Release Notes 2022-03-01: I finally got a first list of enough organisms and antibiotics to motivate the argument for antibiotics for Beauty based on the 16s rRNA. There are over 330 organisms found in the two samples and only about 100 have been considered so far.

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I am not a veterinarian or a doctor or health care professional

Note that any item given to a non-human must be checked for safety alone and in combination with other ingredients or medicines for that animal. Animals including dogs and cats have decreased tolerance for many common ingredients in things meant for human consumption.

CBeauty: linical Relevance of Vomit and Fecal Microbiome

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(Dated: March 1, 2022)

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1. INTRODUCTION

Beauty had been suffering from a variety of non-specific symptoms as detailed later. Recently 16s rRNA along with other molecular techniques has become available to the general public. However, the large number of normal organisms present in many biological samples makes it difficult to establish clinical relevance of any particular "community structure" or small group of organisms except in specific cases. Organisms may become pathological simply due to location as bloodstream or organ infections with GI organisms may occur. These samples can not determine colonization in other locations. Virulence and various phenotypes canbe induced by specific environmental factors not revealed by the 16s rRNA sequences.

In the case of Beauty, considering her clinical picture, several organisms are highly suspicious due to their mere presence in the sample of propensity to become pathogens or to be associated with pathological states.

16s rRNA PCR analysis of the two samples from Beauty turned up a variety of suspicious organisms. In most cases, these organisms are described in the literature along with antibiotics that appear to work either in vitro, in humans, or in animals. The short list of relevant drugs includes,

Antibiotics
Cefovecin
clindamycin
amoxicillin plus clavulanate
doxycycline
ceftriaxone
metronidazole

TABLE I: Antibiotics thought to be useful against the most suspicious organisms found.

Currently she appears to be responding to silver and maybe copper as well as a low carbohydrate diet.

2. BACKGROUND

Two samples were collected from Beauty on 2022-01-22 and subsequently sent to Zymo Research for 16s rRNA PCR. The procedure generally followed [1] with more details in the company's full report. Results were reported on 2022-02-22 and can be found until approximated 2022-04-22 at these links,

```
https://epiquest.s3.amazonaws.com/epiquest_zr5958/FZHH7JJJPKPLH4T3FYTAKSYBQ2HBATFC/report/zr5958.16S_220218.zymo.zip
https://epiquest.s3.amazonaws.com/epiquest_zr5958/FZHH7JJJPKPLH4T3FYTAKSYBQ2HBATFC/rawdata/zr5958.rawdata.220218.zip
```

The complete list of organisms found in the two samples is included in Appendix A along with their amounts.

Class	Genus	Species	Comments
Methanobacteria	Methanobrevibacter	oralis	(P) [2]
Actinobacteria	Actinomyces	bowdenii	(P) [3] [4]
Actinobacteria	Actinomyces	canis	(P) (C) [5]
Actinobacteria	Actinomyces	hordeovulneris	(P) [6]
Actinobacteria	Propionibacterium	acnes	(C) (P) [7]
Coriobacteriia	Atopobium	sp10394	(P) vaginosis [8]
Coriobacteriia	Paraeggerthella	hongkongensis	(P) renamed [9] [10]
Bacteroidia	Bacteroides	vulgatus	(C) (P) common in abscess [11]
Bacteroidia	Odoribacter	denticanis	(P) [12]
Bacteroidia	Parabacteroides	sp13269	(C) (P) (?) [13]
Bacteroidia	Porphyromonas	cangingivalis	(C) (P) [14] assoc [15]
Bacteroidia	Porphyromonas	canoris	(P) black subgingival [16]
Bacteroidia	Porphyromonas	crevioricanis	(P) Cefovecin effective [17]
Bacteroidia	Porphyromonas	gingivicanis	(P) [18]
Bacteroidia	Porphyromonas	gulae	(P) Cefovecin effective [17]
Bacteroidia	Porphyromonas	macacae	(P) clindamycin ok [19]
Bacteroidia	Tannerella	forsythia	(P) [20] sensitive including amoxicillin with
			clavulanate doxycycline clindamycin [21]
Bacteroidia	Prevotella	intermedia	(P) [22]
Bacilli	Staphylococcus	delphini intermedius	(P) [23]
		pseudintermedius	
Bacilli	Abiotrophia	sp28087	possible (P) [24] likely clindamycin [25]
Bacilli	Streptococcus	canis	(P) [26]
Clostridia	Filifactor	alocis	(P) indicator of periodontal disease [27] an-
			tibiotics ceftriaxone (4 g/day) and metron-
			idazole [28]
Deltaproteobacteria	Desulfomicrobium	orale	associated (P) [15]
Epsilonproteobacteria	1 2 0	rectus showae	(P) CDT targets [29]
Spirochaetes	Treponema	denticola	(P) [20]

TABLE II: Currently annotated organisms based on a quick literature search. Organisms are identified by genus and species as well as class for context. Terse notes are indicated in the right most column. "(C)" indicates common or commensal not associated with disease under appropriate conditions. "(P)" indicates observed to be pathogenic at least under some conditions. Unusual features or antibiotic susceptibility are noted where they were thought helpful.

3. CONCLUSIONS

4. SUPPLEMENTAL INFORMATION

4.1. Computer Code

5. BIBLIOGRAPHY

[1] Callahan, Benjamin J and McMurdie, Paul J and Rosen, Michael J and Han, Andrew W and A Johnson, Amy Jo and Holmes, Susan P. DADA2: High-resolution sample inference from Illumina amplicon data Nature Methods 581-583 2016-05-23 DOI.

^[2] Horz, Hans-Peter and Conrads, Georg. Methanogenic Archaea and oral infections ways to unravel the black box. Journal of Oral Microbiology 20110223 DOI.

^[3] Pascual, Cristina and Foster, Geoffrey and Falsen, Enevold and Bergstram, Karin and Greko, Christina and Collins, Matthew D. Actinomyces bowdenii sp. nov., isolated from canine and feline clinical specimens International Journal of Systematic and Evolutionary Microbiology DOI.

^[4] Sherman, Amanda and Daniels, Joshua B and Wilkie, David A and Lutz, Elizabeth. Actinomyces bowdenii ulcerative keratitis in a dog. Veterinary ophthalmology 20121104 DOI.

^[5] Hoyles, L and Falsen, E and Foster, G and Pascual, C and Greko, C and Collins, M D. Actinomyces can sp. nov., isolated from dogs. International journal of systematic and evolutionary microbiology DOI.

- [6] Pelle, G and Makrai, L and Fodor, L and Dobos-Kovacs, M. Actinomycosis of dogs caused by Actinomyces hordeovulneris. Journal of comparative pathology DOI.
- [7] Perry , Alexandra and Lambert , Peter. Propionibacterium acnes: infection beyond the skin. Expert review of anti-infective therapy DOI.
- [8] Wikimedia projects, Contributors to. Atopobium Wikipedia url:en.wikipedia.org.
- [9] Lee, Hwa Jeen and Hong, Sung Kuk and Choi, Woo Suk and Kim, Eui-Chong. The First Case of Eggerthella lenta Bacteremia in Korea Annals of Laboratory Medicine 177-179 2014-03-01 DOI.
- [10] Lau, Susanna P and Woo, Patrick Y and Woo, Gibson S and Fung, Ami Y and Wong, Michelle M and Chan, King-Man and Tam, Dorothy W and Yuen, Kwok-Yung. Eggerthella hongkongensis sp. nov. and eggerthella sinensis sp. nov., two novel Eggerthella species, account for half of the cases of Eggerthella bacteremia. Diagnostic microbiology and infectious disease DOI.
- [11] Wexler, Hannah M. Bacteroides: the Good, the Bad, and the Nitty-Gritty. Clinical Microbiology Reviews DOI.
- [12] Hardham , John M and King , Kendall W and Dreier , Kimberly and Wong , Jason and Strietzel , Catherine and Eversole , Rob R and Sfintescu , Cornelia and Evans , Richard T. Transfer of Bacteroides splanchnicus to Odoribacter gen. nov. as Odoribacter splanchnicus comb. nov., and description of Odoribacter denticanis sp. nov., isolated from the crevicular spaces of canine periodontitis patients. International journal of systematic and evolutionary microbiology DOI.
- [13] Ezeji , Jessica C and Sarikonda , Daven K and Hopperton , Austin and Erkkila , Hailey L and Cohen , Daniel E and Martinez , Sandra P and Cominelli , Fabio and Kuwahara , Tomomi and Dichosa , Armand K and Good , Caryn E and Jacobs , Michael R and Khoretonenko , Mikhail and Veloo , Alida and Rodriguez-Palacios , Alexander. Parabacteroides distasonis: intriguing aerotolerant gut anaerobe with emerging antimicrobial resistance and pathogenic and probiotic roles in human health. Gut Microbes 2022-02-28 DOI.
- [14] OFlynn, Ciaran and Deusch, Oliver and Darling, Aaron E and Eisen, Jonathan A and Wallis, Corrin and Davis, Ian J and Harris, Stephen J. Comparative Genomics of the Genus Porphyromonas Identifies Adaptations for Heme Synthesis within the Prevalent Canine Oral Species Porphyromonas cangingivalis. Genome Biology and Evolution 20151113 DOI.
- [15] Riggio , Marcello P and Lennon , Alan and Taylor , David J and Bennett , David. Molecular identification of bacteria associated with canine periodontal disease Veterinary Microbiology DOI.
- [16] Love, D N and Karjalainen, J and Kanervo, A and Forsblom, B and Sarkiala, E and Bailey, G D and Wigney, D I and Jousimies-Somer, H. Porphyromonas canoris sp. nov., an asaccharolytic, black-pigmented species from the gingival sulcus of dogs. International journal of systematic bacteriology DOI.
- [17] Khazandi , Manouchehr and Bird , Philip S and Owens , Jane and Wilson , Gary and Meyer , James N and Trott , Darren J. In vitro efficacy of cefovecin against anaerobic bacteria isolated from subgingival plaque of dogs and cats with periodontal disease Anaerobe DOI.
- [18] Allaker, R P and de Rosayro, R and Young, K A and Hardie, J M. Prevalence of Porphyromonas and Prevotella species in the dental plaque of dogs Veterinary Record DOI.
- [19] A Senhorinho, Gerusa N and Nakano, Viviane and Liu, Chengxu and Song, Yuli and Finegold, Sydney M and Avila-Campos, Mario J. Occurrence and antimicrobial susceptibility of Porphyromonas spp. and Fusobacterium spp. in dogs with and without periodontitis Anaerobe DOI.
- [20] Sharma, Ashu. Virulence mechanisms of Tannerella forsythia. Periodontology 2000 DOI.
- [21] R Tanner, Anne C and Izard, Jacques. Tannerella forsythia, a periodontal pathogen entering the genomic era Periodontology 2000 88-113 2006-10 DOI.
- [22] **Dorn**, **Brian R and Leung**, **K and Progulske-Fox**, **Ann**. Invasion of Human Oral Epithelial Cells by Prevotella intermedia Infection and Immunity 6054-6057 1998-12 DOI.
- [23] Bannoehr , Jeanette and Franco , Alessia and Iurescia , Manuela and Battisti , Antonio and Fitzgerald , J Ross. Molecular Diagnostic Identification of Staphylococcus pseudintermedius Journal of Clinical Microbiology 469-471 2009-02 DOI.
- [24] Mosca , Ana Margarida and Fenando , Mané and Marques Pires , Carla and Medeiros , Paulo. Infective endocarditis by a rare and fastidious agent: Abiotrophia defectiva BMJ Case Reports CP DOI.
- [25] Tuohy, Marion J and Procop, Gary W and Washington, John A. Antimicrobial susceptibility of Abiotrophia adiacens and Abiotrophia defectiva Diagnostic Microbiology and Infectious Disease DOI.
- [26] DEVRIESE, LUC A and HOMMEZ, JOZEF and KILPPER-BALZ, RENATE and SCHLEIFER, KARL-HEINZ. Streptococcus canis sp. nov.: a Species of Group G Streptococci from Animals International Journal of Systematic and Evolutionary Microbiology DOI.
- [27] Aja , E and Mangar , M and Fletcher , H M and Mishra , A. Filifactor alocis: Recent Insights and Advances Journal of Dental Research 002203452110006 2021-03-14 DOI.
- [28] Wisutep, Pruettichai and Kamolvit, Witchuda and Chongtrakool, Piriyaporn and Jitmuang, Anupop. Brain abscess mimicking acute stroke syndrome caused by dual Filifactor alocis and Porphyromonas gingivalis infections: A case report Anaerobe DOI.
- [29] Kreling, Vanessa and Falcone, Franco H and Kehrenberg, Corinna and Hensel, Andreas. Campylobacter sp.: Pathogenicity factors and prevention methods—new molecular targets for innovative antivirulence drugs? Applied Microbiology and Biotechnology DOI.
- [30] Qiao , Shichong and Wu , Dongle and Wang , Mengge and Qian , Shujiao and Zhu , Yu and Shi , Junyu and Wei , Yongjun and Lai , Hongchang. Oral microbial profile variation during canine ligature-induced peri-implantitis

- development. BMC Microbiology 20200929 DOI.
- [31] Suzuki, Hiroyuki and Arshava, Evgeny V and Ford, Bradley and Nauseef, William M. Dont Let Its Name Fool You: Relapsing Thoracic Actinomycosis Caused by Pseudopropionibacterium propionicum (Formerly Propionibacterium propionicum). The American Journal of Case Reports 20191229 DOI.
- [32] Stackebrandt, Erko and Otten, Linda G. The Class Nitriliruptoria Springer Berlin Heidelberg DOI.
- [33] Watanabe, Yohei and Nagai, Fumiko and Morotomi, Masami and Sakon, Hiroshi and Tanaka, Ryuichiro. Bacteroides clarus sp. nov., Bacteroides fluxus sp. nov. and Bacteroides oleiciplenus sp. nov., isolated from human faeces International Journal of Systematic and Evolutionary Microbiology 1864-1869 2010-08-01 DOI.
- [34] Tkadlec , Jan and Krutova , Marcela and Matejkova , Jana and Nyc , Otakar and Drevinek , Pavel. Bloodstream infection caused by Bacteroides denticanum, a close relative of Bacteroides pyogenes, misidentified by MALDI TOF- mass spectrometry. Anaerobe 20180711 DOI.
- [35] Ueki , Atsuko and Akasaka , Hiroshi and Suzuki , Daisuke and Ueki , Katsuji. Paludibacter propionicigenes gen. nov., sp. nov., a novel strictly anaerobic, Gram-negative, propionate-producing bacterium isolated from plant residue in irrigated rice-field soil in Japan. International journal of systematic and evolutionary microbiology DOI.
- [36] Muramatsu, Yasukazu and Haraya, Nami and Horie, Kazuki and Uchida, Leo and Kooriyama, Takanori and Suzuki, Akio and Horiuchi, Motohiro. Bergeyella zoohelcum isolated from oral cavities of therapy dogs Zoonoses and Public Health DOI.
- [37] Gaastra, Wim and A Lipman, Len J. Capnocytophaga canimorsus Veterinary Microbiology 339-346 2010-01 DOI.
- [38] Suzuki , Michio and Kimura , Masanobu and Imaoka , Koichi and Yamada , Akio. Prevalence of Capnocytophaga canimorsus and Capnocytophaga cynodegmi in dogs and cats determined by using a newly established species-specific PCR Veterinary Microbiology DOI.
- [39] . The Prokaryotes Springer US 2006 DOI.
- [40] Cotta , Michael A and Whitehead , Terence R and Falsen , Enevold and Moore , Edward and Lawson , Paul A. Erratum to: Two novel species Enterococcus lemanii sp. nov. and Enterococcus eurekensis sp. nov., isolated from a swine-manure storage pit Antonie van Leeuwenhoek DOI.
- [41] Lozano , Chloe P and Wilkens , Lynne R and Shvetsov , Yurii B and Maskarinec , Gertraud and Park , Song-Yi and Shepherd , John A and Boushey , Carol J and Hebert , James R and Wirth , Michael D and Ernst , Thomas and Randolph , Timothy and Lim , Unhee and Lampe , Johanna W and LeMarchand , Loac and Hullar , Meredith J. Associations of the Dietary Inflammatory Index with total adiposity and ectopic fat through the gut microbiota, LPS, and C-reactive protein in the Multiethnic Cohort-Adiposity Phenotype Study The American Journal of Clinical Nutrition DOI.

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Appendix A: Full List of Organisms found in 16s rRNA Sequencing

					0	
0	k	p		0	f	
1		g		sample 0	sample 1	
2	None	Other		Other	Other	
3		Other		2.44	0.0181	
4	Archaea		Methanobacteria	Methanobacteriales	Me than obacteria ceae	
5		${\bf Methan obrevibacter}$		0.0254		(P) [2]
6	Archaea		Methanomicrobia	Methanosarcinales	Methanosarcinaceae	
7		Methanimicrococcus	blatticola	0.0701		[30]
8	Archaea		Thermoplasmata	Thermoplasmatales	NA	
9		*Methanomethylophilus	sp1266	0.0242		
10			sp1275	0.0326		
11	Bacteria	Actinobacteria		Actinomycetales	Actinomycetaceae	
12		Actinomyces	bowdenii	0.0326		(P) [3] [4]
13		Actinomyces	canis	1.23		(P) (C) [5]
14		Actinomyces	cardiffensis	0.122		
15		Actinomyces	coleocanis	0.752		
16			hordeovulneris	0.487		(P) [6]
17		Actinomyces	oris	0.081		
18		Actinomyces	slackii	0.0943		
19		Actinomyces		0.0363		
20		Actinomyces	sp4762	0.173		
21	Bacteria	Actinobacteria	Actinobacteria	Corynebacteriales	Corynebacteriaceae	
22		Corynebacterium	canis	0.254		
23		Corynebacterium	freiburgense	0.48		
24		Corynebacterium	matruchotii	0.337		
25		Corynebacterium	sp5220	0.302		
26	Bacteria	Actinobacteria	Actinobacteria	Micrococcales	Microbacteriaceae	
27		Leucobacter	sp6730	0.0798		
28	Bacteria	Actinobacteria	Actinobacteria	Propionibacteriales	Propionibacteriaceae	
29		NA	sp7814	0.0375	_	
30		NA	sp7833	0.0411		
31		NA	sp7836	0.029		
32		Propionibacterium	acnes	0.0387		(C) (P) [7]
33		Propionibacterium		0.0338		[31]
34		Propioniciclava		0.0483		likely decaying
						matter
35		Propioniciclava	sp7803	0.0314		
	Bacteria	Actinobacteria	Coriobacteriia	Coriobacteriales	Coriobacteriaceae	
37		Atopobium		0.0169		(P) vaginosis [8]
38		Collinsella	intestinalis		3.98	
			stercoris			
39		Paraeggerthella	hongkongensis	0.058		(P) renamed [9]
						[10]
40			piriformis		0.166	
	Bacteria	Actinobacteria	Nitriliruptoria	Euzebyales	Euzebyaceae	
42		Euzebya	sp10631	0.244		(?) marine organ-
						isms [32]
	Bacteria	Bacteroidetes		Bacteroidales	Bacteroidaceae	
44		Bacteroides	clarus	0.0471		(C) $[33]$

TABLE III: Summary of all of the organisms identified in Beauty's two samples from 2021-01-22. Two line types exist. The first line indicates the higher level classifications of the following lines which only contain genus and speces along with percentage of total abundance in the two samples. The first sample was spit up clear fluid while the second one was a fecal sample. During this time here symptoms were fairly controlled.

45	1			I		
45 46	k	p		sample 0	f sample 1	
47		Bacteroides	coprocola	sample 0	5.67	
48		Bacteroides		0.759	5.07	bite related [34]
10		Bacteroraes	pyogenes	0.193		bric related [01]
49		Bacteroides	120	1.24		
50		Bacteroides		0.517		
51		Bacteroides		0.01.	4.06	
52		Bacteroides	-		3.57	
53		Bacteroides				(C) (P) common
						in abscess [11]
54	Bacteria	Bacteroidetes	Bacteroidia	Bacteroidales	NA	
55		NA	sp12425	0.359		
56			sp12429	0.0145		
57			sp13034	0.108		
58	Bacteria	Bacteroidetes			Porphyromonadaceae	
59		Microbacter		0.0278		<u></u>
60		Odoribacter		0.39		(P) [12]
61		Paludibacter	sp13190	0.0701		plant residue (?)
co		D	19960	0.0710		[35]
62		Parabacteroides		0.0713		(C) (P) (?) [13]
63		Petrimonas		0.0205		(C) (D) [14]
64		Porphyromonas	cangingivalis	6.57		(C) (P) [14] assoc
65		Porphyromonas	canoris	3.61		[15] (P) black subgin-
05		Forphyromonas	Calloris	3.01		gival [16]
66		Porphyromonas	crovioricanis	0.609		(P) Cefovecin ef-
00		1 of phyromonas	Crevioricanis	0.003		fective [17]
67		Porphyromonas	gingivicanis	2.95		(P) [18]
68		Porphyromonas		5.23		(P) Cefovecin ef-
		1 of phy fornolicus	Suide	0.20		fective [17]
69		Porphyromonas	macacae	0.527		(P) clindamycin
		1 0				ok [19]
70		Porphyromonas	sp13363	0.84		
71		Porphyromonas		0.178		
			sp13368			
72		Porphyromonas	sp13365	1.32		
73		Porphyromonas	sp13366	0.0616		
74		Porphyromonas		1.02		
75		Porphyromonas		1.8		
76		Proteiniphilum		0.0508		
		m ··	sp13418	2 25-		(7) [00]
77		Tannerella	torsythia	0.227		(P) [20] sensi-
						tive including
						amoxicillin with
						clavulanate
						doxycycline clindamycin [21]
78	Bacteria	Bacteroidetes	Bacteroidia	Bacteroidales	Prevotellaceae	cinidaniyen [21]
79	Dacteria	Alloprevotella		2.4	1 revotenaceae	
80		Alloprevotella		0.648		
81		Alloprevotella		0.0568		
82		Alloprevotella		1.64		
83		Alloprevotella		0.173		
		F_O.GCIRC	sp13517	0.110		
84		NA	sp12884	0.355		
85			sp13774	0.0387		
86			sp14118		0.191	
87			sp14284	0.168		
88		Prevotella	intermedia	0.54		(P) [22]
89		Prevotella	sp14101	1.34		- -

TABLE IV: Summary of all of the organisms identified in Beauty's two samples from 2021-01-22. Two line types exist. The first line indicates the higher level classifications of the following lines which only contain genus and speces along with percentage of total abundance in the two samples. The first sample was spit up clear fluid while the second one was a fecal sample. During this time here symptoms were fairly controlled.

90	k	р	c	О	f	
91	IX.	g	s	sample 0	sample 1	
92	Bacteria	Bacteroidetes		Bacteroidales	Rikenellaceae	
93	Bacteria		sp14589	0.023	Timenenaceae	
94			sp14717	0.135		
95	Bacteria		Flavobacteriia	Flavobacteriales	Flavobacteriaceae	
96	Dacteria	Bergeyella		0.0846	1 lavobactellaceae	
97			zoohelcum	0.0340		(C) human
31		Dergeyena	Zooneicum	0.074		pathogen [36]
98		Capnocytophaga	annimoreus	0.116		(C) human
90		Caphocytophaga	cammorsus	0.110		pathogen [37]
99		Capnocytophaga	cynodogmi	0.39		(C) human
33		Caphocytophaga	cynodegiiii	0.55		pathogen [38]
100		Capnocytophaga	sn16516	0.349		pathogen [60]
101		Caphocytophaga		0.0387		
101		Flavobacterium		0.0894		
	Bacteria		Sphingobacteriia	Sphingobacteriales	NA	
103	Dacteria		bacterium	0.0145	IVA	
	Bacteria		Chlorobia	Chlorobiales	NA	
105	Dacteria			0.586	IVA	
	Bacteria		sp20053 Anaerolineae	Anaerolineales	Anaerolineaceae	
1 -	Dacteria				Апаегоппеасеае	
108	Do at:		sp20572	0.114 N.A	NT A	
109	Bacteria	Cyanobacteria		NA 0.0157	NA	, ,
110		Castanea	mollissima	0.0157		suspect floor
111	D	0 1 .	NT A	NT A	D.T.A.	contamination
	Bacteria	Cyanobacteria		NA	NA	
112	ъ .		sp23682	0.108	T) 11 37T	
	Bacteria	Firmicutes		Bacillales	Family XI	(0) 1 :0
114		Gemella	palaticanis	0.512		(C) dog specific
115	D4:-	F:	D:11:	D:11.1	C4 1 1	[39]
115	Bacteria	Firmicutes		Bacillales	Staphylococcaceae	
116		Staphylococcus	_	0.853		
			intermedius			
115	D	D:	pseudintermedius	T . 1 . 11 . 1	Α.	
	Bacteria	Firmicutes		Lactobacillales	Aerococcaceae	11 (D) [04]
118		Abiotrophia	sp28087	0.357		possible (P) [24]
						likely clindamycin
110		76. T. A.	am 20120	0.469		[25]
119	Do at ani-	Firmicutes	sp28129	0.462 Lactobacillales	Camabastanias	
120	Bacteria	Granulicatella			Carnobacteriaceae	(a)
121	Do at:			0.656	Entono	(C)
	Bacteria	Firmicutes		Lactobacillales	Enterococcaceae	
123		Enterococcus		0.0101	0.0313	(C) [40]
124		Enterococcus		0.0181	Ct. t	(C) manure [40]
	Bacteria	Firmicutes		Lactobacillales	Streptococcaceae	
126		Streptococcus		0.146		
127		Streptococcus		0.0435		(D) [0.6]
128		Streptococcus		0.164	0.404	(P) [26]
129		Streptococcus	equinus	0.0363	0.181	
			infantarius			
		a .	lutetiensis			
130		Streptococcus		1.27		
131		Streptococcus		0.112		
132		Streptococcus	mitis	0.133		
			oralis			
			sanguinis			
133		Streptococcus		0.0254	C1	
134	Bacteria	Firmicutes	Clostridia	Clostridiales	Christensenellaceae	

TABLE V: Summary of all of the organisms identified in Beauty's two samples from 2021-01-22. Two line types exist. The first line indicates the higher level classifications of the following lines which only contain genus and speces along with percentage of total abundance in the two samples. The first sample was spit up clear fluid while the second one was a fecal sample. During this time here symptoms were fairly controlled.

105				1	C	
135		p	c	0	f	
136		g	S	sample 0	sample 1	
137			sp30201	0.0399		
138			sp30214	0.0496		
139			sp30247	0.0858		
140			sp30248	0.0302		
141			sp30313	0.436		
142			sp30336	0.312		
143		Firmicutes		Clostridiales	Clostridiaceae	
144		Clostridium			0.296	
145	1	Clostridium		0.0387	13	
1	Bacteria	Firmicutes			Defluviitaleaceae	
147		NA		0.686		
148	Bacteria	Firmicutes		Clostridiales	Family XI	
149		Ezakiella		0.236		
150		Helcococcus	•	1.01		
151		NA	sp31397	0.193		
152		NA	sp31414	0.0302		
153		Parvimonas	micra	0.0761		
154		Parvimonas	sp31278	0.0278		
155		Parvimonas	sp31283	0.966		
156		Peptoniphilus	sp31312	0.227		
157	Bacteria	Firmicutes	Clostridia	Clostridiales	Family XII	
158		Fusibacter	sp31441	0.412		
159		Fusibacter	sp31447	0.0447		
160		Fusibacter	sp31454	0.167		
161		Fusibacter		0.0302		
162		Fusibacter	sp31462	0.205		
163		Fusibacter		0.035		
164	Bacteria	Firmicutes	Clostridia	Clostridiales	Family XIII	
165		Anaerovorax	sp31493	0.0157	-	
166		Anaerovorax	sp31513	0.0314		
167		Eubacterium		0.0266		
168			sp31535	0.0834		
169				0.0822		
170				0.0471		
171				0.0278		
172			-	0.0266		
173				0.1		
174				_		
177				0.0532		
l.	Bacteria		_		Lachnospiraceae	
169 170 171 172 173 174 175 176 177		NA NA NA NA NA NA NA	sp31550 sp31556 sp31583 sp31623 sp31624 sp31635 sp31677 sp31686 sp31699 sp31701	0.0822 0.0471 0.0278 0.0266 0.1 0.0882 0.126 0.0496	Lachnospiraceae	

TABLE VI: Summary of all of the organisms identified in Beauty's two samples from 2021-01-22. Two line types exist. The first line indicates the higher level classifications of the following lines which only contain genus and speces along with percentage of total abundance in the two samples. The first sample was spit up clear fluid while the second one was a fecal sample. During this time here symptoms were fairly controlled.

100	1		I		C	I
180	k		c	0	f	
181			S	sample 0	sample 1	
182		Acetitomaculum		0.613		
183		Blautia	hansenii		1.4	
			producta			
184		Blautia	sp31989		2.32	
185		Blautia	sp32002		0.028	
			sp32027			
186		Blautia	sp32032		0.0214	
187		Blautia	sp32042		0.485	
188		Catonella		0.174		
189		Catonella		0.0399		
			sp32120			
190		Catonella		0.0737		
191		Catonella		1.07		
192		Catonella		0.0145		
193		Johnsonella	, -	0.0143		
194		Johnsonella	-	0.0508		
194		Johnsonella		0.0556		
				0.0550	0.490	
196		Lachnoclostridium	-		0.438	
107		T 1 1 4 11	sp32430			
197		Lachnoclostridium			4.75	
198		Lachnoclostridium	, -		0.0938	
199		Lachnoclostridium			0.0214	
200		Lachnoclostridium			0.179	
201		Lachnoclostridium		0.111		
202		Lachnoclostridium			0.244	
203		Lachnoclostridium	sp32443		0.257	
204		NA	sp32167		0.0329	
205		NA	sp32615		0.0576	
			sp32802			
206		NA	sp33271		0.0741	
207			sp33387		0.137	
208			sp33411	0.0193		
209			sp33422		0.474	
210			sp33656		0.133	
211			sp33707		0.862	
212			sp33756		0.051	
213		Roseburia			0.0346	
210		1 toseburia	sp33189		0.0510	
214		Roseburia		0.156		
215		Tyzzerella		0.150	0.0477	may be diet re-
210		1 yzzerena	sp33301		0.0477	l c
216	Bootonio	Dinmianta.	Clostridia	Clostridiales	NA	lated [41]
	Bacteria	Firmicutes		Ciostridiales	l .	
217			NA 2112C	0.0550	8.48	
218	ъ .		sp31126	0.0556	D /	
	Bacteria	Firmicutes		Clostridiales	Peptococcaceae	
220		Peptococcus		0.163		
221	ъ .	Peptococcus		0.52	D	
	Bacteria	Firmicutes	I .	Clostridiales	Peptostreptococcaceae	(D)
223		Filifactor	alocis	0.533		(P) indicator of
						periodontal dis-
						ease [27] antibi-
						otics ceftriaxone
						(4 g/day) and
						metronidazole
						[28]
224		Filifactor	sp34271	0.665		
			I .	1		

TABLE VII: Summary of all of the organisms identified in Beauty's two samples from 2021-01-22. Two line types exist. The first line indicates the higher level classifications of the following lines which only contain genus and speces along with percentage of total abundance in the two samples. The first sample was spit up clear fluid while the second one was a fecal sample. During this time here symptoms were fairly controlled.

225	k	n	C	0	f	
225	K	p	c s	sample 0	sample 1	
227		Filifactor		0.632	sample 1	
221		Intestinibacter		0.032	0.665	
229				0.299	0.000	
- 1			sp34397			
230			sp34399	0.0846		
231			sp34402	0.191	1.40	
232		Paeniclostridium		0.0500	1.48	
233		Peptoclostridium	•	0.0568		
234		Peptoclostridium		0.213		
235		Peptostreptococcus		0.927		
236		Peptostreptococcus	_	0.423		
237		Proteocatella		0.0411		
238		Proteocatella	_	0.464	.	
	Bacteria	Firmicutes		Clostridiales	Ruminococcaceae	
240		Anaerotruncus			2.24	
241		Faecalibacterium	-		0.148	
242		Fastidiosipila	_	0.0628		
243			sp34794		0.028	
244			sp35348	0.248		
245		NA	sp35348	0.0242		
			sp35356			
246			sp35734	0.0218		
247			sp35829		0.0872	
248			sp35859	0.0725		
249		Oscillospira	_		0.0313	
250		Ruminiclostridium	sp34905		0.132	
			sp34912			
251		Ruminiclostridium		0.0665		
- 1	Bacteria		Erysipelotrichia	Erysipelotrichales	Erysipelotrichaceae	
253			stercoricanis		0.309	
254		Erysipelothrix	sp36653	0.308		
255		Faecalitalea			0.0889	
256		NA	sp36724	0.0314		
257		NA	sp36726	0.213		
258		NA	sp36764	0.546		
259		NA	sp36778	0.0882		
260		NA	sp36784	0.0894		
261	Bacteria		Negativicutes	Selenomonadales	Acidaminococcaceae	
262		Megamonas	funiformis		2.95	
263		Succiniclasticum	sp36849	0.158		
			sp36859			
264		Succiniclasticum	sp36859	0.0906		
265	Bacteria	Firmicutes	Negativicutes	Selenomonadales	Veillonellaceae	
266			sp37039	0.0677		
267		Selenomonas	_	0.0677		
268		Veillonella		0.0157		
269		Veillonella	-	0.212		
200		Vemonena	SP3.100	0.212		

TABLE VIII: Summary of all of the organisms identified in Beauty's two samples from 2021-01-22. Two line types exist. The first line indicates the higher level classifications of the following lines which only contain genus and speces along with percentage of total abundance in the two samples. The first sample was spit up clear fluid while the second one was a fecal sample. During this time here symptoms were fairly controlled.

270
Pusobacteria Fusobacteriia Fusobacteriia Fusobacteriiales Fusobacteriales Fusobacteriales
Pusobacterium Canifelinum Canifelinum
Tusobacterium Pusobacterium Pusobacteriia Pusobacterii
274 Fusobacterium equinum 2.31 275 Fusobacterium mortiferum 17.4 276 Fusobacterium nucleatum 0.434 277 Fusobacterium sp37444 1.26 278 Fusobacterium sp37445 2.71 279 Fusobacterium sp37458 9.99 280 Fusobacterium Fusobacteriia Fusobacteriia 281 Bacteria Fusobacteriia Fusobacteriia 282 Leptotrichia sp37508 0.0689 283 Leptotrichia sp37508 0.0773
Tusobacterium Sp37444 Sp37445 Sp37464 Sp37508 Sp37508
275 Fusobacterium mortiferum 17.4 276 Fusobacterium nucleatum 0.434 277 Fusobacterium sp37444 1.26 278 Fusobacterium sp37445 2.71 279 Fusobacterium sp37458 9.99 280 Fusobacterium sp37464 1.91 281 Bacteria Fusobacteriia Fusobacteriiales Leptotrichiaceae 282 Leptotrichia sp37508 0.0689 283 Leptotrichia sp37508 0.0773
276 Fusobacterium nucleatum 0.434 277 Fusobacterium sp37444 1.26 278 Fusobacterium sp37445 2.71 279 Fusobacterium sp37458 9.99 280 Fusobacterium sp37464 1.91 281 Bacteria Fusobacteriia Fusobacteriia 282 Leptotrichia sp37508 0.0689 283 Leptotrichia sp37508 0.0773
277 Fusobacterium sp37444 1.26 278 Fusobacterium sp37445 2.71 279 Fusobacterium sp37458 9.99 280 Fusobacterium sp37464 1.91 281 Bacteria Fusobacteriia Fusobacteriia Fusobacteriales 282 Leptotrichia sp37508 0.0689 283 Leptotrichia sp37508 0.0773
278 Fusobacterium sp37445 2.71 279 Fusobacterium sp37458 9.99 280 Fusobacterium sp37464 1.91 281 Bacteria Fusobacteriia Fusobacteriiales Leptotrichiaceae 282 Leptotrichia sp37508 0.0689 283 Leptotrichia sp37508 0.0773
279
280 Fusobacterium sp37464 1.91 281 Bacteria Fusobacteria Fusobacteriia 282 Leptotrichia sp37508 0.0689 283 Leptotrichia sp37508 0.0773
280 Fusobacterium sp37464 1.91 281 Bacteria Fusobacteria Fusobacteriia 282 Leptotrichia sp37508 0.0689 283 Leptotrichia sp37508 0.0773
281 Bacteria Fusobacteria Fusobacteriia Fusobacteriia Fusobacteriiales Leptotrichiaceae Leptotrichia sp37508 0.0689 Leptotrichia sp37508 0.0773
282 Leptotrichia sp37508 0.0689
283 Leptotrichia sp37508 0.0773
SD375111
284 Leptotrichia sp37518 0.166
285 NA sp37541 1.38
286 Streptobacillus moniliformis 0.321
287 Bacteria Gracilibacteria NA NA NA NA
288 Gracilibacteria bacterium 0.0375
290 NA sp38170 0.0846
291 NA sp38230 0.0363 NA NA NA NA NA NA NA N
292 Bacteria NA
293 NA sp19816 1.5
294 NA sp19817 0.0749
295 NA sp19824 0.289
296 Bacteria Parcubacteria NA
297 NA sp40081 0.0302
298 Bacteria Proteobacteria Alphaproteobacteria Rhodospirillales Rhodospirillaceae
$ 299 $ NA $ \mathbf{sp46470} $ 0.155
300 Bacteria Proteobacteria Betaproteobacteria Burkholderiales Alcaligenaceae
301 Sutterella stercoricanis 1.44
302 Bacteria Proteobacteria Betaproteobacteria Burkholderiales Burkholderiaceae
303 Lautropia mirabilis 0.375
304 Bacteria Proteobacteria Betaproteobacteria Burkholderiales Comamonadaceae
305 Brachymonas denitrificans 0.0314
306 Brachymonas sp48850 0.16
307 Brachymonas sp48857 0.149
308 Comamonas sp48916 0.0604
Lampropedia hyalina 0.253
310 Lampropedia sp49018 0.226
311 Bacteria Proteobacteria Betaproteobacteria Neisseriales Neisseriaceae
313 Conchiformibius steedae 0.369
314 Neisseria animaloris 0.0592

TABLE IX: Summary of all of the organisms identified in Beauty's two samples from 2021-01-22. Two line types exist. The first line indicates the higher level classifications of the following lines which only contain genus and speces along with percentage of total abundance in the two samples. The first sample was spit up clear fluid while the second one was a fecal sample. During this time here symptoms were fairly controlled.

915	1		Γ_	<u> </u>			
315	k	p		0	f		
316		g	S	sample 0	sample 1		
317		Neisseria	animaloris	0.0363			
318		Neisseria	zoodegmatis	0.0786			
319			shayeganii	0.0780			
320				0.302			
321		Neisseria Neisseria		0.404			
321			zoodegmatis	0.411			
	Bacteria		Betaproteobacteria	Rhodocyclales	Dhodoaralaaaa		
$\frac{323}{324}$	Dacteria	Propionivibrio		0.0278	Rhodocyclaceae		
	Bacteria		Deltaproteobacteria	Desulfobacterales	Desulfobulbaceae		
326	Dacteria	Desulfobulbus		0.0205	Desullobulbaceae		
	Bacteria		Deltaproteobacteria	Desulfovibrionales	Desulfohalobiaceae		
328	Dacteria		sp52441	0.365	Desuliolialobiaceae		
	Bacteria		Deltaproteobacteria	Desulfovibrionales	Desulfomicrobiaceae		
330	Dacteria	Desulfomicrobium		0.0363	Destinomicrobiaceae	associated	(P)
330		Desunomiciobium	or are	0.0303		[15]	(1)
331	Bacteria	Protechacteria	Deltaproteobacteria	Desulfovibrionales	Desulfovibrionaceae		
332	Dacteria	Desulfovibrio		0.157	Desumovibilonaceae		
	Bacteria		Deltaproteobacteria	Desulfuromonadales	NA		
334	Dacteria		bacterium	0.0375	1111		
	Bacteria		Epsilonproteobacteria		Campylobacteraceae		
336	Bacteria	Arcobacter		0.305	Campy lobactoraccae		
337		Campylobacter		0.0254			
338		Campylobacter		0.88			
000		Campy Issuetti	showae	0.00			
339	Bacteria	Proteobacteria	Epsilonproteobacteria	Campylobacterales	Helicobacteraceae		
340			sp55662	0.029			
341			succinogenes	0.0459			
342	Bacteria		Gammaproteobacteria	Cardiobacteriales	Cardiobacteriaceae		
343		Cardiobacterium		0.023			
344		Cardiobacterium		0.848			
345			sp57146	0.0773			İ
346	Bacteria		Gammaproteobacteria	Enterobacteriales	Enterobacteriaceae		
347		Escherichia Shigella			0.0197		
348	Bacteria		Gammaproteobacteria	Pasteurellales	Pasteurellaceae		
349		Aggregatibacter Haemophilus		0.0532			
			sp62189				
350		Bibersteinia		0.618			
351		Bibersteinia		0.12			
352		Haemophilus	sp62184	0.14			
353		Haemophilus	sp62189	1.15			İ
354			sp62273	1.21			
355		Pasteurella		0.0761			
356		Pasteurella		1.3			
	Bacteria		Gammaproteobacteria	Pseudomonadales	Moraxellaceae		
358		Moraxella		0.245			
			equi				
359		Moraxella	catarrhalis	0.143			
			nonliquefaciens				

TABLE X: Summary of all of the organisms identified in Beauty's two samples from 2021-01-22. Two line types exist. The first line indicates the higher level classifications of the following lines which only contain genus and speces along with percentage of total abundance in the two samples. The first sample was spit up clear fluid while the second one was a fecal sample. During this time here symptoms were fairly controlled.

360	k	n	0		f	
361	K	p	c s	sample 0	sample 1	
362		Moraxella		0.375	sample 1	
302		Moraxena	caviae cuniculi	0.575		
262		Managalla		1.05		
363		Moraxella		1.25 3.06		
364		Moraxella	-			
365	D4:-	Psychrobacter		0.0338	Dl	
	Bacteria		Gammaproteobacteria		Pseudomonadaceae	
367	D	Pseudomonas		0.0193	V 41 1	
369	Bacteria	Proteobacteria	Gammaproteobacteria		Aantnomonadaceae	
370		Arenimonas Luteimonas		0.081 0.0931		
371				0.0951		
	D4:-	NA	$\mathbf{sp65479}$		NT A	
373	Bacteria	Saccharibacteria *Saccharimonas		NA 0.271	NA	
374			_	0.271 0.175		
375		*Saccharimonas *Saccharimonas		0.175		
				0.0308		
376		*Saccharimonas	=			
377		*Saccharimonas	•	0.0157 0.0641		
378 379		NA NA	*Saccharibacteria *Saccharibacteria	0.0302		
379		INA	sp65941	0.0302		
380		NT A	sp65941	0.415		
381			sp66045	0.413		
382			sp66119	0.0483		
	Bacteria	Spirochaetae		Spirochaetales	NA	
384	Dacteria	Firmicutes	-	0.0967	IVA	
	Bacteria	Spirochaetae	Spirochaetes	Spirochaetales	Spirochaetaceae	
386	Dacteria	NA	sp66621	0.0592	Spirochactaceae	
387			sp66653	0.0399		
388			sp66672	0.0157		
389			sp66678	0.0133		
390			sp66695	0.0133		
391			sp66723	0.0302		
392			sp67037	0.0302		
393		Spirochaeta		0.197		
394		Treponema	=	0.708		(P) [20]
395		Treponema		0.129		· / L]
		•	vincentii			
396		Treponema	parvum	0.0145		
397		Treponema	-	0.0133		
398		Treponema	pedis	0.0266		
399		Treponema	sp66795	0.117		
400		Treponema		0.0628		
401		Treponema		0.29		
402	Bacteria	Synergistetes		Synergistales	Synergistaceae	
403		Fretibacterium	fastidiosum	0.0181		
404		Fretibacterium	feline	0.0713		

TABLE XI: Summary of all of the organisms identified in Beauty's two samples from 2021-01-22. Two line types exist. The first line indicates the higher level classifications of the following lines which only contain genus and speces along with percentage of total abundance in the two samples. The first sample was spit up clear fluid while the second one was a fecal sample. During this time here symptoms were fairly controlled.

405	k	n	С	0	f	
	K	p		·	1	
406			S	sample 0	sample 1	
407		Fretibacterium	sp67103	0.0665		
408		Fretibacterium	sp67106	0.0967		
409	Bacteria	Tenericutes	Mollicutes	Acholeplasmatales	Acholeplasmataceae	
410		Acholeplasma	morum	0.32		
411		Acholeplasma	sp67593	0.283		
412		Acholeplasma	sp67613	0.0906		
413	Bacteria	Tenericutes	Mollicutes	Mycoplasmatales	Mycoplasmataceae	
414		Mycoplasma	canis	0.0483		
415		Mycoplasma	edwardii	0.0254		
416		Mycoplasma	lipophilum	0.0278		
417		Mycoplasma	neophronis	0.0157		
418		Ureaplasma	parvum	0.0967		
			urealyticum			
419	Bacteria	Tenericutes	Mollicutes	NA	NA	
420		Acholeplasmatales	bacterium	0.0737		
421		Firmicutes	oral	0.0157		
422		NA	sp68302	0.0798		

TABLE XII: Summary of all of the organisms identified in Beauty's two samples from 2021-01-22. Two line types exist. The first line indicates the higher level classifications of the following lines which only contain genus and speces along with percentage of total abundance in the two samples. The first sample was spit up clear fluid while the second one was a fecal sample. During this time here symptoms were fairly controlled.

Appendix B: Statement of Conflicts

No specific funding was used in this effort and there are no relationships with others that could create a conflict of interest. I would like to develop these ideas further and have obvious bias towards making them appear successful. Barbara Cade, the dog owner, has worked in the pet food industry but this does not likely create a conflict. We have no interest in the makers of any of the products named in this work.

Appendix C: About the Authors and Facility

This work was performed at a dog rescue run by Barbara Cade and housed in rural Georgia. The author of this report ,Mike Marchywka, has a background in electrical engineering and has done extensive research using free online literature sources. I hope to find additional people interested in critically examining the results and verify that they can be reproduced effectively to treat other dogs.

Appendix D: Symbols, Abbreviations and Colloquialisms

TERM definition and meaning

Appendix E: General caveats and disclaimer

This document was created in the hope it will be interesting to someone including me by providing information about some topic that may include personal experience or a literature review or description of a speculative theory or idea. There is no assurance that the content of this work will be useful for any paricular purpose.

All statements in this document were true to the best of my knowledge at the time they were made and every attempt is made to assure they are not misleading or confusing. However, information provided by others and observations that can be manipulated by unknown causes ("gaslighting") may be misleading. Any use of this information should be preceded by validation including replication where feasible. Errors may enter into the final work at every step from conception and research to final editing.

Documents labelled "NOTES" or "not public" contain substantial informal or speculative content that may be terse and poorly edited or even sarcastic or profane. Documents labelled as "public" have generally been edited to be more coherent but probably have not been reviewed or proof read.

Generally non-public documents are labelled as such to avoid confusion and embarassment and should be read with that understanding.

Appendix F: Citing this as a tech report or white paper

Note: This is mostly manually entered and not assured to be error free. This is tech report MJM-2022-003.

Version	Date	Comments
0.01		Create from empty.tex template
-	March 1, 2022	version 0.10 MJM-2022-003
0.1	2022-03-01	First revision for consideration
1.0	20xx-xx-xx	First revision for distribution

Released versions, build script needs to include empty releases.tex

Version	Date	URL
0.1	2022-03-01	email circulation RFC

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@techreport{marchywka-MJM-2022-003-0.10,
filename ="beauty",
run-date ="March 1, 2022"
title ="CBeauty: linical Relevance of Vomit and Fecal Microbiome",
author ="Mike J Marchywka",
type ="techreport",
name = "marchywka-MJM-2022-003-0.10",
number = "MJM-2022-003",
version = "0.10",
institution ="not institutionalized, independent"
address = "306 Charles Cox, Canton GA 30115",
date ="March 1, 2022"
startdate = "2022-01-10",
dav = "1"
month = "3"
year = "2022",
author1email = "marchywka@hotmail.com",
contact ="marchywka@hotmail.com"
author1id = "orcid.org/0000-0001-9237-455X",
pages =" 17",
filename ="beauty"
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Supporting files. Note that some dates, sizes, and md5's will change as this is rebuilt.

This really needs to include the data analysis code but right now it is auto generated picking up things from prior build in many cases

```
13983 Mar 1 08:52 beauty.aux b36dfd02507357efff5f205a096c06d8
15941 Mar 1 08:51 beauty.bbl 82a27a0483ae50bcf3fc22f3d5914ee1
398 Mar 1 08:49 beauty.bib f735ad4feb97d13439d788fbae7681d4
1555 Mar 1 08:49 beauty.blg fe4ce7a61ee475a61507421b3441ebe9
0 Mar 1 08:54 beauty.bundle_checksums d41d8cd98f00b204e9800998ecf8427e
29991 Mar 1 08:49 beauty.fls e5aacd77ac32db1471a59970d60c36d2
3 Mar 1 08:49 beauty.last_page 4d095eeac8ed659b1ce69dcef32ed0dc
59973 Mar 1 08:52 beauty.log 0b4dc4f3b20ac85a2365c3d22c93649e
902 Mar 1 08:52 beauty.out fd61b43585e1faf0ebe20358c7cec418
256718 Mar 1 08:52 beauty.pdf 4ecac7df37045189916c04467d24706f
```

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17110 Mar 1 08:49 beauty.tex c767662dfb9d97c66c1c984ef779a220
1240 Mar 1 08:52 beauty.toc d7b8f05dceff89154933f4c7a81855af
3530 Mar 1 08:52 comment.cut bbd5912458788bb1c0b215594b5e45c4
30013 Feb 19 09:11 /home/documents/latex/bib/mjm_tr.bib 026bce9e80e7ea9edbfffa132bec3ca9
29063 Feb 14 09:18 /home/documents/latex/bib/releases.bib ba42de648b8c087e067521f62c1ec76d
7331 Jan 24 2019 /home/documents/latex/pkg/fltpage.sty 73b3a2493ca297ef0d59d6c1b921684b
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