Supplementary Materials

Interaction of a novel Zn2Cys6 transcription factor DcGliZ with promoters in the gliotoxin biosynthetic gene cluster of the deep- sea-derived fungus *Dichotomomyces cejpii*

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Supplementary Figures

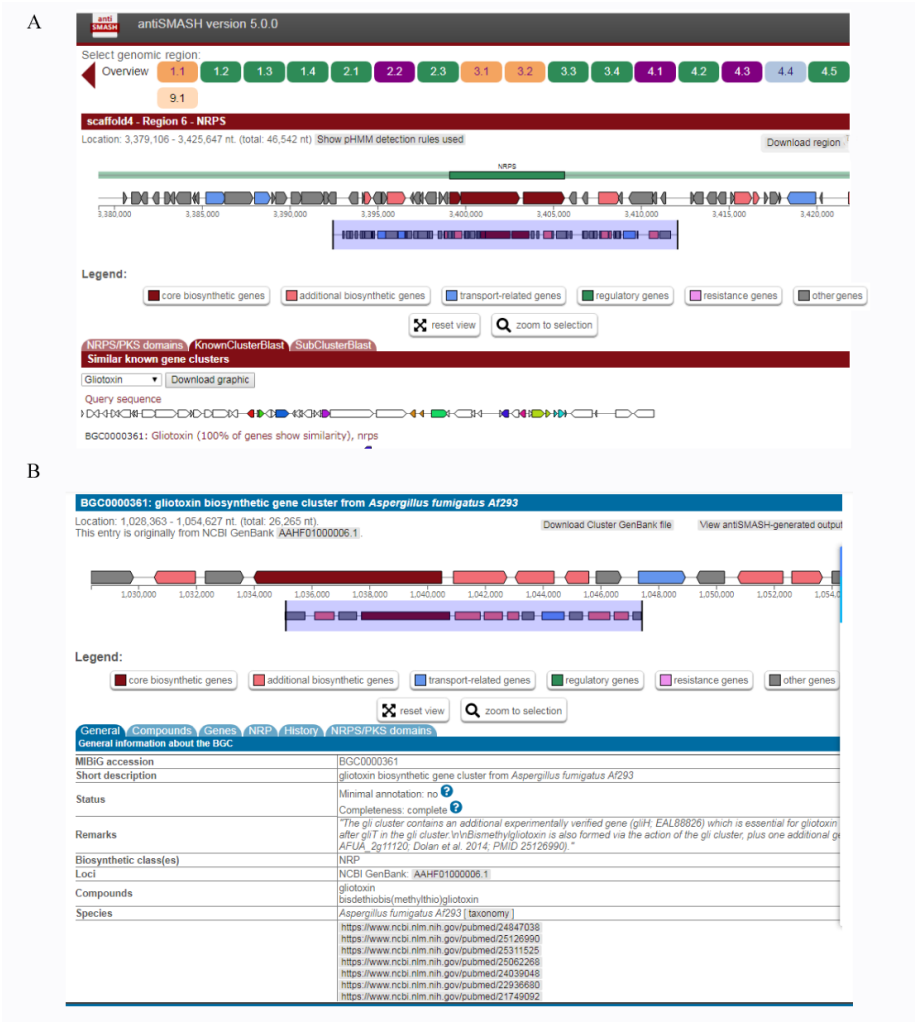

Fig. S1 The prediction of gliotoxin biosynthesis gene cluster of *D. cejpii* and the similarity with other *gli* cluster: A) the prediction of *gli* cluster of *D. cejpii* by antiSMASH 5.0.0; B) the annotation of gliotoxin biosynthetic cluster in *A. fumigutas* Af293.

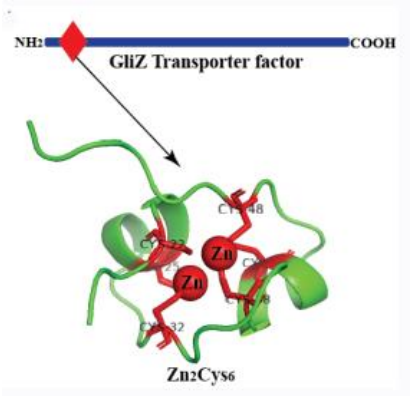

Fig.S2. Prediction of transcriptional factor DcGliZ regulatory region and the putative 3-D structure using the programs of Pfam, SWISS-MODEL and PyMol.

Table S1 The primers used in this study

Primer	Sequence
DcgliZ(core)-F	TGTTTAACTTTAAGAAGGAGATATACAATGTCGCCATTGTCCGATTCCCAG
DcgliZ(core)-R	CAGTGGTGGTGGTGGTGGGTGTCGCTTATTGTGGTGTCGG
DcgliZ-F	TGTTTAACTTTAAGAAGGAGATATACAATGTCGCCATTGTCCGATTCCCAG
DcgliZ-R	AGTGGTGGTGGTGGTGGTGGAGCAGATTACAGAGCCTGCTCTGCAG
pET22b-F	TGTATATCTCCTTCTTAAAGTTAAACAAAAT
pET22b-R	CACCACCACCACCACCACTGAGATCC
pG-F	GTTTCTATGTCTATATCGGAGG
pG-R	CGAAGAGAACCAGCCTGTCC
pI-F	ATTATGCGTTTGTATATTTGAGGC
pI-R	CTGAGTCTCCTCTATTGTGGTC

pM-F	TAGTCTATCACTGAACAGTTGAATG
pM-R	TGTGATCGAGCTCAACTGATTG
pN-F	TTACTTCTTGGTCTACTCCGTATT
pN-R	GATGATGTTTAGTTGATTTTGCTG
pCP-F	TGATTTGGGCCGTCTGGCTG
pCP-R	GATTGAGATGAGGAACAGAGACG
pTF-F	GTTTGGGAAATTCTAACAAGAGTG
pTF-R	GGTATCCTGTTGCCACCTG
pA-F	CTTGACACCAGCAGAGGAGAG
pA-R	ATGCCCTGGTTACTGGATTG

TablTable S2. The kinetics parameter between DcGliZ and pG, pM, pN, pCP

Sample	ka(1/Ms)	kd(1/s)	K_D(M)	Rmax(RU)	$Chi^2(RU^2)$	Ligand	Model
pG	8.30E+04	1.32E-02	1.60E-07	16.5	6.87	DcGliZ	1:1 binding
pM	7.43E+04	1.21E-02	1.62E-07	12.9	4.24	DcGliZ	1:1 binding
pN	8.99E+04	9.39E-03	1.04E-07	13.0	7.27	DcGliZ	1:1 binding
pCP	1.02E+07	1.68E-02	1.65E-09	153.6	4.44E+05	DcGliZ	1:1 binding

ka: association rate constant, kd: dissociation rate constant

pG promoter sequence:

GTTTCTATGTCTATATCGGAGGAGTGATCAACGGCGTCCGAAAATTCGGCCCGCGGCTGT

CTTAGGGCTGGCCTGCAGGTGTAGGGTTCATTATGAAAGACTGGTAGTATTATGCTGCTA

TTTAGTCAAAAGCAGAAGAACAGTTTGTCTTTAGACCTTGAATAGATATCTGTCAAGACA

AGAGCCAAGAAAGTCCCATCACCATGGCAGACATGACCGAACGACCTTCTGATCTCGTTG

TGGACAGGCTGGTTCTCTTCG

pI promoter sequence:

ATTATGCGTTTGTATATTTGAGGCAAGGCATACCAGAAACAGTCGTTATATATTCAGTTT

CCTTGAGATGCTACATTCGGTGGCCGAAAGGGGATATGCCGACGAAAGGATGTCGATTCT

TCTTCATCGGCCTCCGAATATGTTCGAGACTGGCATATCCCAGTTTACTTATACAGAGGA

ACCATATTTCAACCCTCTAGCTGAATCTGCCTTGTCTACCTTCCCAAATCCAGGTGGATT

GATCTTGCCAGTTTATGACCACAATAGAGGAGACTCAG

pM promoter sequence:
TAGTCTATCACTGAACAGTTGAATGAATTTGTTTCAAGACAGCTAAAGCTCCATTCTAGC

CGTACGTACTGGTAGTTCTCCGCATAGAAACATATATCTCTCTGCTTGGTCAAAGTCAGG

TATCGCCGACAAGTCTTAATATCTGCAGAGTATTCGGTGACCGAAATAGGGTCGGAATAT

AAGCCATATATATCACTGTTCTGGAAATCAAGAAAATATAACAGTTGAATACTCACTTTT

CTAACATTCCAACAATCAGTTGAGCTCGATCACA

pN promoter sequence:
TTACTTCTTGGTCTACTCCGTATTGTGAATCGAAATGAGATAGAAGTATAGTTCTACTGT

ACTGGTTTCTATCTGCTTAAAATAAATACAATTGTGCCTTCTATACAGATCAGTATGTAG

AATGAACTGATAGACCTCCAGGAGGTTCTTCCTCCGAGCCTGCAACGCCCAAGAGGAGAA

CTGTGCATACGCCAGGACAGATTTTCGGCCTCCGAAAAGGACTGAGGATAGTATCTGCCA

TGTTTATATATAACTGAGGGAATAGACCAGGTAGATAACAGCAAAATCAACTAAACATCA

TC

pCP promoter sequence:
TGATTTGGGCCGTCTGGCTGTAAGACAACAGGCAAACACATCTGATGTGGTGTCCGGGGA

GGACGGCATATGAAGCATCCGAATTCCTCATATCAAAAGATCCTGTATTCAACAATCAGA

CCACCATGTCTACTTCCTCCCGTCCTATCTGATCGTCGTCTCTGTTCCTCATCTCAATC

pTF promoter sequence:
GTTTGGGAAATTCTAACAAGAGTGGAAGAACGAAAGGAATATTTACTTTGTTAAGATAGA

CCAGCAAACTATCTATTTATTAAGAACCACTCGGGGACTTTCCCCCTCGGCAGCCGAAAA

AAGTGTCCGCGGCGAGATTGTGGATCTGGCATGATCATTTATACAAATGGATAATTCCAT

GAGCTATTAATAAAGATGCAGGTATATTGTTTTCTGAAAGCATAAAAGACAGCCGAAGTA

TACAGACAACAGGCAGGTGGCAACAGGATACC

pA promoter sequence:
CTTGACACCAGCAGAGGAGAGAAAAGAAAGCAGATGTGGATATGTTTCAATCAGGGGTTG

AGTAGTTGGAATTCTGAGGGTAGAAGAAGGAAAAGATGTTGATCAGGGAGGCATTTGTAT

GTTTCCTTGTCGGAGACATGGAGACATATACACATAACAGGTAATAGGATATTGGTTAAT

GCAGCCTTCTAGACCAGGATCACTTGTCAGCAAGATGGCCTGGCCTCTGATCAGCCTATT

CATTGTTTCTGAGGGCAGTATAAGAATACTTGACCAACTGTGCTTTGTGTACAATCCAGT

AACCAGGGCAT