Supplementary Material (ESI) for Organic and Biomolecular Chemistry

Supplemental Material for

A Cryptic PKS/NRPS Gene Locus in the Plant Commensal *Pseudomonas fluorescens* Pf-5 Codes for the Biosynthesis of an Antimitotic Rhizoxin Complex

Nicole Brendel,[a] Laila P. Partida-Martinez,[a] Kirstin Scherlach and Christian Hertweck*[ab]

[a] *Leibniz Institute for Natural Product Research and Infection Biology, HKI, Beutenbergstr. 11a, D-07745 Jena, Germany. Fax: + 49 3641 656705; Tel: + 49 3641 656700; E-mail: Christian.Hertweck@hki-jena.de*
[b] *Friedrich-Schiller-University, Jena, Germany*

Figure S1. Gel photograph showing results of PCR targeting the *kan* resistance cassette. 1, 1 kb marker; 2, negative control; 3, pK19 as template; 4, *P. fluorescens* Pf-5 genomic DNA as template; 5, genomic DNA of *P. fluorescens* Pf-5 mutant with disrupted AT gene as template.

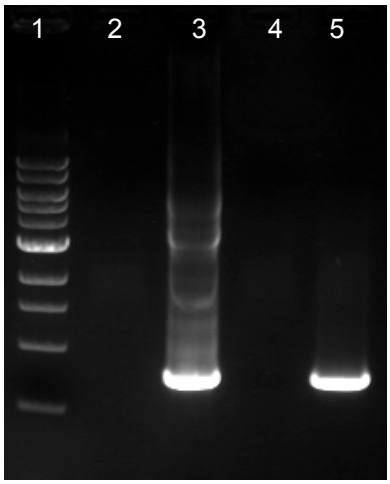
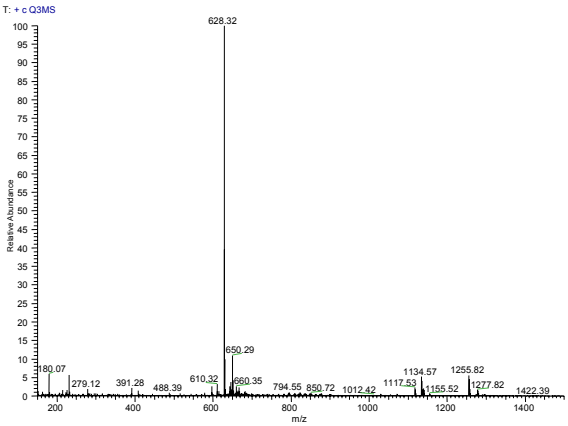


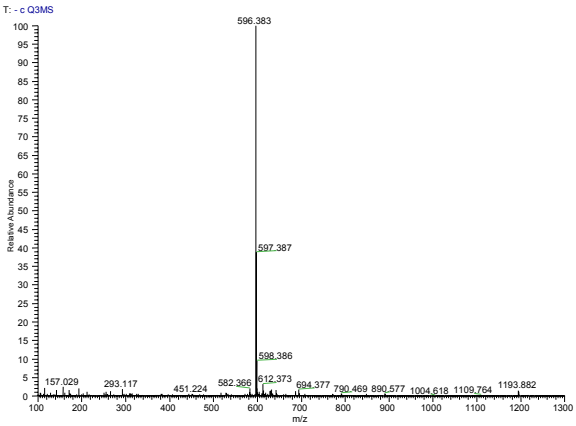
Table S1. Deduced gene functions encoded by the *rzx* gene cluster.

Deduced protein	Size (aa)	Proposed function	Closest relative [origin]	Identity/ Similarity	Accesion number
RzxA [PFL2997]	1920	PKS-NRPS; domains: GNAT, ACP, (KS), HC	PKS-NRPS [*Burkholderia* sp. B1]	67% / 77%	CAL69888
RzxB [PFL2989]	6802	PKS-NRPS; domains: A, PCP, OXY, (KS), ACP, KS, DH, KR, MT, ACP, KS, DH, KR, ACP, ACP, KS, DH, KR	PKS-NRPS [*Burkholderia* sp. B1]	68% / 78%	CAL69889
RzxC [PFL2990]	5235	PKS; domains: MT, ACP, KS, KR, MT, ACP, KS, KR, ACP, KS, KR, MT, ACP	PKS [*Burkholderia* sp. B1]	69% / 78%	CAL69890
RzxD [PFL2991]	4159	PKS; domains: KS, DH, KR, ACP, KS, DH, KR, MT, ACP, (KS)	PKS [*Burkholderia* sp. B1]	69% / 77%	CAL69891
RzxE [PFL2993]	4257	PKS; domains: (ACP), KS, KR, ACP, KS, DH, KR, ACP, (KS), B, ACP,	PKS [*Burkholderia* sp. B1]	70% / 80%	CAL69893
RzxF [PFL2994]	2616	PKS; domains: KS, DH, KR, ACP, (KS), ACP, TE	PKS [*Burkholderia* sp. B1]	69% / 79%	CAL69894
RzxG [PFL2996]	665	acyl transferase	malonyl CoA-acyl carrier protein transacylase [*Burkholderia* sp. B1]	70% / 81%	CAL69887
RzxH [PFL2992]	485	cytochrome P-450 monooxygenase	cytochrome P-450 monooxygenase [*Burkholderia* sp. B1]	80% / 88%	CAL69892
RzxI [PFL2995]	288	*O*-methyltransferase	O-methyltransferase [*Burkholderia* sp. B1]	76% / 86%	CAL69886

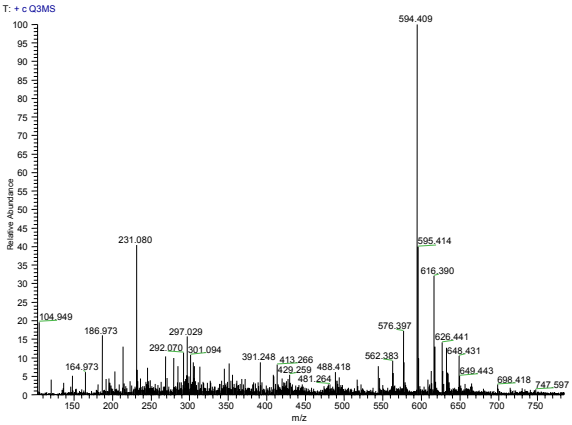
Figure S2. Mass spectra of rhizoxin derivatives produced by P. fluorescens Pf-5



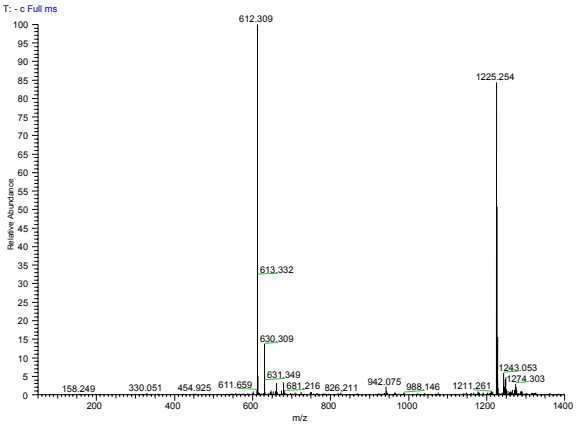
Rhizoxin S2: m/z 628 [M+H]



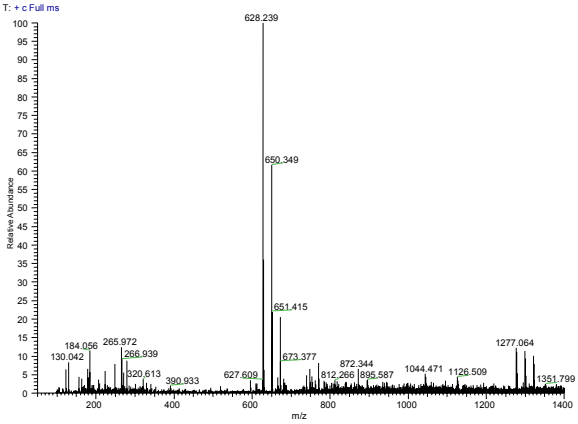
Rhizoxin D3: m/z 596 [M-H]



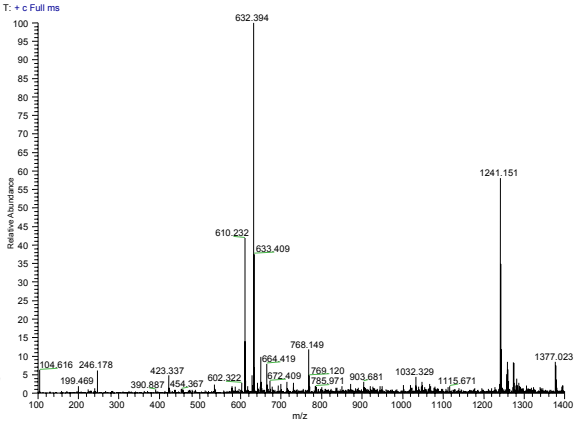
Rhizoxin D2: m/z 594 [M+H]



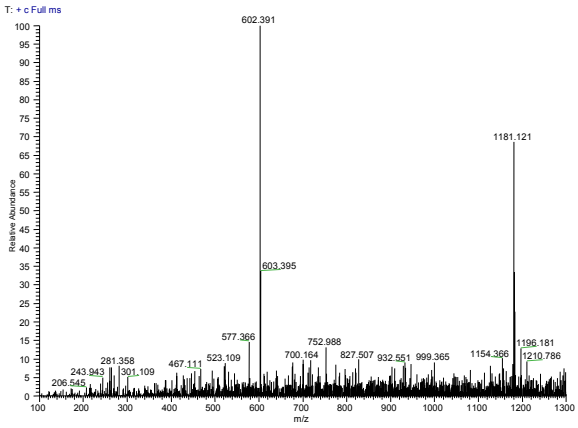
Rhizoxin S1: m/z 612 [M-H]



Rhizoxin Z1: m/z 628 [M+H]



WF1360F: m/z 632 [M+Na]



Rhizoxin D1: m/z 602 [M+Na]