## Synthesis of Novel 2-Aryl-3-(2-morpholinoethyl)-1,3-thiazinan-4-ones Via Ultrasound Irradiation

Daniela P. Gouvêa,<sup>a</sup> Gabriele A. Berwaldt,<sup>a</sup> Patrícia D. Neuenfeldt,<sup>b</sup> Ricardo J. Nunes,<sup>b</sup> Wanda P. Almeida<sup>c</sup> and Wilson Cunico<sup>\*,a</sup>

<sup>a</sup>Laboratório de Química Aplicada a Bioativos (LaQuiABio), Universidade Federal de Pelotas (UFPel), Campus Universitário, CP 354, 96010-900 Pelotas-RS, Brazil

<sup>b</sup>Laboratório Estrutura e Atividade (LEAT), Universidade Federal de Santa Catarina (UFSC), Campus Trindade, 88040-970 Florianópolis-SC, Brazil

<sup>c</sup>Laboratório de Desenvolvimento de Fármacos e Medicamentos (LAFAME), Universidade Estadual de Campinas (UNICAMP), CP 6154, 13083-970 Campinas-SP, Brazil



Figure S1. Mass of compound 5a.



Figure S2. Mass of compound 5b.

\*e-mail: wjcunico@yahoo.com.br; wilson.cunico@ufpel.edu.br







Figure S4. Mass of compound 5d.











Figure S7. Mass of compound 5g.



Figure S8. Mass of compound 5h.



Figure S9. Mass of compound 5i.



Figure S10. Mass of compound 5j.



Figure S11. Mass of compound 5k.



Figure S12. Mass of compound 5l.



Figure S13. Mass of compound 5m.



Figure S14. Mass of compound 5n.



Figure S15. <sup>1</sup>H NMR spectrum (400 MHz, CDCl<sub>3</sub>) of compound 5a.



Figure S16. <sup>13</sup>C NMR spectrum (125 MHz, CDCl<sub>3</sub>) of compound 5a.



Figure S17. HMQC of compound 5a.



Figure S18. HMBC of compound 5a.



Figure S19. <sup>1</sup>H NMR spectrum (400 MHz, CDCl<sub>3</sub>) of compound 5b.



Figure S20. <sup>13</sup>C NMR spectrum (100 MHz, CDCl<sub>3</sub>) of compound 5b.



Figure S21. <sup>1</sup>H NMR spectrum (400 MHz, CDCl<sub>3</sub>) of compound 5c.



Figure S22. <sup>13</sup>C NMR spectrum (100 MHz, CDCl<sub>3</sub>) of compound 5c.





Figure S24. HMBC of compound 5c.

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Figure S25.  $^1\!\mathrm{H}$  NMR spectrum (400 MHz, CDCl\_3) of compound 5d.



Figure S26. <sup>13</sup>C NMR spectrum (100 MHz, CDCl<sub>3</sub>) of compound 5d.



Figure S27. <sup>1</sup>H NMR spectrum (600 MHz, CDCl<sub>3</sub>) of compound 5e.



Figure S28. <sup>13</sup>C NMR spectrum (150 MHz, CDCl<sub>3</sub>) of compound 5e.



Figure S29. <sup>1</sup>H NMR spectrum (200 MHz, CDCl<sub>3</sub>) of compound 5f.



Figure S30. <sup>13</sup>C NMR spectrum (50 MHz, CDCl<sub>3</sub>) of compound 5f.



Figure S31. <sup>1</sup>H NMR spectrum (400 MHz, CDCl<sub>3</sub>) of compound 5g.



Figure S32. <sup>13</sup>C NMR spectrum (100 MHz, CDCl<sub>3</sub>) of compound 5g.

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Figure S33. <sup>1</sup>H NMR spectrum (250 MHz, CDCl<sub>3</sub>) of compound 5h.



Figure S34.  $^{\rm 13}{\rm C}$  NMR spectrum (100 MHz, CDCl<sub>3</sub>) of compound 5h.



Figure S35. <sup>1</sup>H NMR spectrum (600 MHz, CDCl<sub>3</sub>) of compound 5i.



Figure S36. <sup>13</sup>C NMR spectrum (150 MHz, CDCl<sub>3</sub>) of compound 5i.





Figure S37. <sup>1</sup>H NMR spectrum (400 MHz, CDCl<sub>3</sub>) of compound 5j.



Figure S38. <sup>13</sup>C NMR spectrum (100 MHz, CDCl<sub>3</sub>) of compound 5j.



Figure S39. <sup>1</sup>H NMR spectrum (400 MHz, CDCl<sub>3</sub>) of compound 5k.



Figure S40. <sup>13</sup>C NMR spectrum (125 MHz, CDCl<sub>3</sub>) of compound 5k.



Figure S41. HMQC of compound 5k.



Figure S42. HMBC of compound 5k.



Figure S43. <sup>1</sup>H NMR spectrum (600 MHz, CDCl<sub>3</sub>) of compound 5l.



Figure S44. <sup>13</sup>C NMR spectrum (150 MHz, CDCl<sub>3</sub>) of compound 5l.



Figure S45. <sup>1</sup>H NMR spectrum (400 MHz, CDCl<sub>3</sub>) of compound 5m.



Figure S46. <sup>13</sup>C NMR spectrum (100 MHz, CDCl<sub>3</sub>) of compound 5m.



Figure S47. <sup>1</sup>H NMR spectrum (600 MHz, CDCl<sub>3</sub>) of compound 5n.



Figure S48. <sup>13</sup>C NMR spectrum (150 MHz, CDCl<sub>3</sub>) of compound 5n.



Figure S49. IR (ATR) 5a.



Figure S50. IR (ATR) 5b.



Figure S51. IR (ATR) 5c.



Figure S52. IR (ATR) 5d.



Figure S53. IR (ATR) of compound 5e.



Figure S54. IR (ATR) of compound 5f.



Figure S55. IR (ATR) of compound 5g.



Figure S56. IR (ATR) of compound 5h.



Figure S57. IR (ATR) of compound 5i.



Figure S58. IR (ATR) of compound 5j.



Figure S59. IR (ATR) of compound 5k.



Figure S60. IR (ATR) of compound 5l.



Figure S61. IR (ATR) of compound 5m.



Figure S62. IR (ATR) of compound 5n.