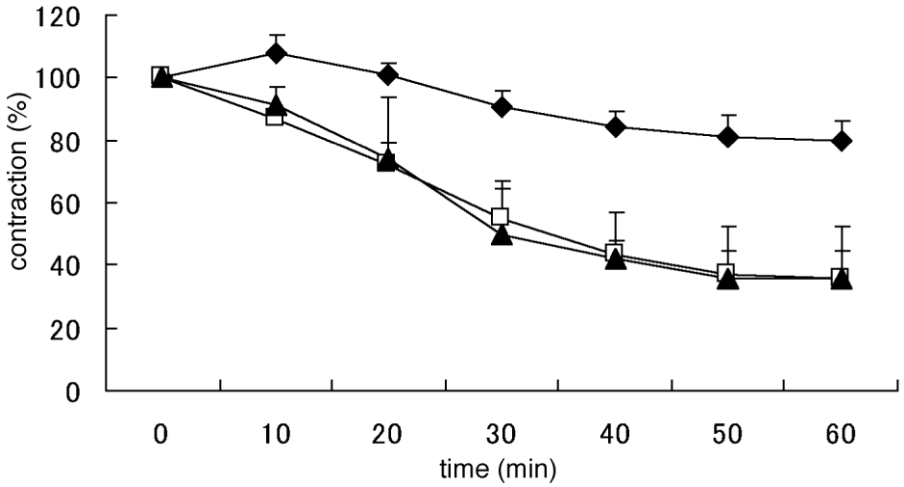


Figure 3.82: Relaxation responses induced by alkaloid **50-52** in aortic rings precontracted with 3×10^{-7} M phenylephrine (PE); Symbols: －▲－, (**50)** at 3×10^{-5}M; －◆－, (**51)** at 3×10^{-5}M; －□－, (**52)** at 3×10^{-5}M. Values are means ±SE (*n*=3).

(gyrolidine **50**, norstephasubine **51**, 3'4'-dihydronorstephasubine **52**)

4. CONCLUSION

4.1 Conclusion

Alseodaphne corneri (KL5501) from the Lauraceae family was collected from Piah Reserve Forest, Sungai Siput Perak. Phytochemical investigation on the bark and leaves of this species led to the isolation of two types of alkaloids; bisbenzylisoquinoline and aporphine.

To the knowledge of the author, five *Alseodaphne* species; *A. perakensis*, *A. andersonii, A. hainensis, A. semicarpifolia,* and *A. archboldiana* have been chemically studied and reported to contain phenantrenes, aporphines, morphinandienones, lactones, and furanones.[68-73,100] There has been no report on the phytochemical study and medicinal values of *Alseodaphne corneri*, although the fruits of this species were reported to be poisonous.[6-8]

The phytochemical study on the leaves and bark of *Alseodaphne corneri* yielded eleven alkaloids. The leaves afforded four aporphines; isocorydine **44**, norisocorydine **45**, *N*-methyl laurotetanine **46** and *N*-methyl lindcarpine **47**. Meanwhile, five bisbenzylisoquinolines and two aporphines were isolated from the bark. The alkaloids isolated were known as laurotetanine **48**, norboldine **49**, from aporphine group and gyrolidine **50**, norstephasubine **51**, 3', 4'-dihydronorstephasubine **52**, 7'-*O*-demethylstebisimine **53** and stephasubimine **54** from bisbenzylisoquinoline type. The type of skeleton of compounds that isolated from *Alseodaphne corneri* were summarized in table 4.1.

The structures of all those alkaloids were determined by the extensive spectroscopic methods notably 1D- and 2D- NMR, IR, UV, and HRMS and the comparison with literature reviews.

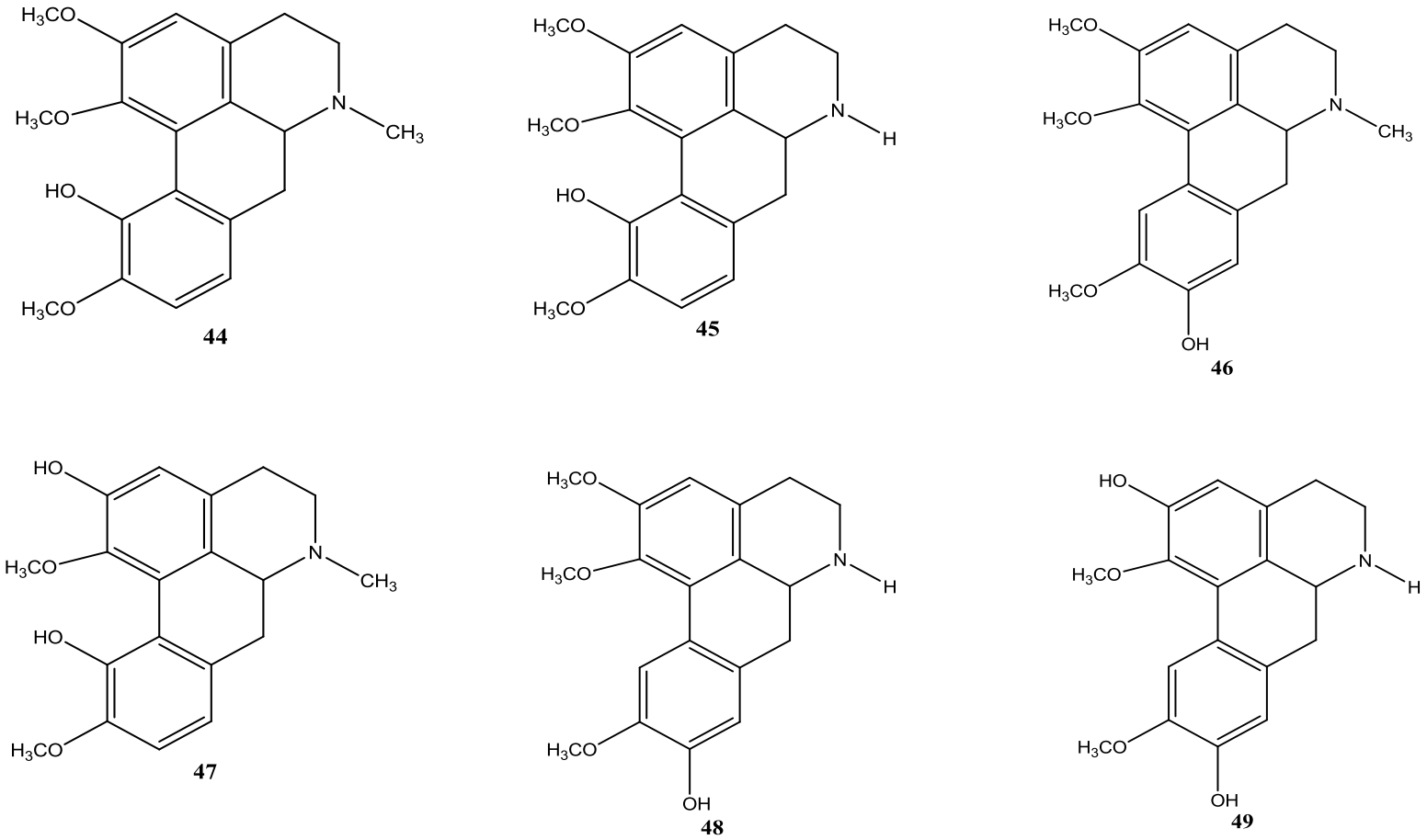
Two known bisbenzylisoquinolines; gyrolidine **50**, norstephasubine **51** and one new compound, 3'4'-dihydronorstephasubine **52** were tested for vasorelaxant activity

on isolated rat aorta. Only gyrolidine **50** and 3'4'-dihydronorstephasubine **52** exhibited a moderate vasorelaxant activity with 65% relaxation against contraction in the rat aorta strips. In addition, four aporphine alkaloids were tested for inhibitory activity against *P. falciparum* in antimalarial assay. Isocorydine **44,** norisocorydine **45,** *N*-methyl laurotetanine **46,** and *N*-methyl lindcarpine **47** from the leaves of this species showed inhibitory activities against *P.falciparum* in antimalarial assay with IC_{50} values 51.3, 19.8, 8.4 and 27.6, respectively.

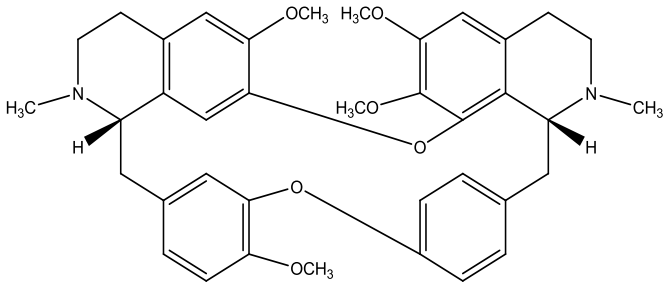
In conclusion, this is the first study of alkaloids from the species of *Alseodaphne corneri*. It is believed that, this species can be a source of pharmacologically interesting molecules. More bioactivities can be performed on these compounds and further mechanistic study can be pursued on the more potent compounds.

Table 4.1: Alkaloids Isolated from *Alseodaphne corneri*

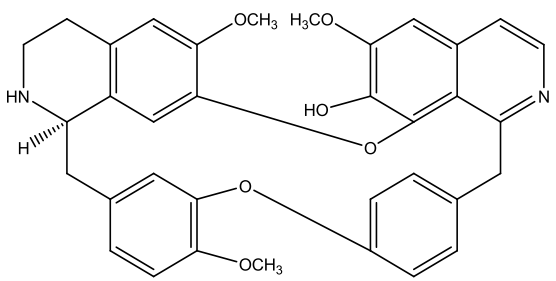
Species	**Plant part**	**Compounds**	**Type of skeleton (Aporphine and bisbenzylisoquinoline(BBIQ))**
***Alseodaphne corneri* (KL5501)**	Leaves	Isocorydine **44**	1, 2, 10, 11-tetrasubstituted aporphine[26,73]
		Norisocorydine **45**	1, 2, 10, 11-tetrasubstituted aporphine[26, 73]
		N-methyl laurotetanine **46**	1, 2, 9, 10-tetrasubstituted aporphine[36, 77]
		N-methyl lindcarpine **47**	1, 2, 10, 11-tetrasubstituted aporphine[26,73]
	Bark	Laurotetanine **48**	1, 2, 9, 10-tetrasubstituted aporphine[36, 77]
		Norboldine **49**	1, 2, 9, 10-tetrasubstituted aporphine[36, 77]
		Gyrolidine **50**	Type VI (two ether linkages between 7-8', 11-12') BBIQ[21, 45]
		Norstephasubine **51**	Type VI (two ether linkages between 7-8', 11-12') BBIQ[21, 45]
		3',4'-dihydronorstephasubine **52**	Type VI (two ether linkages between 7-8', 11-12') BBIQ[21, 45]
		7'-*O*-demethylstebisimine **53**	Type VI (two ether linkages between 7-8', 11-12') BBIQ[21, 45]
		Stephasubimine **54**	Type VI (two ether linkages between 7-8', 11-12') BBIQ[21, 45]



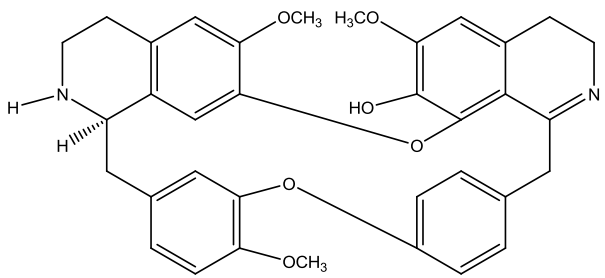
Scheme 4.1: Alkaloids Isolated from *Alseodaphne corneri*



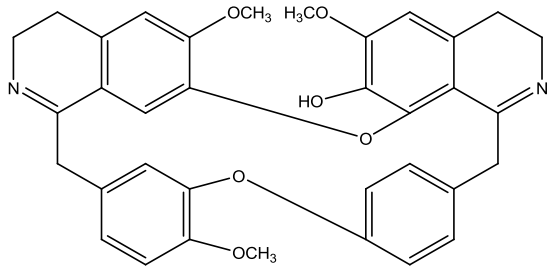
50



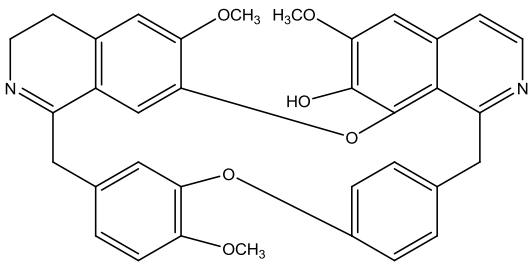
51



52



53



54

Scheme 4.1: Alkaloids Isolated from *Alseodaphne corneri* (Continued)