

Isolation and Identification of *Streptomyces* sp. Act4Zk, a Good Producer of Staurosporine and Some Derivatives

Zahra Khosravi Babadi^{1,2,*†}, Gholam Hossein Ebrahimipour¹, Joachim Wink², Abolfazl Narmani^{3,4} and Chandra Risdian^{2,5}

¹Department of Microbiology & Microbial Biotechnology, Faculty of Life Sciences and Biotechnology, Shahid Beheshti University GC, Tehran, Iran.

² Microbial Strain Collection, Helmholtz Centre for Infection Research GmbH (HZI), Inhoffenstrasse 7, 38124 Braunschweig, Germany.

³ Department of Plant Protection, Faculty of Agriculture, University of Tabriz, Tabriz, Iran

⁴ Department of Microbial Drugs, Helmholtz Centre for Infection Research and German Centre for Infection Research (DZIF), partner site Hannover/Braunschweig, Inhoffenstrasse 7, 38124 Braunschweig, Germany

⁵ Research Unit for Clean Technology, Indonesian Institute of Sciences (LIPI), Bandung 40135, Indonesia

* Correspondence: zahrakhosravi1365@yahoo.com ; Tel.: +989372849677; Fax: +982122432706

Fig.S1 A: LC/MS chromatogram for compound 1, t_r=6.56 min; Rt(buffer)=12.4 min; Staurosporin (compound 1) **B:** UV spectrum of compound 1; **C:** ESI-HRMS spectrum, showing the prominent ion clusters.

*

Fig.S2 **A:** LC/MS chromatogram for compound 2, $t_r=8.60$ min; $R_t(\text{buffer})=15.86$ min; Antibiotic MLR 52 (compound 2) **B:** UV spectrum of compound 2; **C:** ESI-HRMS spectrum, showing the prominent ion clusters.

Fig.S3 **A:** LC/MS chromatogram for compound 3, $t_r=8.22$ min; $R_t(\text{buffer})=14.85$ min; Antibiotic K 252d Staurosporin-derivative (compound 3) **B:** UV spectrum of compound 3; **C:** ESI-HRMS spectrum, showing the prominent ion clusters.

Fig.S4 Staurosporine standard Maxis **A:** UV spectrum of Staurosporine; **B:** ESI-HRMS spectrum.

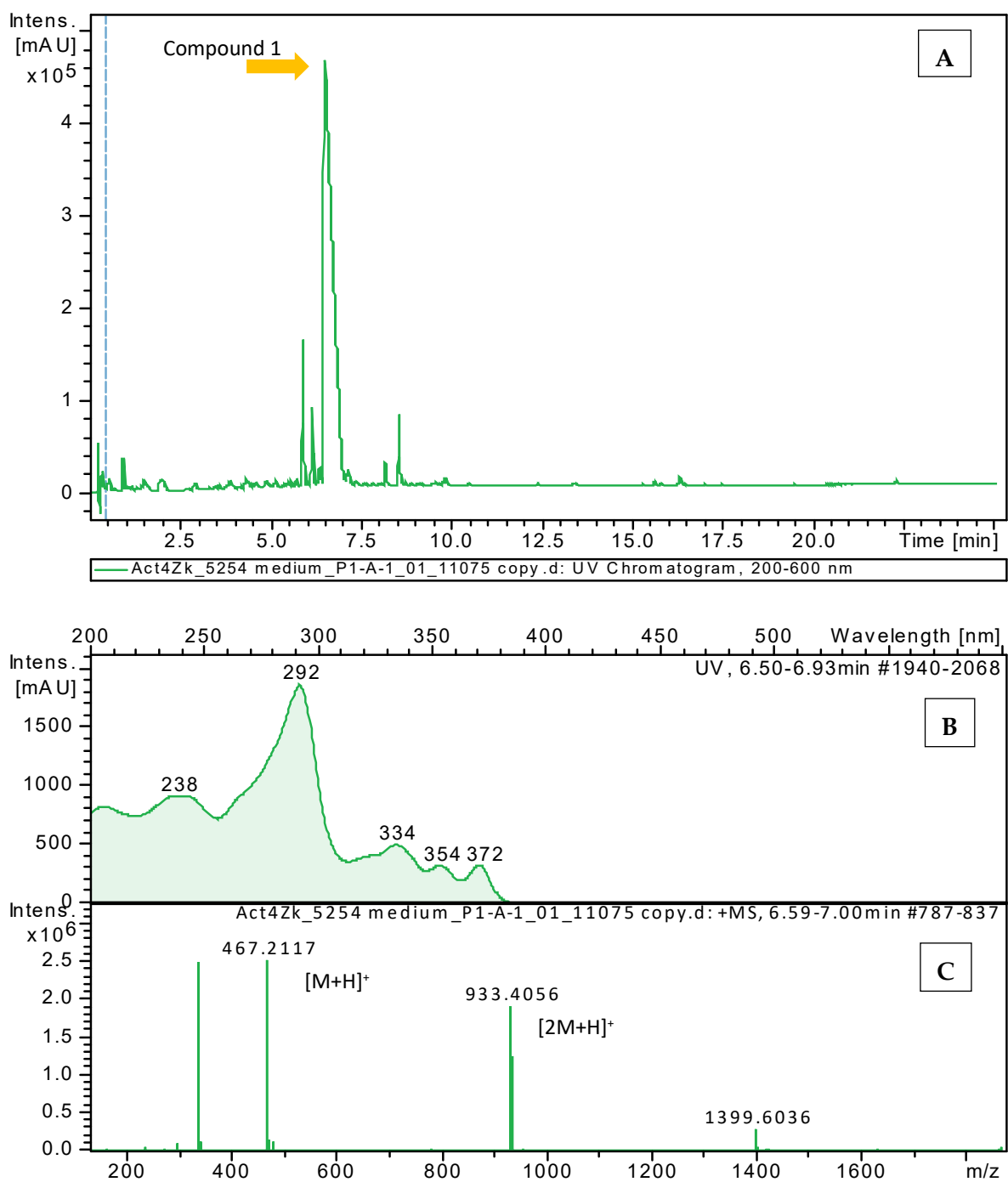


Figure S1. A: LC/MS chromatogram for compound 1, $t_r=6.56$ min; $R_t(\text{buffer})=12.4$ min; Staurosporin (compound 1) **B:** UV spectrum of compound 1; **C:** ESI-HRMS spectrum, showing the prominent ion clusters.

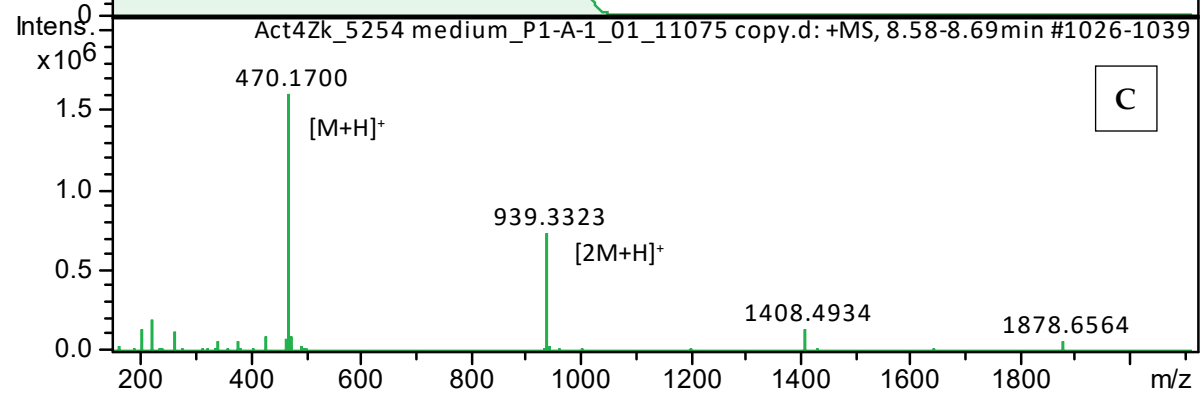
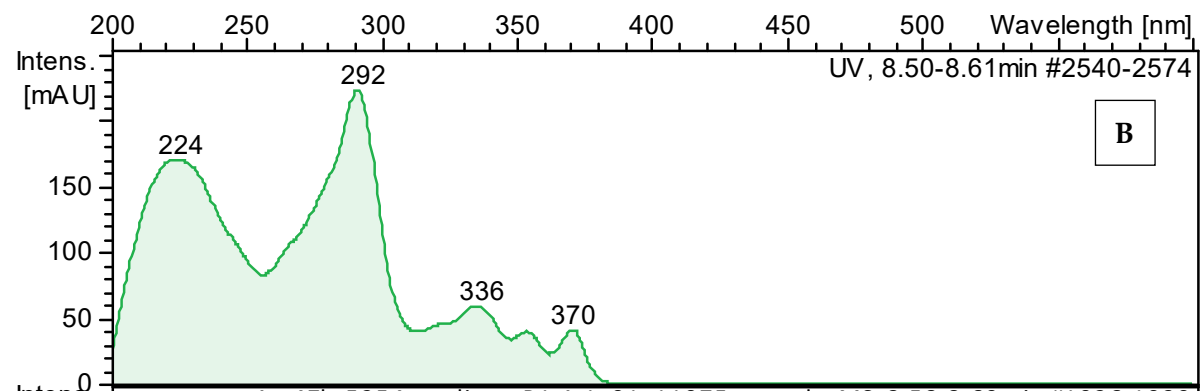
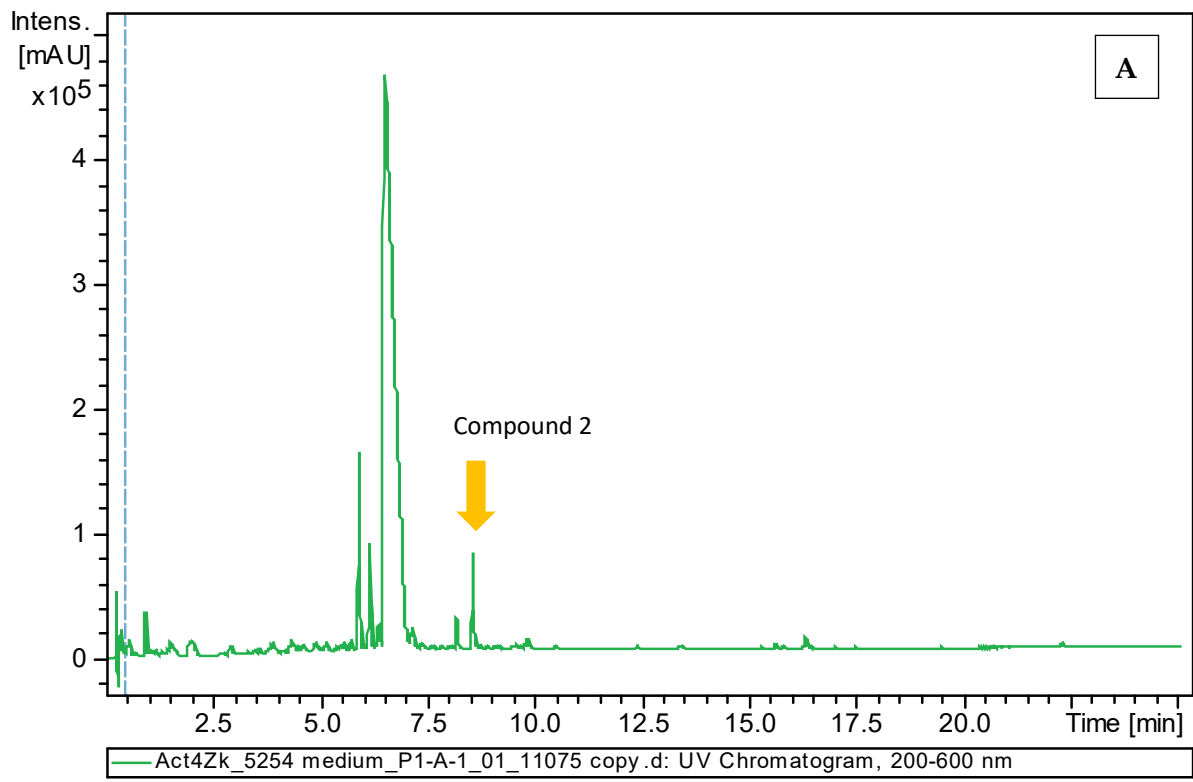


Figure S2 A: LC/MS chromatogram for compound 2, $t_r=8.60$ min; $R_t(\text{buffer})=15.86$ min; Antibiotic MLR 52 (compound 2) **B:** UV spectrum of compound 2; **C:** ESI-HRMS spectrum, showing the prominent ion clusters.

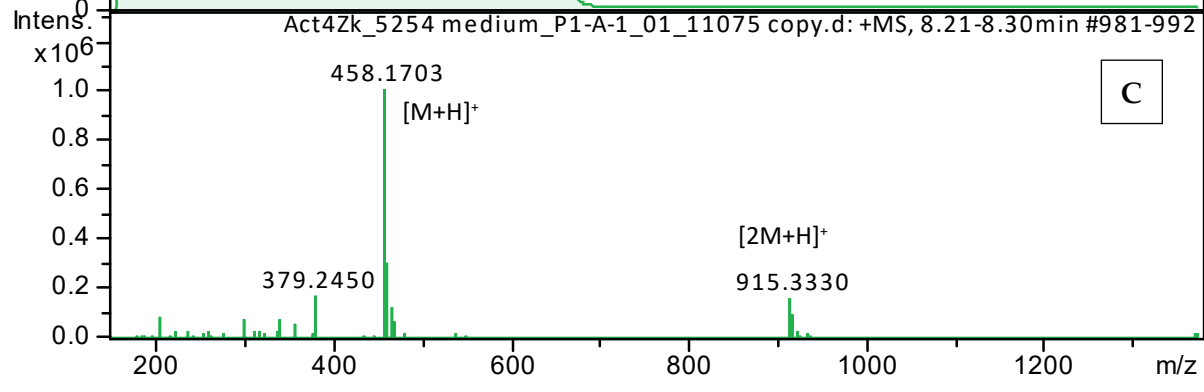
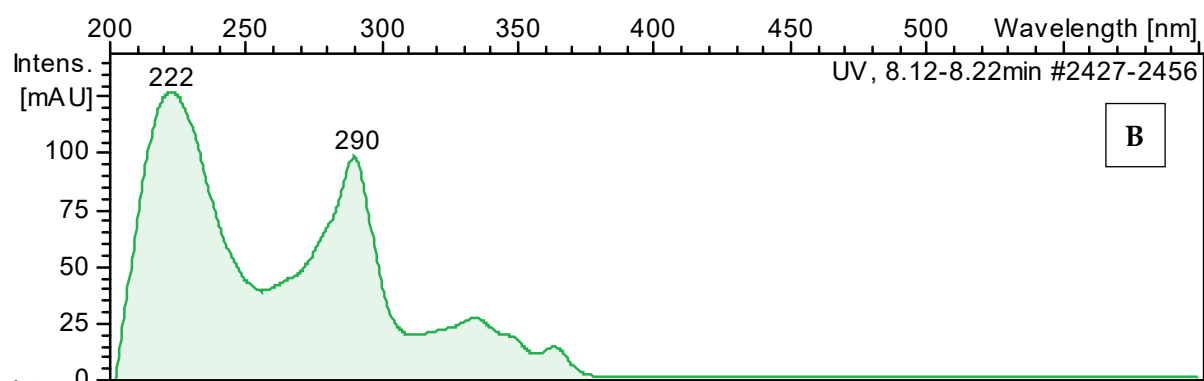
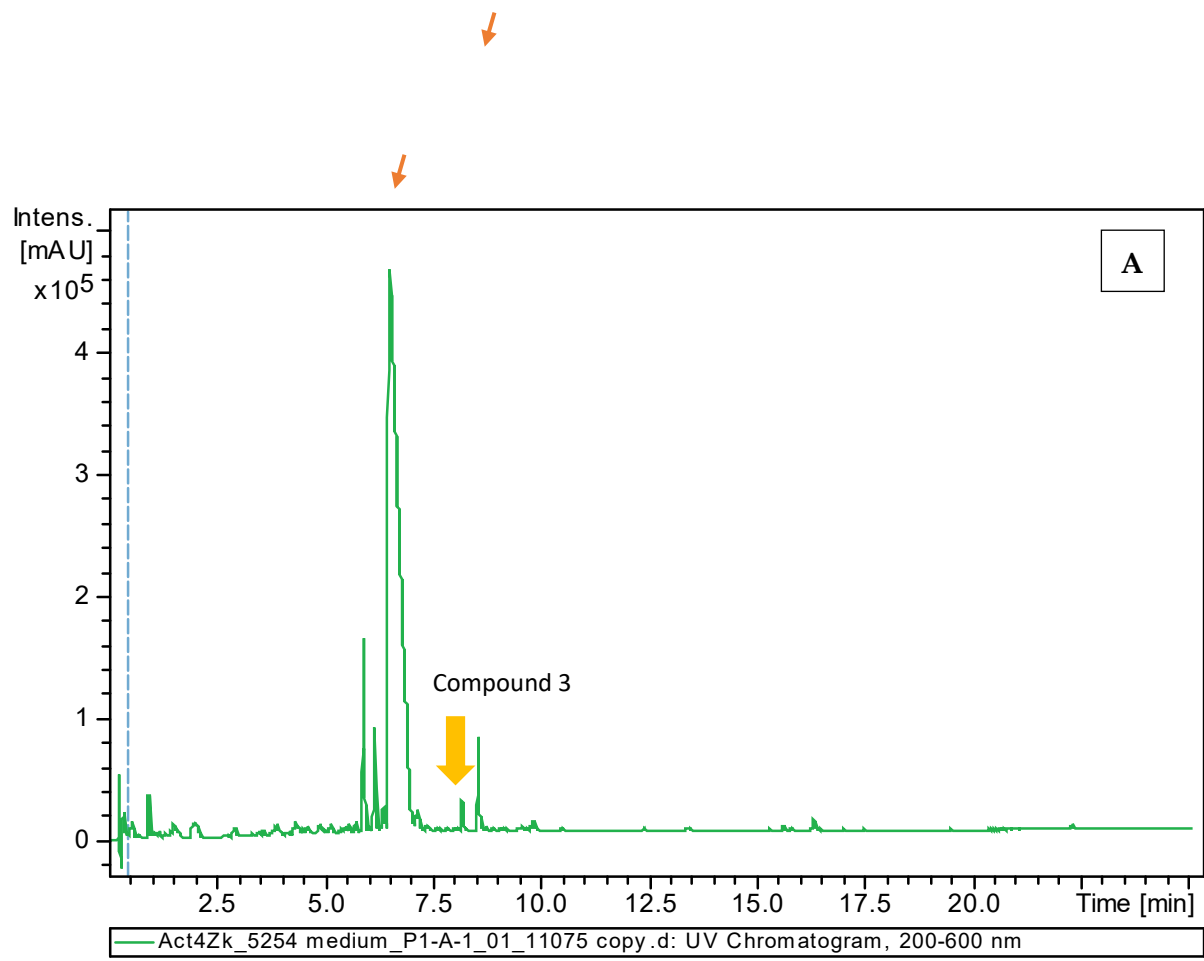


Figure S3 A: LC/MS chromatogram for compound 3, $t_r=8.22$ min; $R_t(\text{buffer})=14.85$ min; Antibiotic K 252d Staurosporin-derivative (compound 3) B: UV spectrum of compound 3; C: ESI-HRMS spectrum, showing the prominent ion clusters.

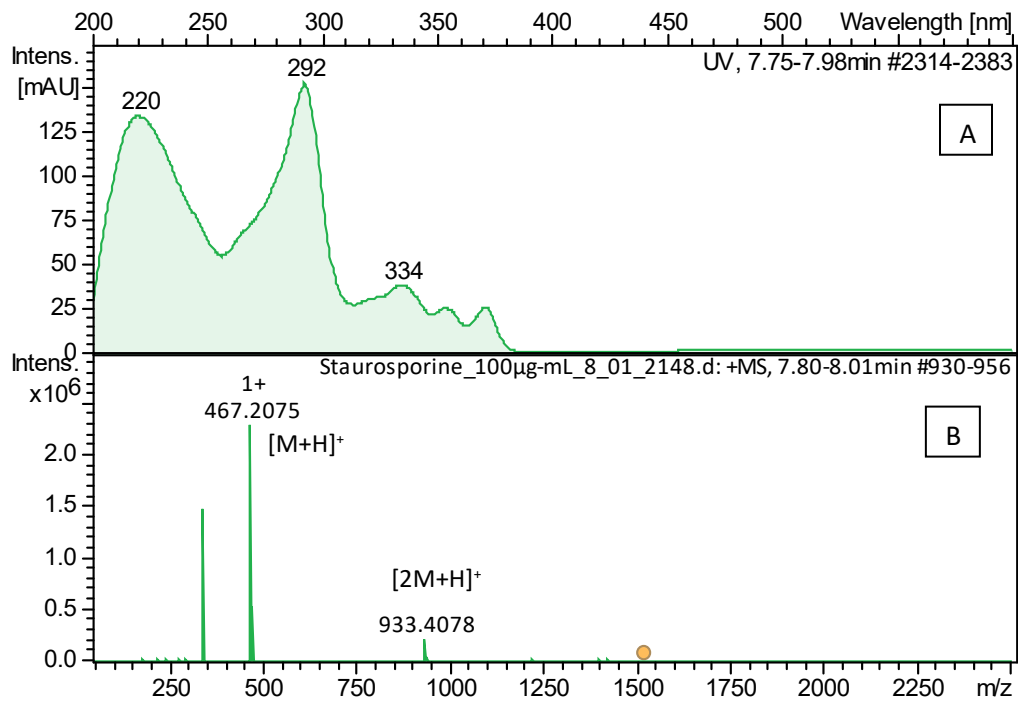


Figure S4, Staurosporine standard Maxis **A**: UV spectrum of Staurosporine; **B**: ESI-HRMS spectrum.

