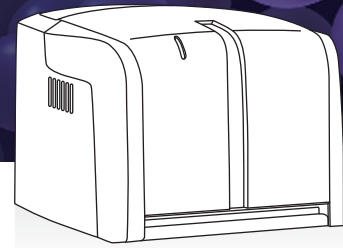
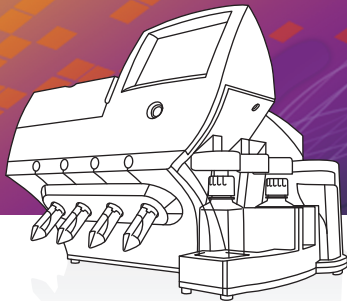


BITS MetaGenome Suite



1 次世代シーケンサ

2 解析実行

BITS MetaGenome Suite (菌叢解析パイプライン) とは、
次世代シーケンサと連動してメタゲノムサンプルの
菌叢を解析します。

3 ジョブ管理

#	run folder	comment	statistical analysis	registered	start	end	status
1	192.168.1.253:130115_M00469_00...	sample_out1	alignment and phylogenetic tree: exec beta diversity: exec 2D-PCA plot: exec alpha diversity: exec category comparison: exec species divergence: exec	Oct 29, 2014 19:27:10	Oct 18, 2013 12:32:10	Oct 18, 2013 12:46:15	Finish
2	192.168.1.253:130115_M00469_00...	sample_out2	alignment and phylogenetic tree: exec beta diversity: exec 2D-PCA plot: exec alpha diversity: exec category comparison: exec species divergence: exec	Nov 10, 2014 16:59:...	Oct 18, 2013 12:32:10	Oct 18, 2013 12:46:15	Finish
3	192.168.1.253:130123_M01546_00...	sample_out3	alignment and phylogenetic tree: exec	Nov 13, 2014 10:51:...	Oct 18, 2013 12:32:10	Oct 18, 2013 12:46:15	Finish
4	192.168.1.253:130123_M01546_00...	sample_out4	alignment and phylogenetic tree: exec	Nov 14, 2014 09:35:...	Oct 18, 2013 12:32:10	Oct 18, 2013 12:46:15	Finish

4 分類結果

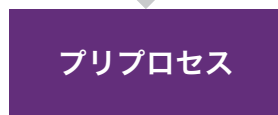
enter search term	Exclusion	lineageID	taxonomy	quality score	info	reference source	accession	species	description
		5	192.168.1.253:130115_M00469_00... k_Bacteria; p_Actinobacteria; c_Actinobacteria; o_Actinomycetales; f_Corynebacteriales; g_Corynebacterium; s_id=105608	5e-70	105608	Genbank	JF19952.1	uncultured bacterium	Uncultured bacterium clone not165408c1 16S ribosomal RNA gene, partial sequence.
		6	New CleanUp... k_Bacteria; p_Firmicutes; c_Clostridia; o_Clostridiales; f_Volwellaceae; g_Volwellia; s_id=4328910	4e-55	4328910	Genbank	HQ805205.1	uncultured organism	Uncultured organism clone ELU015-7288-5-12PCRMgNla_000204 small subunit ribosomal RNA gene, partial sequence.
		7	2480553 k_Bacteria; p_Fusobacteria; c_Fusobacteria; o_Fusobacteriales; f_Leptotrichaceae; g_Leptotricha; s_id=2480553	4e-64	2480553	Genbank	HQ78594.1	uncultured organism	Uncultured organism clone ELU0094-7390-5-NL_000289 small subunit ribosomal RNA gene, partial sequence.
		8	26311 k_Bacteria; p_Actinobacteria; c_Actinobacteria; o_Actinomycetales; f_Microbacteriaceae; g_Microbacterium; s_id=26311	1e-54	26311	Genbank	AJ318159.1	uncultured actinobacterium	Uncultured Actinobacterium 16S rRNA gene, clone B01246.
		9	4437362 k_Bacteria; p_Bacteroidetes; c_Bacteroidia; o_Bacteroidales; f_Bacteroidaceae; g_Bacteroides; s_id=4437362	5e-70	4437362	Genbank	HQ759631.1	uncultured organism	Uncultured organism clone ELU0044-7227-5-12PCRMgNla_000203 small subunit ribosomal RNA gene, partial sequence.
		10	4395450 k_Bacteria; p_Firmicutes; c_Clostridia; o_Clostridiales; f_Lachnospiraceae; g_s_id=4395450	5e-67	4395450	Genbank	JQ447520.1	uncultured bacterium	Uncultured bacterium clone 069063_234 16S ribosomal RNA gene, partial sequence.
		11	New CleanUp... k_Bacteria; p_Actinobacteria; c_Actinobacteria; o_Actinomycetales; f_Corynebacteriales; g_Corynebacterium; s_id=1015518	5e-58	1015518	Genbank	JF160877.1	uncultured bacterium	Uncultured bacterium clone not193203c1 16S ribosomal RNA gene, partial sequence.
		12	189292 k_Bacteria; p_Firmicutes; c_Clostridia; o_Clostridiales; f_Lachnospiraceae; g_s_id=189292	2e-63	189292	Genbank	DQ825270.1	uncultured bacterium	Uncultured bacterium clone RL185_aan67609 16S ribosomal RNA gene, partial sequence.
		13	New CleanUp... k_Bacteria; p_Firmicutes; c_Clostridia; o_Clostridiales; f_Ruminococcaceae; g_s_id=157453	1e-64	157453	Genbank	DQ458898.1	uncultured bacterium	Uncultured bacterium clone OT19H11 16S ribosomal RNA gene, partial sequence.
		14	New CleanUp... k_Bacteria; p_Bacteroidetes; c_Bacteroidia; o_Bacteroidales; f_Bacteroidaceae; g_Bacteroides; s_id=4401580	3e-53	4401580	Genbank	HQ794984.1	uncultured organism	Uncultured organism clone ELU0137-7294-5-12PCRMgNla_000204 small subunit ribosomal RNA gene, partial sequence.
		15	New CleanUp... k_Bacteria; p_Fusobacteria; c_Fusobacteria; o_Fusobacteriales; f_Leptotrichaceae; g_s_id=300586	2e-57	300586	Genbank	EU682001.1	uncultured bacterium	Uncultured bacterium clone D46-41 16S ribosomal RNA gene, partial sequence.
		16	New CleanUp... k_Bacteria; p_Proteobacteria; c_Betaproteobacteria; o_Nesiseriales; f_Nesiseriaceae; g_Nesiseria; s_id=4477910	6e-45	4477910	Genbank	JQ455402.1	uncultured bacterium	Uncultured bacterium clone 069098_373 16S ribosomal RNA gene, partial sequence.
		17	New CleanUp... k_Bacteria; p_Firmicutes; c_Bacilli; o_Lactobacillales; f_Streptococcaceae; g_Streptococcus; s_id=536866	2e-50	536866	Genbank	GQ155782.1	uncultured bacterium	Uncultured bacterium clone SH2H33 16S ribosomal RNA gene, partial sequence.
		18	New CleanUp... k_Bacteria; p_Bacteroidetes; c_Bacteroidia; o_Bacteroidales; f_Bacteroidaceae; g_Bacteroides; s_id=182886	2e-54	182886	Genbank	DQ805892.1	uncultured bacterium	Uncultured bacterium clone RL306aa9202 16S ribosomal RNA gene, partial sequence.
		19	4305262 k_Bacteria; p_Verrucomicrobia; c_Verrucomicrobiales; o_Verrucomicrobiales; f_Verrucomicrobiaceae; g_Akkermansia; s_id=4305262	6e-60	4305262	Genbank	JQ184815.1	uncultured bacterium	Uncultured bacterium clone BD04683 16S ribosomal RNA gene, partial sequence.
		20	174946 k_Bacteria; p_Firmicutes; c_Clostridia; o_Clostridiales; f_Ruminococcaceae; g_Faecalibacterium; s_id=4381430	8e-69	4381430	Genbank	HQ804333.1	uncultured organism	Uncultured organism clone ELU0154-7272-5-12PCRMgNla_000203 small subunit ribosomal RNA gene, partial sequence.
		21	New CleanUp... k_Bacteria; p_Fusobacteria; c_Fusobacteria; o_Fusobacteriales; f_Fusobacteriaceae; g_Fusobacterium; s_id=4387092	3e-59	4387092	Genbank	HQ799522.1	uncultured organism	Uncultured organism clone ELU0144-7169-5-12PCRMgNla_000203 small subunit ribosomal RNA gene, partial sequence.
		22	1736067 k_Bacteria; p_Bacteroidetes; c_Bacteroidia; o_Bacteroidales; f_Bacteroidaceae; g_Bacteroides; s_id=4447188	8e-66	4447188	Genbank	HQ796707.1	uncultured organism	Uncultured organism clone ELU0139-7413-5-12PCRMgNla_000203 small subunit ribosomal RNA gene, partial sequence.



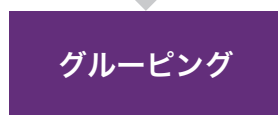
シーケンサ



リード配列



プリプロセス



グルーピング



種分類



統計解析



α多様性算出



β多様性算出



主成分分析



群間差検定

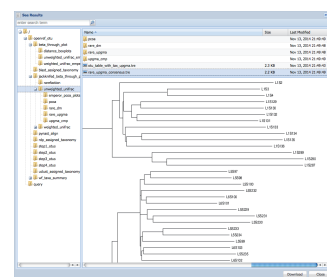
BITS MetaGenome Suite

(菌叢解析パイプライン)データ解析の流れ

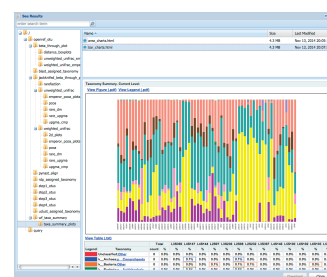
- ・ LQ 領域/アダプタのトリミング
- ・ キメラ配列除去
- ・ リードペア結合

- ・ 16S rRNA DB を参照した分類
- ・ de-novo 分類
- ・ 併用分類

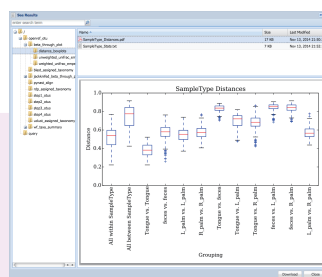
- ・ taxonomy 解析
- ・ 系統樹作成



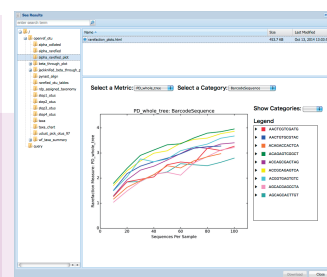
系統樹



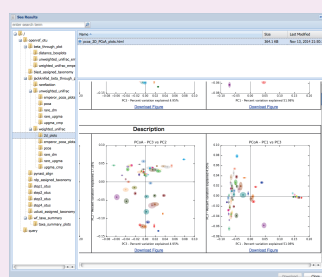
taxonomy 分布



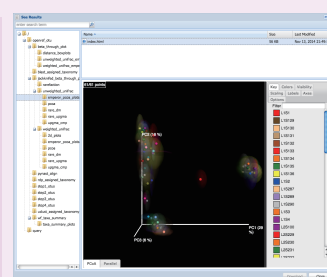
distance boxplot



α多様性



主成分分析(2D plot)



主成分分析(3D plot)

□ BITS MetaGenome Suite の特長

- ➡ Web インターフェースより解析フローとパラメータを設定
- ➡ シーケンサと連動した自動処理
- ➡ 生物種の詳細情報を表示・検索可能
- ➡ 各種グラフ化機能

□ 所要計算機 (推奨)

C P U : 計 12 コア
 メモリ : 32 GB
 H D D : 15 TB (RAID5)

※本システムは解析エンジンに QIIME (Caporaso J. G., et al., Nat. Methods(2010) 7:335) を使用しています。

※記載の内容は2015年6月時点のものであり、変更される場合があります。
 ※製品の仕様は予告なく変更される場合があります。



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