

**Table S2.** Bioluminescence values for the indicated strains and conditions. Number of biological replicates are indicated (X). nd = no data.

	Time (min)	Nitrogen source		
		NH <sub>4</sub> <sup>+</sup>	NO <sub>3</sub> <sup>-</sup>	-N
PipX-PII ( <i>pipXglnB</i> )	Pre-culture (5)		10190 ± 949	
	0 (5)	20578 ± 5687	20423 ± 4903	21857 ± 3644
	15 (5)	11376 ± 3927	9908 ± 3191	9166 ± 3052
	30 (1)	14556	8565	3716
	45 (5)	71172 ± 19042	57328 ± 26704	30305 ± 10466
	60 (5)	80765 ± 21748	48768 ± 22756	19155 ± 13107
	120 (5)	64529 ± 18988	34561 ± 18267	10025 ± 3702
	180 (5)	46249 ± 14341	26102 ± 12850	8037 ± 3738
	240 (5)	41024 ± 14048	26048 ± 8263	7448 ± 3418
PipX-NtcA ( <i>pipX</i> )	Pre-culture (3)		4811 ± 1364	
	0 (3)	822 ± 50	671 ± 213	702 ± 208
	15 (3)	783 ± 92	922 ± 322	753 ± 118
	30	nd	nd	nd
	45 (3)	873 ± 116	2518 ± 408	2168 ± 727
	60 (3)	610 ± 291	4029 ± 1134	5284 ± 877
	120 (3)	733 ± 60	922 ± 58	3011 ± 1117
	180 (3)	778 ± 160	1065 ± 239	3726 ± 1695
	240 (3)	994 ± 277	1906 ± 434	3290 ± 1462
PipX ( <i>pipX</i> )	Pre-culture (3)		492 ± 134	
	0 (3)	892 ± 507	1216 ± 354	1045 ± 429
	15 (3)	945 ± 213	1128 ± 328	1071 ± 283
	30	nd	nd	nd
	45 (3)	520 ± 151	956 ± 199	917 ± 406
	60 (3)	640 ± 308	1037 ± 231	777 ± 441
	120 (3)	844 ± 406	980 ± 308	804 ± 223
	180 (3)	783 ± 238	1049 ± 381	565 ± 215
	240 (3)	808 ± 194	1015 ± 332	612 ± 234
PipX ( <i>pipXglnB</i> )	Pre-culture (3)		404 ± 106	
	0 (3)	742 ± 216	1046 ± 307	984 ± 293
	15 (3)	693 ± 57	760 ± 25	802 ± 137
	30	nd	nd	nd
	45 (3)	871 ± 108	885 ± 376	1012 ± 522
	60 (3)	896 ± 121	828 ± 215	1259 ± 171
	120 (3)	1334 ± 301	1128 ± 154	750 ± 6
	180 (3)	787 ± 168	852 ± 208	863 ± 374
	240 (3)	818 ± 78	960 ± 314	913 ± 3

**Table S3.** Bioluminescence values for the indicated strains and conditions. Number of biological replicates (2). nd = no data.

	Time (min)	Nitrogen source		
		NH <sub>4</sub> <sup>+</sup>	NO <sub>3</sub> <sup>-</sup>	-N
PipX-NtcA ( <i>pipX</i> )	Pre-culture		3429 ± 1017	
	0	956 ± 387	1025 ± 610	958 ± 249
	15	790 ± 8	1026 ± 387	856 ± 40
	30	3312 ± 3175	7312 ± 9008	9465 ± 1269
	45	5524 ± 146	10182 ± 5896	11421 ± 120
	60	3928 ± 4481	4572 ± 1691	8549 ± 5312
	120	3485 ± 1291	2393 ± 1075	4043 ± 760
	180	2600 ± 27	3730 ± 528	4468 ± 420
	240	4915 ± 241	2747 ± 381	2946 ± 964
	360	4853 ± 1882	10736 ± 3764	3091 ± 259
PipX-NtcA ( <i>pipXglnB</i> )	Pre-culture		4771 ± 440	
	0	690 ± 7	860 ± 159	712 ± 130
	15	958 ± 464	1271 ± 654	626 ± 40
	30	5283 ± 931	11537 ± 745	5190 ± 2632
	45	6759 ± 1802	8939 ± 3514	6183 ± 1961
	60	3892 ± 1657	4828 ± 996	9822 ± 4011
	120	4579 ± 925	1506 ± 1230	3564 ± 2592
	180	3546 ± 4143	2649 ± 1978	3533 ± 2578
	240	3318 ± 1164	3157 ± 2067	4538 ± 608
	360	2363 ± 1100	13437 ± 251	4415 ± 369

**Table S4.** Bioluminescence values for the indicated strains in the presence or absence of 200  $\mu$ M DCCD. Number of biological replicates are indicated (X).

	Time (min)	-DCCD	+DCCD
PipX-P11 ( <i>pipXglnB</i> )	0	12755 $\pm$ 4028	12393 $\pm$ 2814
	5	10967 $\pm$ 2969	116980 $\pm$ 15137
	10	10057 $\pm$ 3919	149405 $\pm$ 16103
	15	9015 $\pm$ 3142	171105 $\pm$ 9677
	20	8956 $\pm$ 3010	121029 $\pm$ 38618
PipX-NtcA ( <i>pipX</i> )	0	4402 $\pm$ 1451	4864 $\pm$ 865
	5	4262 $\pm$ 1793	1568 $\pm$ 509
	10	4311 $\pm$ 1966	657 $\pm$ 119
	15	4510 $\pm$ 1247	523 $\pm$ 40
	20	4770 $\pm$ 1451	400 $\pm$ 45

**Table S5.** Bioluminescence values for the indicated strains and conditions. Number of biological replicates are indicated (X). nd = no data.

	Time (min)	Nitrogen source		
		NH <sub>4</sub> <sup>+</sup>	NO <sub>3</sub> <sup>-</sup>	-N
PipX-PII ( <i>pipXglnB</i> )	0 (2)	24281 ± 7527	22837 ± 8400	23587 ± 5816
	60 (2)	62194 ± 23344	27850 ± 12282	17449 ± 86
PipX <sup>Y6A</sup> -PII ( <i>pipXglnB</i> )	0 (3)	1996 ± 627	2687 ± 1434	1653 ± 615
	60 (3)	6374 ± 1476	2032 ± 1173	845 ± 189
PipX-NtcA ( <i>pipX</i> )	0 (3)	861 ± 35	673 ± 218	577 ± 139
	60 (3)	4100 ± 2901	4592 ± 1805	8221 ± 4255
PipX <sup>Y6A</sup> -NtcA ( <i>pipX</i> )	0 (3)	851 ± 96	681 ± 40	765 ± 83
	60 (3)	710 ± 50	940 ± 204	867 ± 96
PipX ( <i>pipX</i> )	0 (2)	781 ± 38	899 ± 331	700 ± 107
	60 (2)	433 ± 543	825 ± 338	1106 ± 567