Electronic Supplementary Material (ESI) for RSC Advances


# Supplementary Information

## Directed biosynthesis through biohalogenation of secondary metabolites of the marine-derived fungus *Aspergillus unguis*

Sanya Sureram, Chatchai Kesornpun, Chulabhorn Mahidol, Somsak Ruchirawat, and Prasat Kittakoop

**Reagents**

Commercial PDB powder was purchased from HiMedia Laboratories, India. Potassium bromide (KBr) was from Sigma-Aldrich (France), while potassium iodide (KI) and potassium fluoride (KF) were from Carlo Erba (France) and BDH Laboratory Supplies (England). Water with a resistivity of 18.2 MΩ.cm used for media preparation was obtained from a Milli-Q water purification system (Millipore, USA). Sephadex LH-20 and silica gel for column chromatography were purchased from GE Healthcare (Sweden) and Merck (Germany), respectively.

**$^{1}$H and $^{13}$C NMR spectra of compounds 1-5, and 9.**

Fig. S1. $^{1}H$ NMR spectrum (acetone-$d_6$) of aspergillusidone D (**1**)

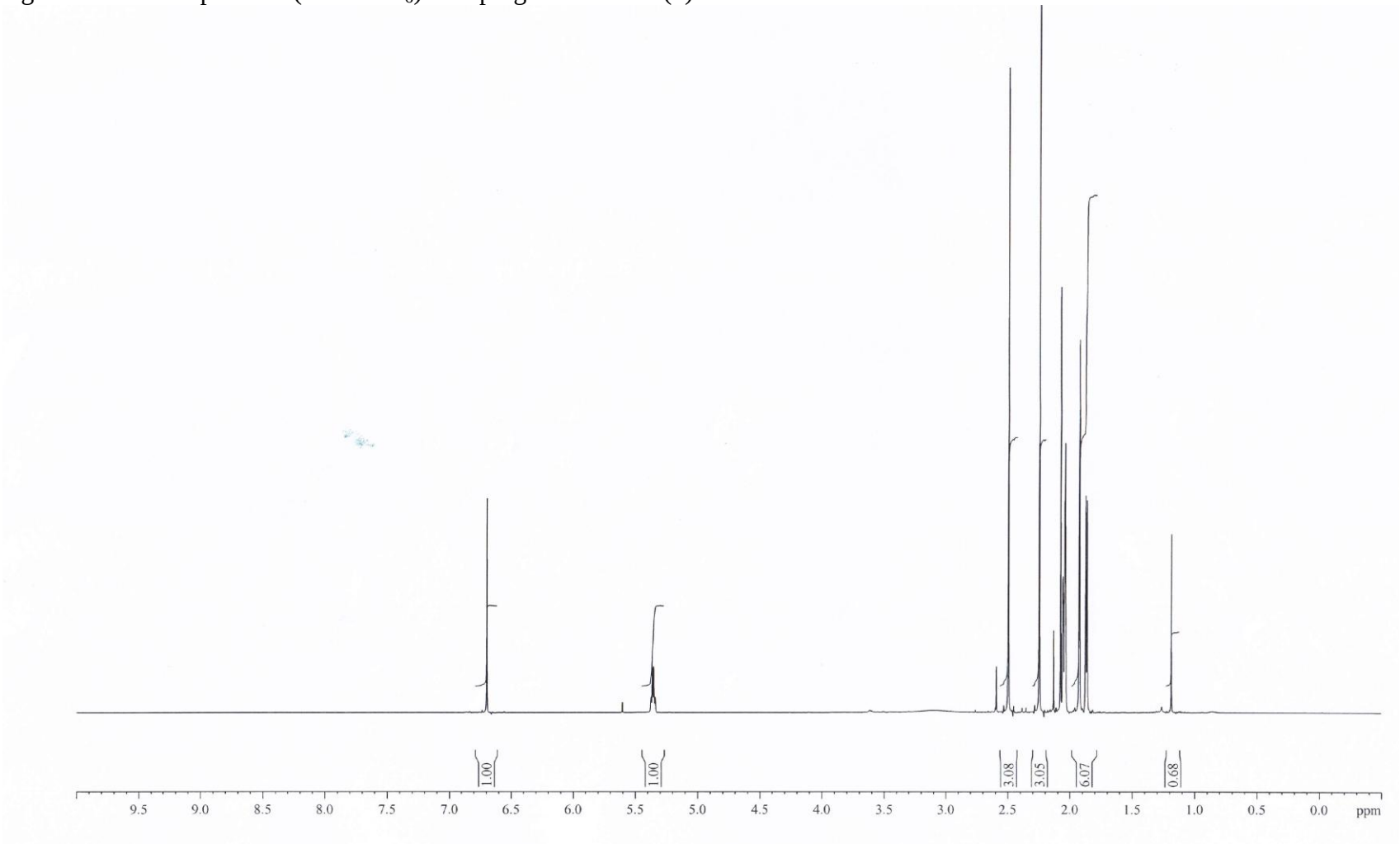

Fig. S2. $^{13}C$ NMR spectrum (acetone-$d_6$) of aspergillusidone D (**1**)

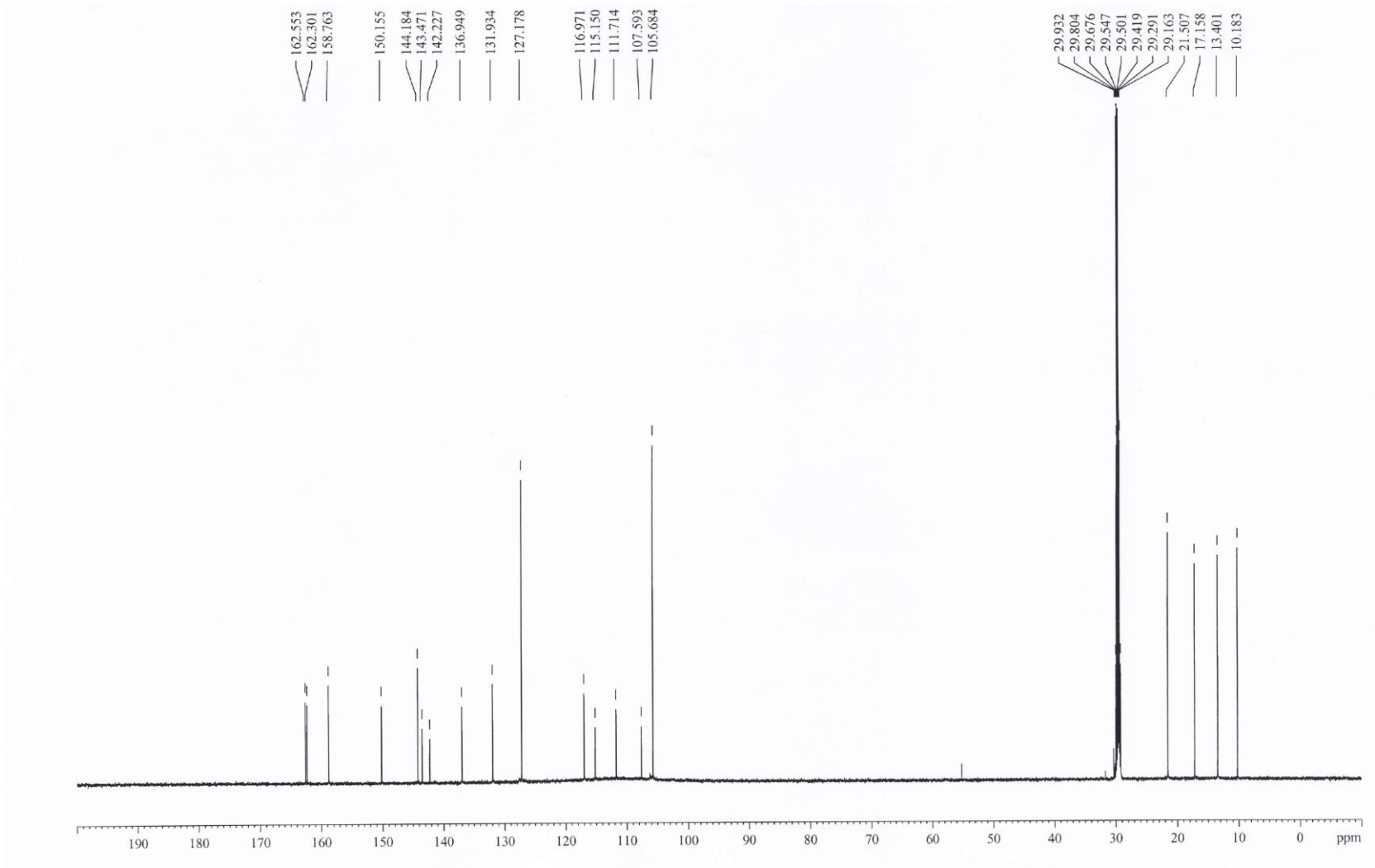

Fig. S3. $^{1}$H NMR spectrum (acetone-$d_6$) of aspergillusidone E (**2**)

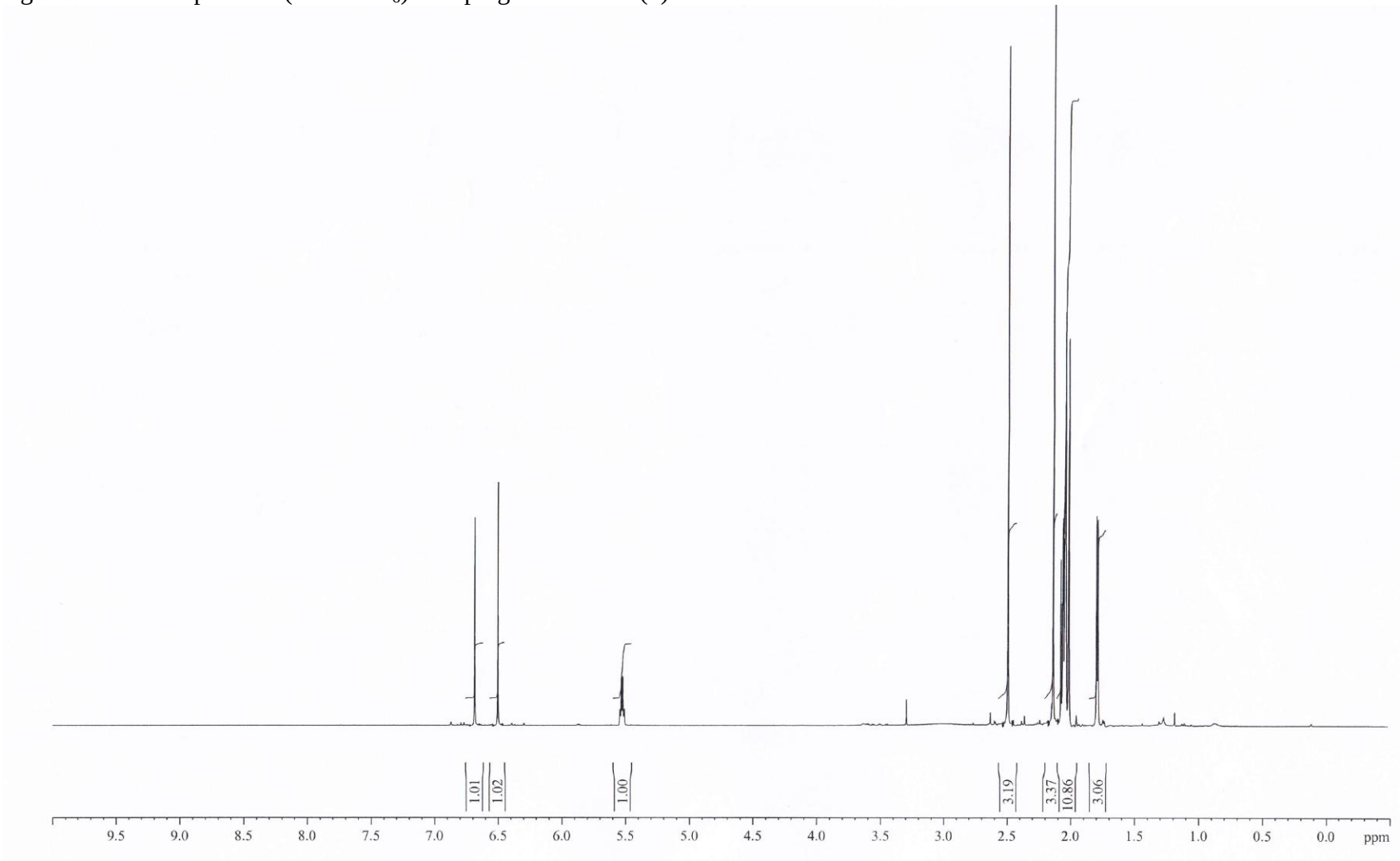

Fig. S4. $^{13}$C NMR spectrum (acetone-$d_6$) of aspergillusidone E (**2**)

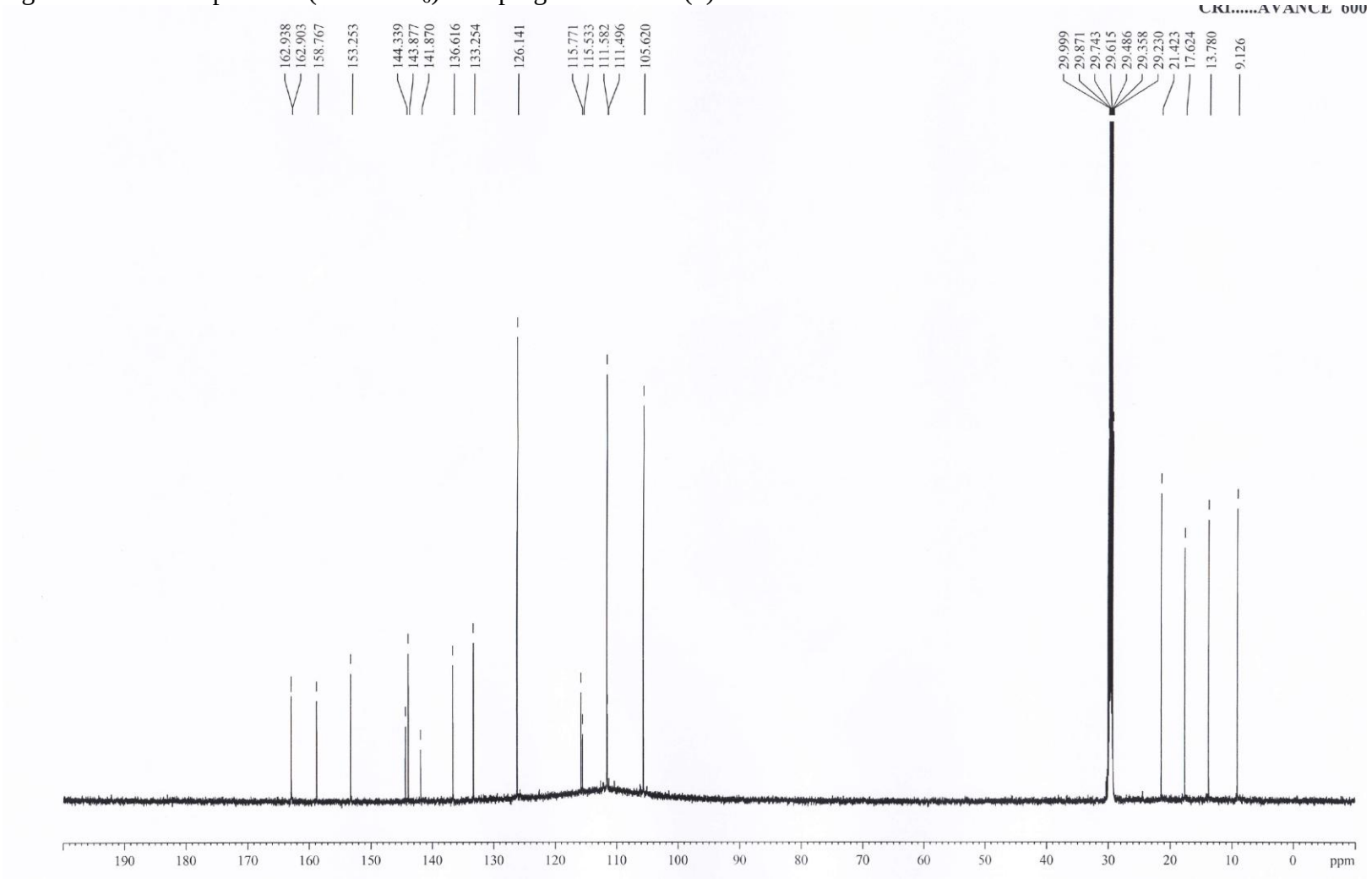

Fig. S5. $^{1}$H NMR spectrum (acetone-$d_6$) of aspergillusidone F (**3**)

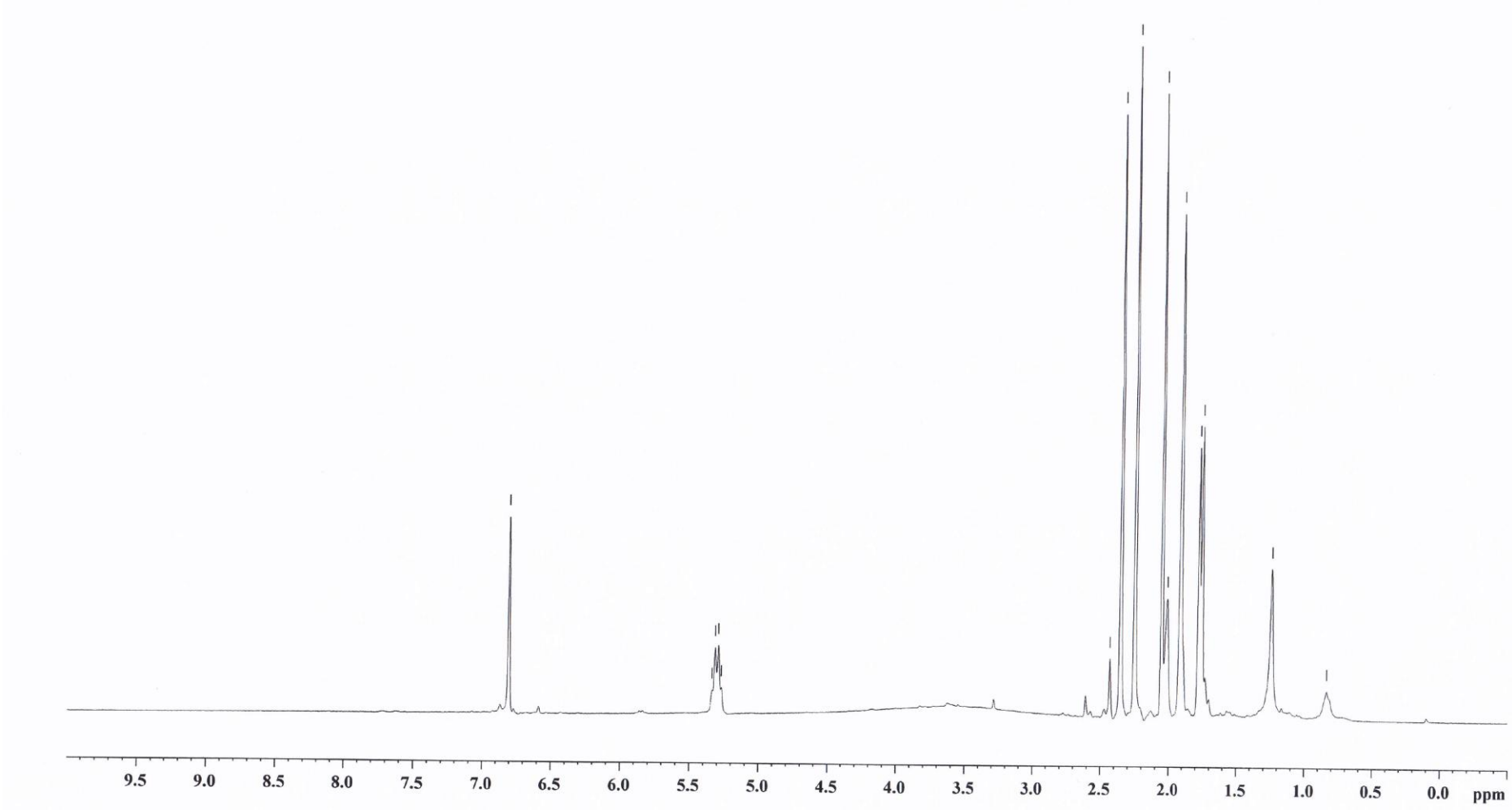

Fig. S6. $^{13}C$ NMR spectrum (acetone-$d_6$) of aspergillusidone F (**3**)

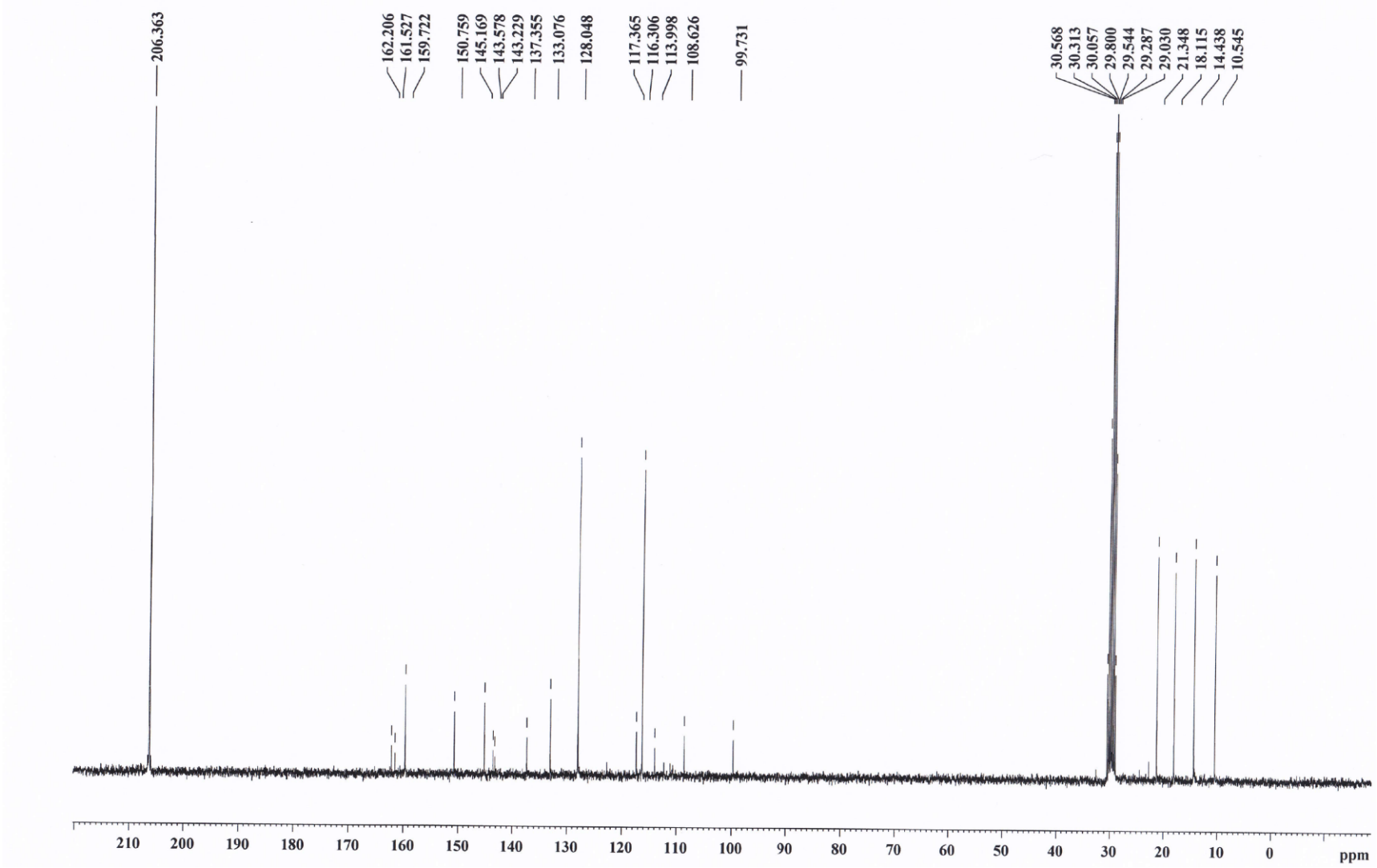

Fig. S7. $^{1}$H NMR spectrum (acetone-$d_6$) of aspergillusphenol A (**4**)

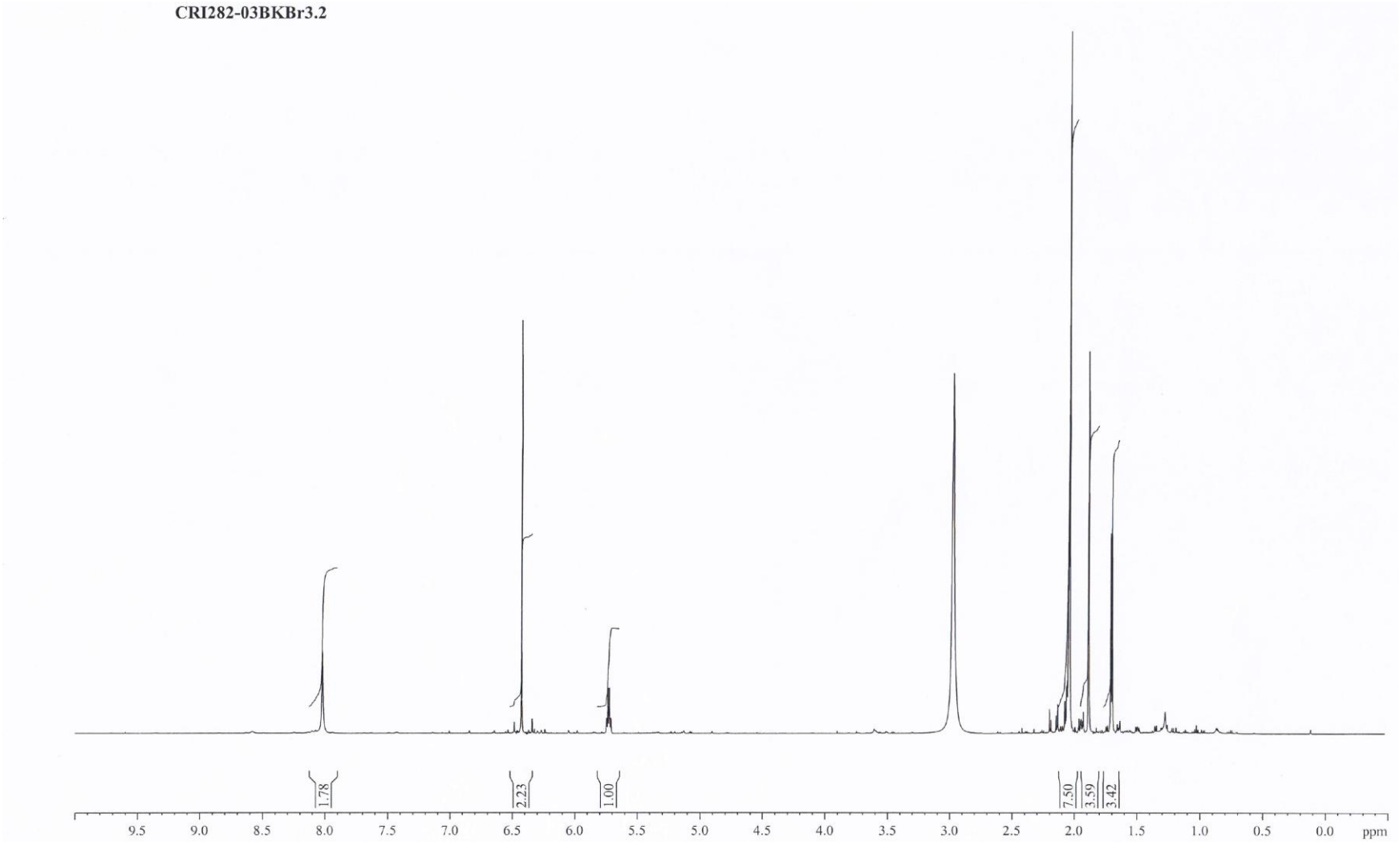

Fig. S8. $^{13}C$ NMR spectrum (acetone-$d_6$) of aspergillusphenol A (**4**)

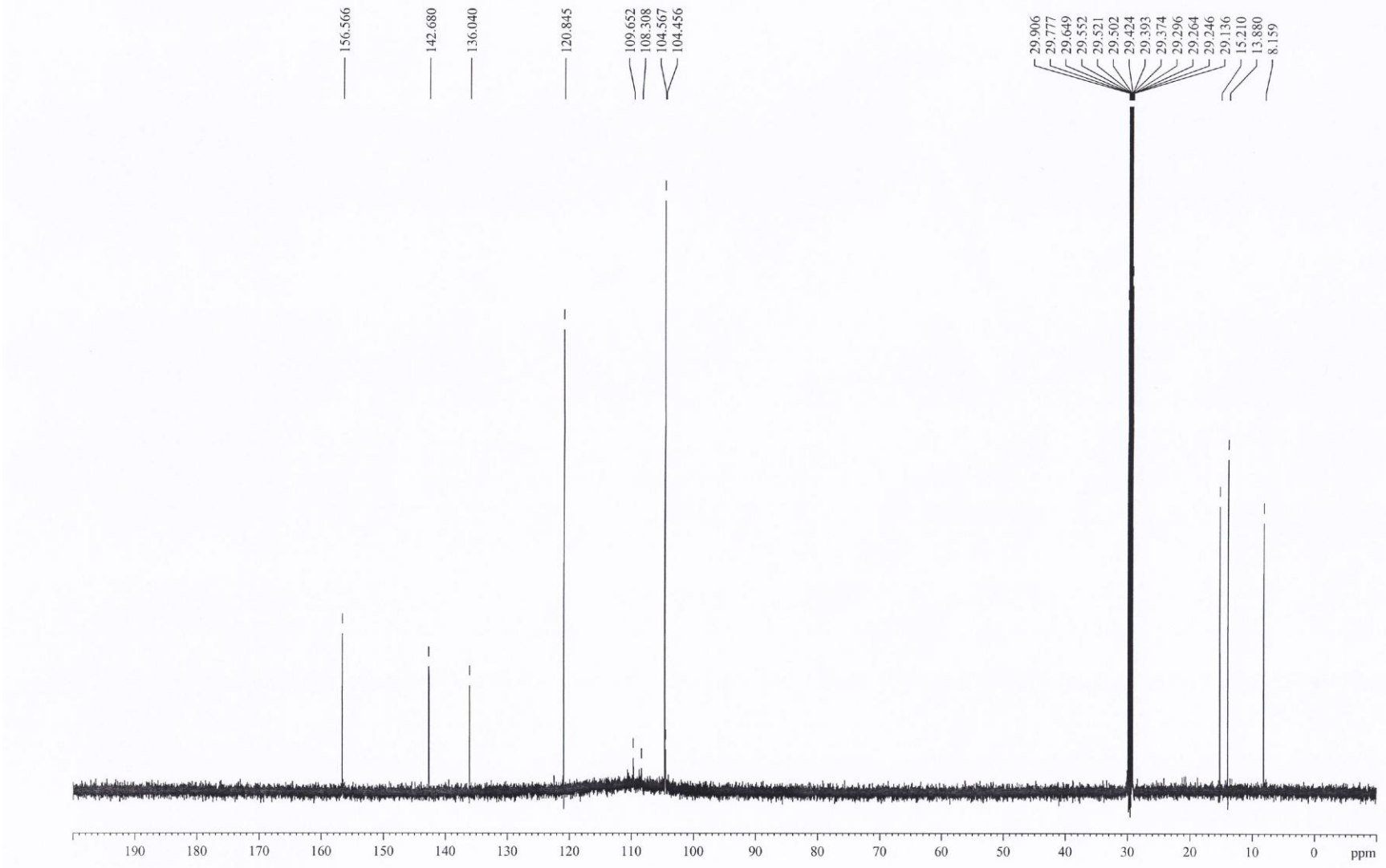

Fig. S9. $^{1}$H NMR spectrum (acetone-$d_6$) of aspergillusphenol B (**5**)

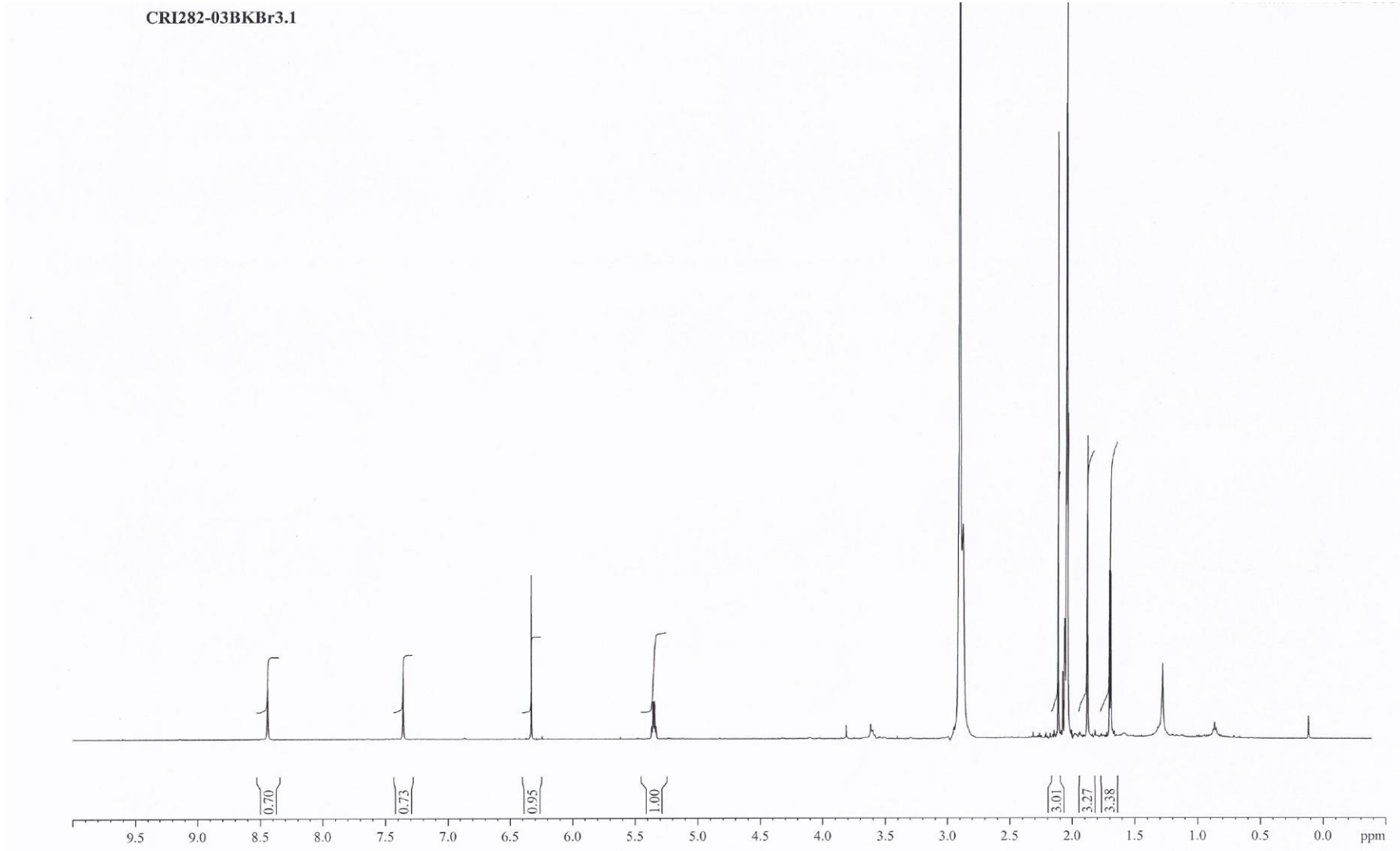

Fig. S10. $^{13}$C NMR spectrum (acetone-$d_6$) of aspergillusphenol B (**5**)

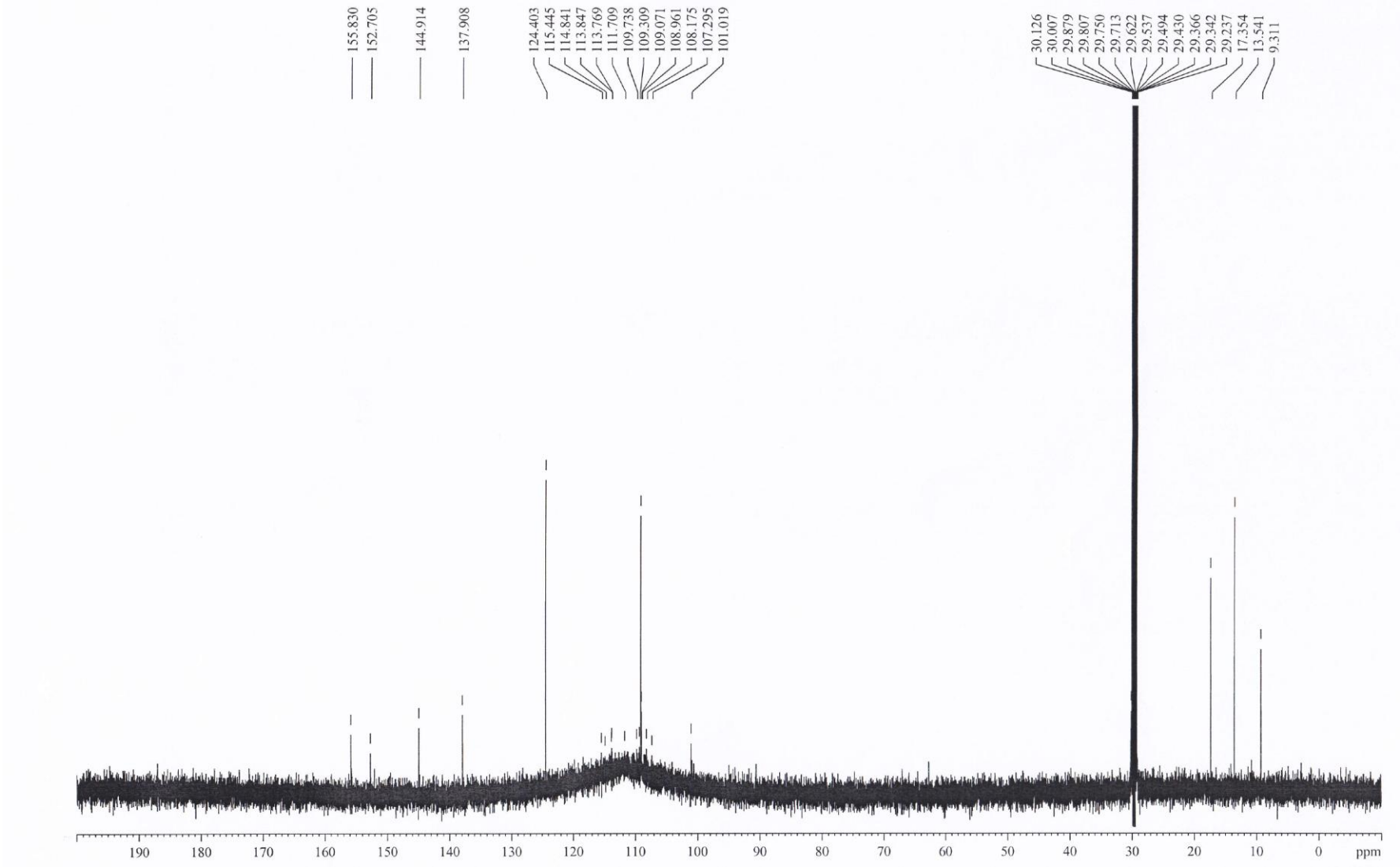

Fig. S11. $^{1}$H NMR spectrum (acetone-$d_6$) of 2,4-dichlorounguinol (**9**)

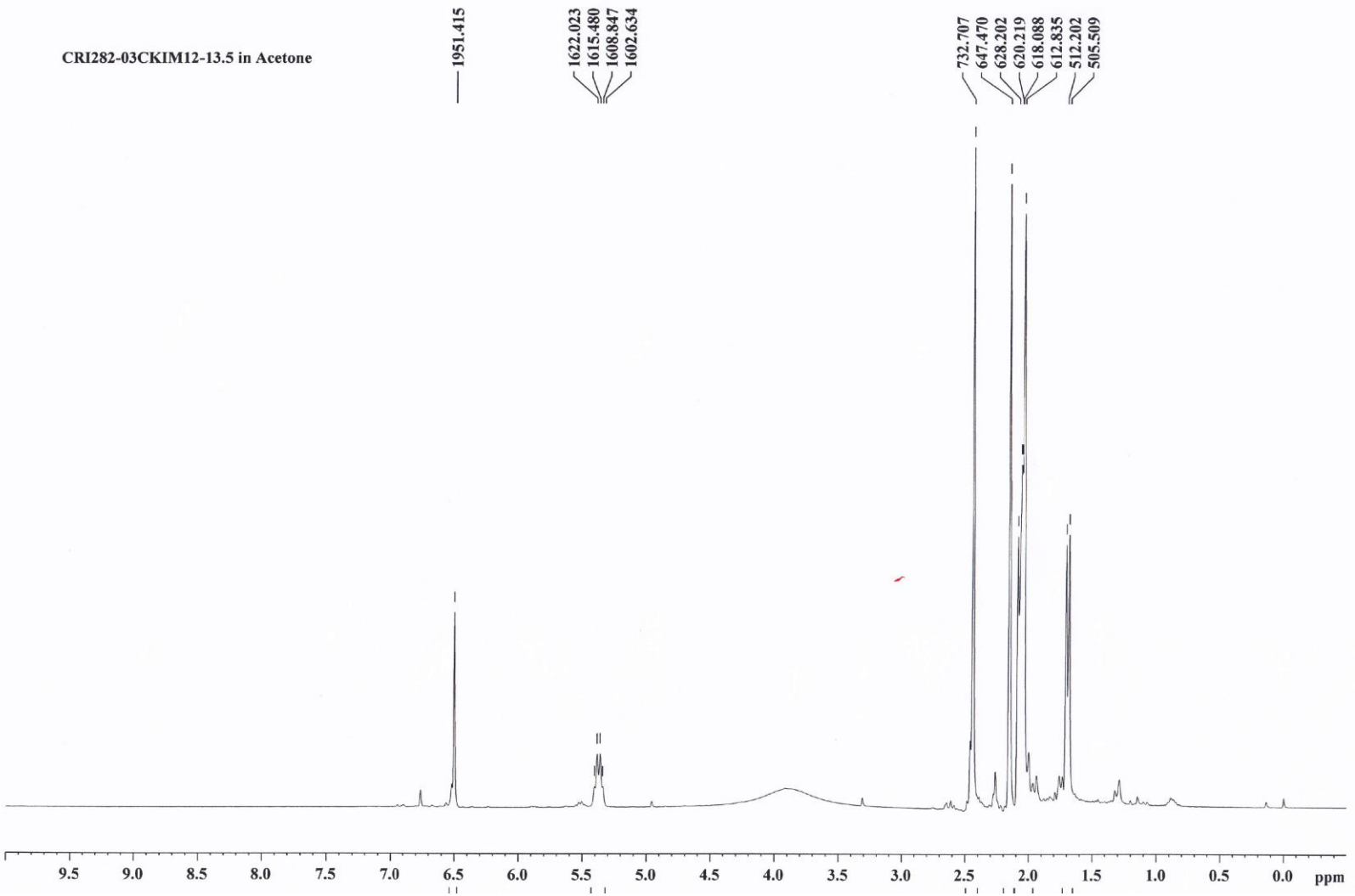

Fig. S12. $^{13}C$ NMR spectrum (acetone-$d_6$) of 2,4-dichlorounguinol (**9**)