1584
Our patient had concomitant, culture-proven infections
with two genospecies of B burgdorferi sensu lato, B garinii
and B afzelii. PCR-based evidence of simultaneous infection
by two or even three genospecies of B 5 23.76 862.3201 Tm
(by)TjTj
8.1454 0 0 11.85i 888.7s(B).h2859 in
our case was responsible for the clinical
disease, or whether both were responsible. CSF and blood
may give positive PCR results only transiently or
intermittently. The reason for this might be the minimal
amounts of spirochaetes and their degradation products
occurring sporadically in the CSF and blood. It is also
possible that spirochaetes are shed to the circulation only
intermittently from their hiding places. Both possibilities
stress the importance of repeated testing. The first symptom
of infection in our
1 year after onset of the
infection, the patient’s central-nervous-system infection
would have remained unrecognised and progressed towards
more serious sequelae. On the basis of this case, we advocate
analysing the CSF of patients even when symptoms are
mild.
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the Maud Kuistila Foundation, the Orion Corporation Research
Foundation, the Turku University Society, and the Turku University
Foundation. We also thank Simo Merne for help in preparation of the

602-08.s667 0 0 8.207 160.32 62.56 13m
0 Tc521 Tc
(speciesol)Tj
6.72 0 0 9.1189 236.64 323.0417m
0.0051j
8.8 0 333 0 0 7.5991 259.68 324.24(po
0.00521 Tc
(s:)Tj
6.97140: 7.2951 265.68 282.24 1m
0.00521 Tc
(speciesol)Tj Tm0-Tm
.5991 133.2 271.92 2308 2Tm
06c
(602-08.)Tj
6.59.7268 48.72 82.24 Tm
0.00m
06c
(602Tj
6.V3 0am 0 7.5998 39.12 270.8 Tm
(.00m0with)Tj-08.)Tj
6.AP, 0 7.903 195.6 28 270.729000m0c
(speciesol)TjKuip0 6.079 118.32 323.04118 480m0with)T(H0 7.903 91 195.6 272.4 Tm31
0.00401 Tc
(
0 Tc
(Vos)Tj
7.4 0 0 9.4228 147.84 240.48 Tm
0.0001 Tc
(K,)Tj
5.6 0 0 6.0792 159.84 241.68 Tm
-0.0001 Tc
(et)Tj
4.6667 0 0 7.5991 168.96 241.68 Tm
(al.)Tj
6.3111 0 0 7.903 180.48 241.68 Tm
(Different)Tj
6.6545 0 0 9.4228 216.96 240.24 Tm
0 Tc
(genospecies)Tj
7.2 0 0 7.903 263.28 241.68 Tm
(of)Tj
5.7 0 0 7.903 273.6 241.68 Tm
-0.0002 Tc
(Borrelia)Tj
5.7454 0 0 10.0308 39.36 230.16 Tm
0 Tc
(burgdorferi)Tj
6.1333 0 0 5.1674 79.44 231.84 Tm
0.0001 Tc
(are)Tj
6.28 0 0 7.903 93.36 231.84 Tm
0 Tc
(associated)Tj
6.7 0 0 7.903 133.68 231.84 Tm
0.0001 Tc
(with)Tj
5.75 0 0 7.903 152.64 231.84 Tm
0 Tc
(distinct)Tj
5.45 0 0 7.903 182.88 231.84 Tm
-0.0001 Tc
(clinical)Tj
6.4286 0 0 7.903 211.68 231.84 Tm
(manifestations)Tj
6.6 0 0 7.903 268.56 231.84 Tm
(of)Tj
8.8 0 0 9.7268 278.16 230.16 Tm
0 Tc
(Lyme)Tj
5.6 0 0 7.903 39.12 221.76 Tm
-0.0001 Tc
(borreliosis.)Tj
6.1 0 0 8.207 82.8 221.76 Tm
0.0001 Tc
(Clin)Tj
5.4 0 0 9.4228 100.56 220.56 Tm
0.0002 Tc
(Infect)Tj
6.4 0 0 7.5991 122.64 222 Tm
0.0001 Tc
(Dis)Tj
6.72 0 0 9.1189 137.52 220.8 Tm
0 Tc
(1993;)Tj
5.8667 0 0 7.5991 161.28 221.76 Tm
(17:)Tj
7.0286 0 0 7.903 175.2 221.76 Tm
-0.0001 Tc
(708-17.)Tj
9.8 0 0 12.4625 26.16 179.04 Tm
0 Tc
(Pruritus)Tj
10.52 0 0 9.7268 25.92 162.72 Tm
0.0001 Tc
(SiR-Yamada)Tj
7.4 0 0 8.8149 94.56 161.04 Tm
(says)Tj
10 0 0 11.8545 118.8 161.04 Tm
((May)Tj
7.7333 0 0 10.9426 148.32 161.52 Tm
(20,)Tj
9.2 0 0 8.8149 167.76 161.04 Tm
-0.0001 Tc
(p)Tj
8.4 0 0 11.2466 180 161.28 Tm
0.0001 Tc
(1314))Tj
10.2 0 0 9.4228 211.68 162.96 Tm
-0.0001 Tc
("now)Tj
6.8 0 0 11.8545 241.44 161.04 Tm
0 Tc
(pruritis)Tj
5.4 0 0 9.4228 279.6 162.96 Tm
0.0002 Tc
(is)Tj
8.4 0 0 7.5991 291.84 162.72 Tm
0.0001 Tc
(not)Tj
8.7 0 0 9.7268 25.44 150.24 Tm
(hard)Tj
7 0 0 7.2951 52.32 150.48 Tm
-0.0001 Tc
(to)Tj
7.6 0 0 11.2466 66.96 149.28 Tm
(describe";)Tj
8.4571 0 0 12.1585 118.8 148.56 Tm
(perhaps)Tj
8.3 0 0 9.7268 160.56 150.48 Tm
(then)Tj
7.8667 0 0 9.4228 186.24 150.72 Tm
0 Tc
(the)Tj
8.2 0 0 7.5991 206.16 150.48 Tm
(next)Tj
7.4 0 0 9.7268 231.6 148.8 Tm
0.0001 Tc
(step)Tj
5.4 0 0 9.7268 255.6 150.48 Tm
0.0002 Tc
(is)Tj
9.2571 0 0 11.8545 268.08 148.8 Tm
0 Tc
(knowing)Tj
10.6666 0 0 9.4228 25.44 138.24 Tm
0.0001 Tc
(how)Tj
7.2 0 0 6.9911 48.96 138.24 Tm
0 Tc
(to)Tj
6.8 0 0 11.8545 62.16 136.32 Tm
(spell)Tj
4.8 0 0 11.2466 87.12 137.04 Tm
0.0001 Tc
(it,)Tj
7.24 0 0 11.8545 100.8 136.56 Tm
0 Tc
(especially)Tj
7.44 0 0 9.7268 148.56 138.24 Tm
0.0001 Tc
(since)Tj
7.7333 0 0 9.4228 175.44 138.48 Tm
(the)Tj
8.55 0 0 11.8545 194.16 136.56 Tm
(epidemic)Tj
8 0 0 9.4228 239.76 138.48 Tm
(of)Tj
6.7 0 0 9.4228 252.48 138.48 Tm
0.0002 Tc
(this)Tj
6.95 0 0 11.8545 273.36 136.56 Tm
0.0001 Tc
(specific)Tj
8.4 0 0 9.4228 25.68 126 Tm
(monolectic)Tj
7.5 0 0 12.1585 81.36 124.08 Tm
0 Tc
(dyslexia)Tj
8.88 0 0 6.6872 122.64 126 Tm
(seems)Tj
7.4 0 0 6.9911 154.56 126.24 Tm
0.0001 Tc
(to)Tj
8.8 0 0 9.7268 168.48 126 Tm
0 Tc
(be)Tj
8.1333 0 0 11.8545 184.32 124.32 Tm
(spreading)Tj
9 0 0 9.4228 233.28 126.24 Tm
0.0001 Tc
(from)Tj
7.8667 0 0 9.1189 259.92 126.24 Tm
0 Tc
(the)Tj
6.5714 0 0 9.4228 279.1201 126.24 Tm
-0.0001 Tc
(letters)Tj
9.0857 0 0 9.4228 25.92 113.76 Tm
0 Tc
(columns)Tj
7.4 0 0 9.4228 69.36 113.76 Tm
0.0001 Tc
(into)Tj
7.8667 0 0 9.4228 92.16 114 Tm
0 Tc
(the)Tj
7.2 0 0 9.7268 111.12 113.76 Tm
(Articles)Tj
10 0 0 11.8545 151.44 112.08 Tm
0.0001 Tc
((May)Tj
7.2 0 0 10.9426 181.44 112.56 Tm
0 Tc
(13,)Tj
9.2 0 0 8.8149 199.44 112.08 Tm
(p)Tj
7.8667 0 0 11.5506 211.2 112.32 Tm
(1198).)Tj
8.5333 0 0 9.4228 246.24 114 Tm
(The)Tj
8.1333 0 0 9.4228 266.4 114 Tm
(Lancet)Tj
5.4 0 0 9.7268 300.24 114 Tm
0.0002 Tc
(is)Tj
8.2667 0 0 6.9911 25.68 101.76 Tm
-0.0001 Tc
(not)Tj
8 0 0 9.1189 47.28 101.76 Tm
0.0001 Tc
(alone)Tj
7 0 0 9.4228 78 101.76 Tm
-0.0001 Tc
(in)Tj
6.8 0 0 9.4228 92.64 102 Tm
0 Tc
(this)Tj
6.5091 0 0 11.5506 115.68 100.08 Tm
-0.0001 Tc
(difficulty.)Tj
9.0286 0 0 9.1189 165.84 102 Tm
(Medline)Tj
9 0 0 9.4228 210.48 102 Tm
0.0001 Tc
(from)Tj
8.9 0 0 8.8149 239.76 102 Tm
-0.0001 Tc
(1966)Tj
7.2 0 0 7.2951 268.08 101.76 Tm
0 Tc
(to)Tj
9.8 0 0 11.5506 283.2 100.08 Tm
(May,)Tj
8.16 0 0 10.9426 26.88 88.08 Tm
-0.0001 Tc
(1995,)Tj
7.6 0 0 9.7268 57.84 87.84 Tm
(reports)Tj
9.3 0 0 9.4228 96.24 89.76 Tm
0.0001 Tc
(4645)Tj
7.52 0 0 6.6872 125.76 89.52 Tm
-0.0001 Tc
(cases)Tj
8 0 0 9.4228 155.04 89.76 Tm
0.0001 Tc
(of)Tj
7.55 0 0 12.1585 169.44 87.6 Tm
(pruritus)Tj
7.7333 0 0 11.5506 212.88 88.08 Tm
((69)Tj
7 0 0 9.4228 233.76 89.76 Tm
-0.0001 Tc
(in)Tj
8.5333 0 0 9.4228 249.36 89.76 Tm
0 Tc
(The)Tj
7.45 0 0 11.5506 270.96 88.08 Tm
-0.0001 Tc
(Lancet),)Tj
9.45 0 0 11.8545 25.92 75.6 Tm
(compared)Tj
8.2 0 0 9.4228 76.32 77.52 Tm
0 Tc
(with)Tj
8.6667 0 0 8.8149 102.72 77.76 Tm
0.0001 Tc
(174)Tj
7.6 0 0 6.3832 123.84 77.52 Tm
-0.0001 Tc
(cases)Tj
8.2 0 0 9.4228 152.16 77.52 Tm
0 Tc
(of)Tj
6.9 0 0 12.1585 165.6 75.6 Tm
(pruritis)Tj
8.56 0 0 11.5506 204.72 75.84 Tm
-0.0001 Tc
((none)Tj
7 0 0 9.1189 235.92 77.76 Tm
(in)Tj
8.6667 0 0 9.7268 250.32 77.52 Tm
0.0001 Tc
(The)Tj
7.35 0 0 11.5506 270.96 76.08 Tm
0 Tc
(Lancet).)Tj
10.2667 0 0 9.4228 25.68 65.28 Tm
-0.0001 Tc
(The)Tj
8.08 0 0 11.8545 50.64 63.36 Tm
(prevalence)Tj
8 0 0 9.4228 106.08 65.52 Tm
0.0001 Tc
(of)Tj
7.8667 0 0 9.4228 120.72 65.28 Tm
0 Tc
(the)Tj
5.28 0 0 9.7268 141.6 65.28 Tm
0.0001 Tc
(-itis)Tj
8.65 0 0 9.4228 163.92 65.28 Tm
0 Tc
(mutation)Tj
7.6 0 0 6.3832 212.16 65.28 Tm
-0.0001 Tc
(across)Tj
8.4 0 0 9.4228 246 65.52 Tm
0.0001 Tc
(time)Tj
6.8 0 0 11.8545 273.6 63.6 Tm
0 Tc
((figure))Tj
7.7 0 0 9.4228 25.92 51.36 Tm
0.0001 Tc
(suggests)Tj
7.6 0 0 6.0792 66.96 53.28 Tm
-0.0001 Tc
(a)Tj
9.2 0 0 9.4228 75.36 53.28 Tm
-0.1822 Tw
(sudden and)Tj
7.35 0 0 9.4228 132.48 53.28 Tm
0 Tc
0 Tw
(virulent)Tj
8.45 0 0 9.4228 171.6 53.28 Tm
-0.0001 Tc
(outbreak)Tj
7 0 0 9.4228 215.76 53.28 Tm
(in)Tj
8.64 0 0 9.1189 228 53.28 Tm
(about)Tj
8.08 0 0 10.9426 258.72 51.84 Tm
(1975,)Tj
8.4 0 0 9.4228 287.04 53.28 Tm
0.0001 Tc
(with)Tj
2.6667 0 0 3.9515 371.76 900.2401 Tm
-0.0002 Tc
(*—*)Tj
4.64 0 0 7.5991 391.92 899.28 Tm
0 Tc
(-itis)Tj
7.6 0 0 5.7753 408.48 899.76 Tm
-0.0001 Tc
(+)Tj
5.52 0 0 7.5991 416.4 899.52 Tm
(-itus)Tj
5.8333 0 0 7.903 372.48 887.52 Tm
0 Tc
(- :%-/t<s)Tj
6.8571 0 0 10.9426 328.8 637.2 Tm
-0.0001 Tc
(Figure:)Tj
8 0 0 8.8149 361.92 639.12 Tm
0.0001 Tc
(Prevalence)Tj
7 0 0 9.1189 413.28 639.12 Tm
-0.0001 Tc
(of)Tj
8 0 0 8.8149 424.32 639.12 Tm
0.0001 Tc
(the)Tj
5.28 0 0 9.1189 442.32 639.12 Tm
(-itis)Tj
7.2 0 0 9.1189 461.04 639.12 Tm
0 Tc
(variant)Tj
7 0 0 8.8149 494.4 639.12 Tm
-0.0001 Tc
(of)Tj
6.9 0 0 10.9426 506.16 637.4401 Tm
0 Tc
(pruritus)Tj
8.1714 0 0 11.2466 542.88 637.4401 Tm
-0.0001 Tc
((shaded)Tj
6.96 0 0 10.9426 581.04 637.4401 Tm
0.0001 Tc
(bars))Tj
8 0 0 6.9911 328.32 626.4 Tm
-0.1504 Tw
(as a)Tj
8.2 0 0 10.6387 350.16 624.96 Tm
0 Tc
0 Tw
(percentage)Tj
6.8 0 0 9.4228 402.96 626.4 Tm
(of)Tj
5.4667 0 0 8.8149 414.0001 626.64 Tm
0.0001 Tc
(all)Tj
8.1454 0 0 6.9911 427.44 626.4 Tm
-0.0001 Tc
(occurrences)Tj
6.8 0 0 9.1189 484.8 626.64 Tm
0.0001 Tc
(of)Tj
7.8667 0 0 8.8149 495.6 626.64 Tm
0 Tc
(the)Tj
5.28 0 0 8.8149 513.6 626.64 Tm
0.0001 Tc
(-itis)Tj
8.5333 0 0 9.1189 532.5601 626.64 Tm
0 Tc
(and)Tj
6.24 0 0 9.4228 551.52 626.4 Tm
(-itus)Tj
8 0 0 9.4228 572.88 626.4 Tm
0.0001 Tc
(forms)Tj
6.6 0 0 11.2466 328.32 612.2401 Tm
-0.0001 Tc
((solid)Tj
6.16 0 0 11.2466 355.92 612.2401 Tm
0 Tc
(line))Tj
5.8 0 0 9.1189 378.72 613.92 Tm
0.0001 Tc
(in)Tj
7.7 0 0 10.9426 389.28 612.48 Tm
(Medline,)Tj
9.5428 0 0 9.1189 430.32 613.92 Tm
0 Tc
(1966-94)Tj
7.2 0 0 6.3832 328.56 594 Tm
(a)Tj
8.6 0 0 12.1585 339.6 592.08 Tm
-0.0001 Tc
(subsequent)Tj
7.3 0 0 11.5506 397.68 592.5601 Tm
(decline,)Tj
7.7 0 0 11.8545 439.2 592.08 Tm
0.0001 Tc
(possibly)Tj
7.3333 0 0 9.7268 482.4 593.76 Tm
-0.0001 Tc
(attributable)Tj
7.2 0 0 7.2951 541.6801 594 Tm
0 Tc
(to)Tj
7.7818 0 0 12.1585 556.8 591.84 Tm
(prophylaxis)Tj
8.6286 0 0 12.1585 328.32 579.6 Tm
(through)Tj
7.7428 0 0 12.1585 370.32 579.6 Tm
-0.0001 Tc
(spell-checking)Tj
7.4667 0 0 9.7268 440.64 581.52 Tm
0 Tc
(software.)Tj
10.1333 0 0 9.7268 487.2 581.52 Tm
(The)Tj
7.36 0 0 6.3832 511.44 581.52 Tm
0.0001 Tc
(error)Tj
8.4571 0 0 12.1585 538.8 579.6 Tm
-0.0001 Tc
(perhaps)Tj
6.7428 0 0 9.7268 579.84 581.28 Tm
(results)Tj
7.2 0 0 9.7268 328.8 569.04 Tm
0 Tc
(either)Tj
9.1 0 0 9.7268 360.72 569.04 Tm
(from)Tj
7.2 0 0 6.3832 389.28 569.04 Tm
(a)Tj
7.5294 0 0 12.1585 400.32 567.12 Tm
(frontal-lobe-type)Tj
7.6 0 0 9.4228 483.84 569.28 Tm
-0.0001 Tc
(defect)Tj
8 0 0 9.4228 517.6801 569.28 Tm
0.0001 Tc
(of)Tj
7.7538 0 0 9.7268 532.8 569.04 Tm
-0.0001 Tc
(overinclusion)Tj
7.4 0 0 6.3832 599.76 569.04 Tm
0.0001 Tc
(or)Tj
7.8461 0 0 11.8545 328.32 554.64 Tm
(perseveration)Tj
9 0 0 9.7268 395.52 556.5601 Tm
(from)Tj
7.92 0 0 9.4228 423.36 556.5601 Tm
(other)Tj
8.1818 0 0 6.6872 452.88 556.5601 Tm
0 Tc
(occurrences)Tj
8 0 0 9.7268 513.12 556.5601 Tm
0.0001 Tc
(of)Tj
7.7333 0 0 10.0308 527.52 556.32 Tm
(the)Tj
11.1333 0 0 6.9911 547.4401 556.32 Tm
0 Tc
(common)Tj
5.04 0 0 9.7268 593.28 556.32 Tm
-0.0001 Tc
(-itis)Tj
6.4571 0 0 11.5506 328.8 542.64 Tm
(suffix,)Tj
7.6 0 0 6.3832 362.64 544.08 Tm
(or)Tj
9.1 0 0 9.7268 377.52 544.08 Tm
0 Tc
(from)Tj
7.2 0 0 6.3832 405.6 544.08 Tm
(a)Tj
6.72 0 0 9.4228 415.92 544.08 Tm
(false)Tj
8.7111 0 0 11.8545 442.32 542.16 Tm
0.0001 Tc
(etymology)Tj
7.5 0 0 9.7268 494.88 544.08 Tm
0 Tc
(that)Tj
7.4857 0 0 12.4625 518.64 541.92 Tm
(itching)Tj
9.4 0 0 7.5991 555.84 544.08 Tm
(must)Tj
6.7333 0 0 9.7268 584.16 543.84 Tm
0.0001 Tc
(result)Tj
9.1 0 0 9.7268 328.56 531.84 Tm
0 Tc
(from)Tj
8.2154 0 0 11.5506 355.2 530.16 Tm
-0.0001 Tc
(inflammation,)Tj
5.28 0 0 9.7268 424.8 531.6 Tm
0.0001 Tc
(-itis)Tj
8.5818 0 0 12.1585 445.92 529.6801 Tm
-0.0001 Tc
((presumably)Tj
8 0 0 9.7268 507.12 531.6 Tm
0.0001 Tc
(of)Tj
7.7333 0 0 9.7268 520.3201 531.6 Tm
(the)Tj
7 0 0 9.7268 538.3201 529.6801 Tm
-0.0001 Tc
(prur-,)Tj
8.35 0 0 9.7268 568.5601 531.6 Tm
0 Tc
(whatever)Tj
7.5 0 0 10.0308 328.56 519.12 Tm
(that)Tj
10.5333 0 0 9.1189 350.4 517.2 Tm
-0.0001 Tc
(may)Tj
7.1 0 0 11.8545 373.44 517.44 Tm
0.0001 Tc
(be).)Tj
7.65 0 0 9.7268 395.52 519.12 Tm
0 Tc
(Pruritus)Tj
9.36 0 0 6.6872 436.8 519.12 Tm
(comes)Tj
7.7143 0 0 9.7268 469.2 519.12 Tm
0.0001 Tc
(instead)Tj
9.1 0 0 10.3347 505.6801 518.88 Tm
0 Tc
(from)Tj
7.8667 0 0 9.7268 531.6 519.12 Tm
(the)Tj
8.16 0 0 9.7268 549.6 519.12 Tm
-0.0001 Tc
(Latin)Tj
6.5 0 0 12.1585 576.96 517.2 Tm
0 Tc
(prurire,)Tj
7.2 0 0 7.5991 328.56 506.64 Tm
(to)Tj
6.48 0 0 11.5506 343.2 505.2 Tm
-0.0002 Tc
(itch,)Tj
9.2 0 0 9.4228 368.88 506.64 Tm
0 Tc
(and)Tj
7.36 0 0 9.7268 390.96 506.64 Tm
0.0001 Tc
(finds)Tj
6.2667 0 0 9.7268 418.56 506.64 Tm
-0.0001 Tc
(itself)Tj
7.4 0 0 9.7268 445.44 506.64 Tm
0.0001 Tc
(in)Tj
7.7333 0 0 9.7268 459.6 506.64 Tm
(the)Tj
7.6 0 0 9.7268 479.04 506.4 Tm
-0.0001 Tc
(rather)Tj
8.6286 0 0 10.0308 511.92 506.4 Tm
0 Tc
(dubious)Tj
9.8286 0 0 8.8149 553.92 504.96 Tm
(company)Tj
7.6 0 0 9.7268 600.48 506.64 Tm
-0.0001 Tc
(of)Tj
6.9714 0 0 11.5506 329.04 492.72 Tm
0.0001 Tc
(coitus,)Tj
7.1555 0 0 11.8545 364.08 492.24 Tm
0 Tc
(crepitus,)Tj
6.8889 0 0 11.5506 408.24 492.72 Tm
(detritus,)Tj
7.5111 0 0 11.5506 450.96 492.72 Tm
(fremitus,)Tj
6.84 0 0 11.2466 496.8 492.96 Tm
0.0001 Tc
(introitus,)Tj
6.3333 0 0 11.5506 543.6 492.72 Tm
-0.0001 Tc
(situs,)Tj
6.7555 0 0 11.5506 571.6801 492.96 Tm
0.0001 Tc
(tinnitus,)Tj
9.2 0 0 9.4228 329.04 481.92 Tm
0 Tc
(and)Tj
8.1 0 0 9.7268 348.72 481.68 Tm
(vomitus.)Tj
7.36 0 0 9.4228 329.52 459.12 Tm
0.0001 Tc
(Chris)Tj
10.2286 0 0 8.8149 355.2 459.36 Tm
0 Tc
(McManus)Tj
6.65 0 0 6.9911 328.8 448.8 Tm
(Academic)Tj
6.32 0 0 7.903 364.32 447.84 Tm
0.0001 Tc
(Department)Tj
5 0 0 6.6872 405.36 448.8 Tm
-0.0001 Tc
(of)Tj
5.4182 0 0 8.207 413.76 447.6 Tm
0.0002 Tc
(Psychiatry,)Tj
5.2 0 0 6.6872 452.88 449.04 Tm
0 Tc
(St)Tj
6.0667 0 0 8.207 462.48 447.84 Tm
0.0001 Tc
(Mary’s)Tj
5.4 0 0 8.207 487.2 447.84 Tm
0.0002 Tc
(Hospital)Tj
6.0571 0 0 6.3832 516.48 449.04 Tm
0 Tc
(Medical)Tj
5.6 0 0 7.903 545.04 448.08 Tm
-0.0001 Tc
(School,)Tj
6.2667 0 0 6.9911 329.28 439.44 Tm
(London)Tj
8.8 0 0 6.6872 354.72 439.44 Tm
0 Tc
(W2)Tj
6.3 0 0 7.5991 368.4 438.7201 Tm
-0.0001 Tc
(1PD,)Tj
7.6 0 0 6.6872 386.64 439.44 Tm
(UK)Tj
9.2923 0 0 12.4625 330 410.64 Tm
(SiR-Taniguchi)Tj
7.3333 0 0 12.1585 408.0001 410.4 Tm
((April)Tj
5.8 0 0 10.9426 440.4 411.12 Tm
0.0001 Tc
(1,)Tj
8.8 0 0 8.8149 452.64 410.64 Tm
0 Tc
(p)Tj
8.4 0 0 11.5506 463.44 410.88 Tm
0.0001 Tc
(870))Tj
8.16 0 0 11.8545 489.6 410.64 Tm
-0.0001 Tc
(along)Tj
8.3 0 0 9.4228 518.64 412.56 Tm
(with)Tj
10.4666 0 0 9.7268 543.36 412.56 Tm
0 Tc
(Yamada)Tj
9.6 0 0 11.8545 586.5601 410.88 Tm
-0.0001 Tc
((May)Tj
7.7333 0 0 11.2466 330 398.64 Tm
0.0001 Tc
(20,)Tj
8.8 0 0 8.8149 347.76 398.16 Tm
0 Tc
(p)Tj
8 0 0 11.5506 357.84 398.4 Tm
0.0001 Tc
(1314),)Tj
9.3333 0 0 9.4228 390.72 400.08 Tm
(and)Tj
7.12 0 0 9.4228 410.88 400.08 Tm
-0.0001 Tc
(their)Tj
7.4182 0 0 12.1585 435.84 398.16 Tm
0.0001 Tc
(colleagues,)Tj
7.2 0 0 6.3832 489.36 400.08 Tm
0 Tc
(are)Tj
6.8 0 0 11.8545 505.92 398.16 Tm
0.0001 Tc
(justly)Tj
8.7555 0 0 10.0308 533.76 400.08 Tm
0 Tc
(concerned)Tj
8.4 0 0 9.7268 584.64 400.08 Tm
0.0001 Tc
(about)Tj
10.8 0 0 9.4228 329.52 387.84 Tm
0 Tc
(how)Tj
7.2 0 0 7.5991 356.64 387.6 Tm
(to)Tj
7.4222 0 0 11.2466 373.68 386.4 Tm
0.0001 Tc
(describe,)Tj
8.5333 0 0 7.2951 421.92 387.84 Tm
0 Tc
(not)Tj
7.4 0 0 7.2951 444.7201 387.84 Tm
0.0001 Tc
(to)Tj
9.0286 0 0 9.4228 461.52 387.84 Tm
-0.0001 Tc
(mention)Tj
6.3333 0 0 12.1585 507.6 385.68 Tm
(spell,)Tj
7.2 0 0 11.8545 538.5601 385.92 Tm
0 Tc
(pruritus.)Tj
7.92 0 0 9.7268 585.84 387.84 Tm
0.0001 Tc
(Since)Tj
7.55 0 0 12.1585 329.76 373.44 Tm
(pruritus)Tj
5.4 0 0 9.4228 371.2801 375.36 Tm
0.0002 Tc
(is)Tj
9.0667 0 0 6.3832 383.04 375.36 Tm
0 Tc
(one)Tj
8 0 0 9.7268 404.64 375.36 Tm
0.0001 Tc
(of)Tj
7.7333 0 0 9.4228 418.08 375.36 Tm
(the)Tj
9.3 0 0 7.5991 437.04 375.36 Tm
(most)Tj
7.92 0 0 12.1585 464.4 373.44 Tm
(misspelled)Tj
9.12 0 0 9.7268 516.96 375.36 Tm
-0.0001 Tc
(words)Tj
7 0 0 9.4228 549.6 375.6 Tm
(in)Tj
7.68 0 0 11.5506 563.04 374.16 Tm
0 Tc
(medicine,’)Tj
2.4 0 0 4.5594 607.6799 379.44 Tm
(1)Tj
8.8 0 0 9.4228 330.72 363.12 Tm
(The)Tj
8.2 0 0 9.7268 349.44 362.88 Tm
(Lancet)Tj
8.6667 0 0 6.3832 382.08 362.88 Tm
0.0001 Tc
(can)Tj
8.4 0 0 12.1585 401.04 360.96 Tm
(probably)Tj
8.8 0 0 9.7268 444.48 362.88 Tm
0 Tc
(be)Tj
7.7 0 0 12.1585 458.64 360.96 Tm
0.0001 Tc
(forgiven)Tj
7.2 0 0 9.4228 498.72 363.12 Tm
0 Tc
(for)Tj
8.08 0 0 11.8545 515.04 361.2 Tm
-0.0001 Tc
(using)Tj
6.85 0 0 12.1585 542.4 360.96 Tm
0.0002 Tc
(pruritis)Tj
5.92 0 0 12.1585 579.6 361.2 Tm
((sic))Tj
7 0 0 9.7268 601.4401 363.12 Tm
-0.0001 Tc
(in)Tj
7.8667 0 0 9.7268 329.76 350.64 Tm
0 Tc
(the)Tj
5.76 0 0 9.7268 348.72 350.64 Tm
0.0001 Tc
(title)Tj
7.4 0 0 7.2951 370.56 350.64 Tm
(to)Tj
9.35 0 0 9.4228 384.24 350.64 Tm
0 Tc
(Yamada’s)Tj
6.1714 0 0 11.2466 434.4 349.2 Tm
-0.0001 Tc
(letter,)Tj
9.2 0 0 9.4228 465.6 350.64 Tm
0 Tc
(and)Tj
7.6 0 0 9.4228 486.96 350.64 Tm
-0.0001 Tc
(the)Tj
8 0 0 9.4228 505.92 350.64 Tm
0.0001 Tc
(authors)Tj
9.4 0 0 7.2951 544.5601 350.64 Tm
0 Tc
(must)Tj
7.0222 0 0 11.8545 571.92 348.96 Tm
0.0001 Tc
(certainly)Tj
8.8 0 0 9.7268 329.28 339.12 Tm
0 Tc
(be)Tj
7.7 0 0 12.1585 344.64 337.2 Tm
0.0001 Tc
(forgiven)Tj
7.52 0 0 9.7268 386.4 339.12 Tm
-0.0001 Tc
(since)Tj
7.7333 0 0 9.4228 413.76 339.12 Tm
0.0001 Tc
(the)Tj
9.7 0 0 9.7268 432.48 339.12 Tm
(word)Tj
11.8666 0 0 11.5506 461.28 337.44 Tm
-0.0001 Tc
((),)Tj
7.4 0 0 6.6872 491.04 339.12 Tm
0.0001 Tc
(so)Tj
6.8 0 0 9.7268 508.08 339.12 Tm
(far)Tj
7 0 0 6.6872 528.24 338.88 Tm
-0.0001 Tc
(as)Tj
5.6 0 0 9.4228 544.8 339.12 Tm
(I)Tj
8.6667 0 0 6.6872 556.08 339.12 Tm
0.0001 Tc
(can)Tj
5.44 0 0 11.2466 579.36 337.92 Tm
-0.0002 Tc
(tell,)Tj
5.2 0 0 9.7268 603.6 339.36 Tm
0 Tc
(is)Tj
9.3818 0 0 12.1585 328.8 324.24 Tm
(unambiguous)Tj
7 0 0 9.7268 396.48 326.16 Tm
-0.0001 Tc
(in)Tj
6.7 0 0 9.7268 409.92 326.16 Tm
0.0002 Tc
(this)Tj
7.4286 0 0 11.8545 431.52 324.24 Tm
-0.0001 Tc
(regard.)Tj
11.6 0 0 9.7268 468.96 326.16 Tm
0.0001 Tc
(On)Tj
7.7333 0 0 9.7268 488.16 325.92 Tm
(the)Tj
7.2 0 0 9.7268 507.36 325.92 Tm
0 Tc
(basis)Tj
8.2 0 0 9.7268 534.72 325.92 Tm
(of)Tj
17.6 0 0 9.7268 548.16 325.92 Tm
(W)Tj
12.4 0 0 9.7268 563.52 326.16 Tm
(V)Tj
8.0571 0 0 12.4625 576.2401 324.24 Tm
(Quine’s)Tj
7.9636 0 0 12.1585 328.8 311.76 Tm
0.0001 Tc
(proposition)Tj
6.8 0 0 11.2466 385.92 312.48 Tm
0 Tc
(that,)Tj
8.1333 0 0 9.7268 411.6 313.68 Tm
("faced)Tj
8.3 0 0 9.4228 445.2 313.68 Tm
-0.0001 Tc
(with)Tj
9.2 0 0 7.2951 469.68 313.68 Tm
0 Tc
(two)Tj
8.32 0 0 7.2951 491.28 313.68 Tm
(terms)Tj
7.0667 0 0 9.4228 521.28 313.68 Tm
0.0001 Tc
(for)Tj
7.7333 0 0 9.4228 538.5601 313.68 Tm
(the)Tj
9.4 0 0 6.6872 557.52 313.68 Tm
0 Tc
(same)Tj
7 0 0 11.8545 584.88 312 Tm
-0.0001 Tc
(thing,)Tj
8.9333 0 0 6.6872 329.04 301.44 Tm
(one)Tj
8 0 0 9.7268 349.2 301.44 Tm
0.0001 Tc
(tends)Tj
7.2 0 0 7.2951 377.52 301.44 Tm
0 Tc
-0.0333 Tw
(to cast)Tj
8.64 0 0 9.7268 411.6 301.44 Tm
-0.0001 Tc
0 Tw
(about)Tj
7.2 0 0 9.7268 441.12 301.44 Tm
0 Tc
(for)Tj
7.2 0 0 6.3832 457.92 301.44 Tm
(a)Tj
7.2308 0 0 11.5506 466.32 300 Tm
-0.0001 Tc
(distinction",)Tj
5.6 0 0 9.1189 527.04 301.68 Tm
(I)Tj
8.7 0 0 9.4228 534.24 301.44 Tm
0.0001 Tc
(have)Tj
8.4667 0 0 12.1585 559.2 299.52 Tm
0 Tc
(argued)Tj
7.1 0 0 9.7268 593.28 301.44 Tm
0.0001 Tc
(that)Tj
8.35 0 0 10.0308 329.04 288.96 Tm
0 Tc
(semantic)Tj
7.2667 0 0 10.0308 375.36 288.96 Tm
-0.0001 Tc
(distinctions)Tj
8.9714 0 0 9.7268 433.68 288.96 Tm
0.0001 Tc
(between)Tj
7 0 0 9.4228 477.36 289.2 Tm
-0.0001 Tc
(itch)Tj
9.2 0 0 9.7268 500.16 288.96 Tm
0 Tc
(and)Tj
7.55 0 0 12.1585 522.48 287.04 Tm
0.0001 Tc
(pruritus)Tj
8.3333 0 0 10.0308 564.72 288.96 Tm
(should)Tj
8.4 0 0 9.7268 600.24 289.2 Tm
(be)Tj
7.2 0 0 7.5991 329.04 276.72 Tm
0 Tc
(cast)Tj
9.28 0 0 9.7268 349.44 276.72 Tm
(aside)Tj
11.6 0 0 9.4228 377.52 276.72 Tm
0.0001 Tc
(At)Tj
6.64 0 0 9.7268 394.8 276.72 Tm
0 Tc
(least)Tj
7 0 0 9.4228 417.84 276.72 Tm
-0.0001 Tc
(in)Tj
7.45 0 0 11.8545 429.84 274.8 Tm
(English,)Tj
7.4667 0 0 9.4228 469.4401 276.72 Tm
0 Tc
(the)Tj
8.88 0 0 9.4228 486.2401 276.72 Tm
(words)Tj
8.3333 0 0 9.7268 516.48 276.72 Tm
0.0001 Tc
(should)Tj
8.6 0 0 9.4228 549.6 276.72 Tm
-0.0001 Tc
(be)Tj
8.5 0 0 9.7268 563.28 276.72 Tm
0 Tc
(used)Tj
6.5333 0 0 9.7268 586.8 276.72 Tm
(inter-)Tj
7.9636 0 0 12.1585 329.04 262.56 Tm
0.0001 Tc
(changeably,)Tj
8.88 0 0 9.7268 390.72 264.48 Tm
0 Tc
(which)Tj
9.2 0 0 9.4228 421.92 264.48 Tm
(would)Tj
7.2 0 0 11.8545 454.32 262.56 Tm
(give)Tj
8 0 0 6.3832 476.4 264.48 Tm
0.0001 Tc
(us)Tj
8.6667 0 0 6.3832 491.28 264.48 Tm
(one)Tj
6.4 0 0 9.4228 511.6801 264.48 Tm
(less)Tj
9.5 0 0 9.4228 531.6 264.48 Tm
0 Tc
(word)Tj
7.2 0 0 7.5991 559.2 264.24 Tm
(to)Tj
6.9778 0 0 12.1585 572.4 262.56 Tm
-0.0001 Tc
(misspell,)Tj
7.9 0 0 11.2466 329.28 250.8 Tm
(and,)Tj
7.85 0 0 11.8545 351.6 250.32 Tm
0.0001 Tc
(perhaps,)Tj
8.8 0 0 6.3832 393.12 252.24 Tm
0 Tc
(one)Tj
6.3 0 0 9.4228 412.56 252.24 Tm
-0.0001 Tc
(less)Tj
7.68 0 0 11.8545 431.28 250.32 Tm
0 Tc
(thing)Tj
7 0 0 6.9911 457.44 252.24 Tm
-0.0001 Tc
(to)Tj
7.4857 0 0 9.7268 469.4401 252 Tm
0 Tc
(scratch)Tj
8.4 0 0 6.3832 504.48 252.24 Tm
0.0001 Tc
(our)Tj
8.48 0 0 9.4228 522.48 252.24 Tm
(heads)Tj
7.3714 0 0 9.7268 551.52 252 Tm
0 Tc
(about.3)Tj
6.8571 0 0 11.2466 329.04 228.24 Tm
-0.0001 Tc
(Jeffrey)Tj
10.4 0 0 8.8149 361.2 230.16 Tm
0 Tc
(D)Tj
8.3 0 0 8.8149 370.56 230.16 Tm
-0.0001 Tc
(Bernhard)Tj
5.25 0 0 6.6872 329.28 219.6 Tm
0.0002 Tc
(Division)Tj
5.4 0 0 6.6872 357.12 219.6 Tm
(of)Tj
5.9667 0 0 8.511 366 218.16 Tm
-0.0001 Tc
(Dermatology,)Tj
5.28 0 0 8.207 412.32 218.4 Tm
0.0001 Tc
(University)Tj
5.4 0 0 6.6872 446.88 219.6 Tm
0.0002 Tc
(of)Tj
6.4308 0 0 6.6872 455.76 219.36 Tm
0 Tc
(Massachusetts)Tj
6 0 0 6.9911 508.8 219.36 Tm
-0.0001 Tc
(Medical)Tj
5.7143 0 0 7.903 537.12 218.64 Tm
(School,)Tj
5.84 0 0 7.5991 563.76 218.88 Tm
0.0001 Tc
(Worcester,)Tj
8.4 0 0 6.3832 329.28 210.48 Tm
(MA)Tj
6.64 0 0 7.903 342.48 209.52 Tm
0 Tc
(01655, USA)Tj
4.4 0 0 7.2951 330 187.2 Tm
-0.0002 Tc
(1)Tj
8.8 0 0 7.903 342.72 186.96 Tm
0 Tc
(Helm)Tj
8.1333 0 0 9.1189 366.24 186 Tm
(KF,)Tj
7.3778 0 0 7.903 384 186.96 Tm
0.0001 Tc
(Goldsmith)Tj
6.6 0 0 7.5991 426.24 187.2 Tm
-0.0001 Tc
(L.)Tj
8.2667 0 0 7.5991 437.04 187.2 Tm
(The)Tj
6.2909 0 0 9.7268 455.04 185.52 Tm
0.0001 Tc
(misspelling)Tj
6.8 0 0 7.903 499.2 186.96 Tm
(of)Tj
5.8667 0 0 9.4228 508.8 185.52 Tm
0 Tc
(pruritus.)Tj
8.4 0 0 9.7268 341.76 175.68 Tm
0.0001 Tc
(J Am)Tj
8 0 0 7.5991 364.08 177.36 Tm
(Acad)Tj
6.85 0 0 7.5991 385.2 177.36 Tm
0.0002 Tc
(Dermatol)Tj
6.56 0 0 8.8149 421.44 176.16 Tm
-0.0001 Tc
(1989;)Tj
5.6 0 0 7.5991 444.24 177.12 Tm
(4:)Tj
6.9714 0 0 7.5991 454.56 177.12 Tm
0.0001 Tc
(705-06.)Tj
6.4 0 0 7.2951 329.28 166.32 Tm
(2)Tj
7.3 0 0 7.5991 342.72 166.32 Tm
-0.0001 Tc
(Bernhard)Tj
6.9333 0 0 9.7268 379.92 164.88 Tm
(JD.)Tj
10.4 0 0 7.5991 395.52 166.32 Tm
0 Tc
(A)Tj
8 0 0 7.5991 404.16 166.32 Tm
0.0001 Tc
(word)Tj
7.8 0 0 5.1674 426 166.32 Tm
0 Tc
(on)Tj
6.1333 0 0 7.5991 438.24 166.32 Tm
0.0001 Tc
("itch")Tj
6.4 0 0 5.1674 462.96 166.32 Tm
(versus)Tj
6.0727 0 0 9.4228 489.12 164.88 Tm
-0.0001 Tc
("pruritus".)Tj
5.6 0 0 7.5991 532.3201 166.32 Tm
(In:)Tj
7.2 0 0 8.207 545.76 166.08 Tm
0 Tc
(Bernhard)Tj
7.0667 0 0 9.4228 582.48 165.12 Tm
0.0001 Tc
(JD,)Tj
5.7333 0 0 7.903 598.0801 166.32 Tm
0.0002 Tc
(ed.)Tj
5.6 0 0 7.5991 342.72 156.48 Tm
-0.0001 Tc
(Itch:)Tj
7.6 0 0 7.903 362.64 156.48 Tm
(mechanisms)Tj
7.6 0 0 7.5991 411.12 156.48 Tm
(and)Tj
8.04 0 0 7.903 427.68 155.04 Tm
(management)Tj
6.6 0 0 7.903 478.56 156.48 Tm
(of)Tj
5.8667 0 0 7.903 488.16 155.04 Tm
0 Tc
(pruritus.)Tj
9.8666 0 0 7.5991 522.72 156.48 Tm
-0.0001 Tc
(New)Tj
6.72 0 0 7.903 542.88 156.48 Tm
0 Tc
(York:)Tj
8.5143 0 0 7.903 566.4 156.48 Tm
(McGraw-)Tj
5.44 0 0 9.4228 342.72 145.44 Tm
-0.0002 Tc
(Hill,)Tj
6.72 0 0 7.5991 362.88 146.64 Tm
0 Tc
(1994:)Tj
5.3 0 0 7.903 385.92 146.64 Tm
-0.0001 Tc
(xiv.)Tj
6.4 0 0 7.2951 329.28 135.6 Tm
0.0001 Tc
(3)Tj
7.35 0 0 7.903 342.72 135.6 Tm
0 Tc
(Bernhard)Tj
6.8 0 0 9.4228 380.16 134.4 Tm
(JD.)Tj
8 0 0 7.903 395.76 135.6 Tm
0.0001 Tc
(Does)Tj
6.45 0 0 9.4228 417.6 134.4 Tm
-0.0001 Tc
(thinking)Tj
5.68 0 0 7.5991 450.96 135.84 Tm
0 Tc
(itch?)Tj
6.6 0 0 7.903 470.88 135.6 Tm
-0.0001 Tc
(Lancet)Tj
6.72 0 0 9.1189 498 134.4 Tm
0 Tc
(1985;)Tj
3.4 0 0 7.5991 521.04 135.6 Tm
-0.0003 Tc
(i:)Tj
6.5 0 0 7.2951 528.72 135.84 Tm
0 Tc
(589.)Tj
14.72 0 0 13.3743 329.76 101.52 Tm
0.0001 Tc
(CORRECTION)Tj
5.2 0 0 7.5991 330 82.32 Tm
0 Tc
(Is)Tj
6.9 0 0 9.4228 340.32 80.88 Tm
(proximal)Tj
7.2 0 0 7.5991 377.52 82.08 Tm
(demarcation)Tj
6.4 0 0 7.903 429.6 82.32 Tm
0.0001 Tc
(of)Tj
6.24 0 0 7.5991 440.64 82.32 Tm
0 Tc
(ulceratIve)Tj
5.5428 0 0 7.5991 482.16 82.32 Tm
0.0002 Tc
(colitis)Tj
7.24 0 0 7.903 509.52 82.32 Tm
0 Tc
(determined)Tj
7.2 0 0 9.4228 556.5601 80.88 Tm
(by)Tj
5.5555 0 0 9.4228 569.28 81.12 Tm
(territory)Tj
6.2 0 0 7.903 603.36 82.56 Tm
(of)Tj
6.6667 0 0 7.5991 330.24 72.48 Tm
-0.0001 Tc
(the)Tj
5.6 0 0 7.5991 346.08 72.48 Tm
(inferior)Tj
7.04 0 0 7.5991 376.32 72.48 Tm
(mesenteric)Tj
4.5 0 0 9.4228 422.64 71.04 Tm
0.0001 Tc
(artery?—In)Tj
5.4 0 0 7.5991 469.4401 72.48 Tm
0.0002 Tc
(Tm
9 Tm
(l0 0 9.4228 380.16 137.5991 376.32 rl Ea Tc8Serd)Tj
7.2 0 0 9.726854c .0000 Tc
(ulcerate2 72.48 TmH 0 9.4228 342.72 140 T00 Tc
(ulc201 Tc
(the)T(o.4 0 0 7..2 Tm
-0.0002 n:)Tj
39.5261 72.48 Tm
0.000D)Tj
8mTc
(ulc0002 n:)Tj
39.6.2 0l0 0 9.4228 38854c .Hamilto 72.48 Tm
0.0088 T)Tj57Tm
0l0 0 9.4228 380.16 14.4 Tm
4(of)Tj
5.866588)T(o.4 0 0 7.Tj
5.4 0 0 7176.16 T2Tm
0.0001 Tc
(JD970 13das22 0 0 9.726854c .(18187.2 T0 Tc
(01655, 2d)TjTj
7.642.72 140M9.687.2 Tm
4Tm
0.0001 .3778 089;)089;) 7.Tj
5.4 0 0 2 15),4.4 Tm
-0.0001Bernha39as27 0228 508 9.726854c .contra2.56 Tm

0.0088 T)Tjm
0is)Tj
7.642.(to 166.32 Tm
0.0001 (of)Am)Tj
7.642.5991 346.08 72.48 Tm
Tm
0 Tc
(prTc
(mis8228 61. 0 0 9.4228figure56 Tm
(of)Tj
01 Tc
("p9.42261. 0 0 (legends, Tm
-0.0002 n:)Tj
3920727 Tj
7.642.0.000D)Tj
8all.48 Tm
T286rate2 72.48 T3Tj
6.61. 0 0 9000D)Tj
8figures.48 Tm
9 Tc
(Bernhar56d.)T)Tj
7.642.5991 346.08re6.3r1 80.88m
(infer88 T)Tj604 0 Tj
5.30 7.5991 346.08 o48 Tm
T222 Tc
(01655, 2d)Tj52. 0 7.Tj
5.4 0 0 dif6.3156.48 T.32 Tm
0.00