```
   1 tggtgcatac gtcagtctgg gtgtgtagtc acagcaatcg cagccaaaat gggctcatct
  61 gccacatggt tctcttcgct gcgtcagacg gcccttaatt tcatccagaa acttccatat
 121 tgcccctgca atacaattga gtccttggat tgtttttctc gcctccgtac ggcgtactgc
 181 cgtcgagtac gctctgcgac acattccgat ctacaatttt tcacagccat aattcaggga
 241 ccttttttgta tactggtcta tttcaaatga gacaactcgc tttccaaccc catataaccg
 301 tctatctact tcatgggtca tcatgcattt gtttccaact ttctacacct atttgttaaa
 361 caatagtact aatattgcta taggtgtaga tcagagaact ctccagcgta aatttcagaa
 421 cctatgagaa attttttttc aggaaaaatt ttctatgaga ctcatctctg ggctccttgt
 481 tggatcttta tataaggaac actagaatcc cttaattttt aattgaatta caaaaatttt
 541 tttctataca tatatctcat atattaatta atcaaaatgg gtaaagaaaa gactcacgtt
 601 aatctcgttg tcattggtca cgtcgattct ggtaaatcta ctaccaccgg tcacttaatt
 661 tacaagtgtg gtggtatcga taagagaacc attgaaaagt tcgaaaagga agccgctgaa
 721 ttaggtaagg gttctttcaa gtacgcctgg gttttagaca agttaaaggc tgaaagagaa
 781 agaggtatca ccattgatat cgctttatgg aagttcgaaa ctccaaagtt ccacgtcacc
 841 attattgatg ctccaggtca cagagatttc atcaagaaca tgattactgg tacttcccaa
 901 gctgattgtg ctattttgat tattgctggt ggtattggtg aattcgaagc cggtatctcc
 961 aaggatggtc aaaccagaga acacgcttta ttagcttaca ccttaggtgt taagcaattg
1021 attgttgcta tcaacaagat ggactctgtc aaatgggaca aggccagatt cgacgaaata
1081 gtcaaggaaa cctctaactt cgtcaagaag gtcggtttca acccaaagag tgttccattc
1141 gtcccaatct ctggttggaa cggtgacaac atgattgagc catcctctaa ctgtccatgg
1201 tacaagggtt gggaaaagga aaccaaggct ggtaagtcct ctggtaagac tttgttagaa
1261 gctattgatg ctatcgaacc accaaccaga ccaactgaca aggctttaag attaccattg
1321 caagatgtct acaagatcgg tggtattggt actgtgccag tcggtagagt tgaaaccggt
1381 atcatcaagg ccggtatggt tgtcaccttc gccccagctg gtgttaccac tgaagtcaag
1441 tccgttgaaa tgcatcacga acaattaacc gaaggtgttc caggtgacaa cgttggtttc
1501 aacgtcaaga atgtttccgt taaggaaatc agaagaggta acgtctgtgg tgactccaag
1561 aacgacccac caaagggtgc tgactctttc accgctcaag ttattgtctt aaaccatcca
1621 ggtcaaatct cctctggtta ctctccagtc ttagattgtc acactgctca cattgcttgt
1681 aagttcgaca ctttaatcga aaagattgac agaagaactg gtaagaagtt agaagacaac
1741 cctaagttca tcaagtctgg tgatgctgct attgtcaaga tggtcccatc taagccaatg
1801 tgtgttgaag ctttcactga ctacccacca ttaggtagat tcgctgtgag agatatgaga
1861 caaactgttg ctgtcggtgt tatcaagtct gttgaaaagt ctgacaagtc cggtaaggtt
1921 actaaggctg ctcaaaaggc tgctaagaaa taagctcctt aatttgaaat tgtccgggag
1981 aagctacttg aatttgaatt acgtaaattt cgagtttttt ccctacagtt agaattctgt
2041 ttatttttgat aagtaatttt atactttaat gtttaatagt tgatctaaac gctcctttgt
2101 aggaacctat ccaatttgaa cgcaaactct attcggactg cagtatacac agttcccgtt
2161 gacctcaatc gtcggatatt atgtccaaca tcagtcgatg ccatgaacac aaaagccgtc
2221 cgaaaaattt ccttatcaag ccacatgtga aaagtcgtcc tcaatgacga gtcaaagatc
2281 tgataagccc accaaactta tattaagatc cctgttatat gaagttccat ttttcacata
2341 ttctttaaca cagctggtac cctcaactgt ttcaaacttt gagatggatt agtattgcgt
2401 tattgtaggt agaaaagtta gtgaaaaatc atcattgaac cgagtcataa tctggggaaa
2461 cagagtcagt aaaataccgt gttaaatatt tttcattgac tctgagtggt acaactttcg
2521 tattagccta tgaagtattt aaaccatcga gaatcctttt aaaatgacaa taaagtagtt
2581 ttaatatcat tcatcttttg ataaatacaa tataatcata gaattaattt tttttgtttt
2641 ataaaccaaa aaaaaataga gaaggatgat ttcaagagtt gttgcaagat cggctcgtgc
2701 taatagattg tttaccttga ccagatctgt tccaaaggta tacaatttga acttgaaaat
2761 tgcatcgagt agcagatttt tagcttcaaa ggccgacaca tcatcagcag attatgaaaa
2821 agtttacgat ccaagtgcca agactgtgtc tttgggcaat ttggatacgt tcgccagacg
2881 tcatcttggt cctacccctg acaatgtcaa gacgatgttg agtaccttgg gatacaagga
2941 tttggacgag tttttgagca aagccatccc agagcacgtt ttatacaaaa gggcattaca
3001 gattcaacca caacaaggtt acactgagct ggaaatgttg gaacatttgc aaaaattggc
```

Figure S1: Nucleotide sequence of the *D. macquariensis* strain D50 *TEF1* gene (bold text) with 5′ and 3′-flanking regions. The putative promoter sequence is red.

```
   1 cactactcag acttaccacc gcatatacag acattaacca taatagtgcc atctacaggg
  61 cacaatgcat ttaatacaca atctaatata cagcttaagt agagcccatc tgtaattaaa
 121 cccacacaaa gagtaattca gtcacatata ctaatgtgaa cggcattcat ttgacctagt
 181 gtcaacatgg caaaagcttc cgccgcagtt tcgcaatttc actacatgtc gcctgtcatc
 241 agctacgaac tgctatgtaa gatcaactgc aaaatgttcc actggtccat aatcgaagtt
 301 tctaggagtt tgccaaaaaa tttagtccca tactatccca accaaatgtc ctcaaataac
 361 taccatcaca cctatttttgc caagttcttc ctatctacta tatagctact tcatgctgct
 421 tgcaataccg tagtctacgg ccatagcact tggattctga atacttagag gaaatagggt
 481 aaagccctat ccgggtaaat taaatatttg tcctgctgaa aaaaaaaatt tcgccacgac
 541 accctctgat gaatggaacg caattggctc tgcaaaaatt tataaggaat taaattgaag
 601 aacttctttt tccttctctt tttttcaata cagtatacta ttattataca ttaaacaaaa
 661 tgggtaaaga aaagactcac gttaatcttg ttgtcattgg tcacgtcgat tccggtaaat
 721 ctaccactac cggtcactta atttacaagt gtggtggtat cgataagaga actattgaaa
 781 agttcgaaaa ggaagccgct gaattaggta agggttcttt caagtacgct tgggttttag
 841 acaagttaaa ggctgaaaga gaaagaggta tcaccattga tatcgcttta tggaagttcg
 901 aaactccaaa gttccacgtc accattattg atgctccagg tcacagagat ttcatcaaga
 961 acatgattac tggtacttcc caagctgatt gtgctatttt gattattgct ggtggtattg
1021 gtgaattcga agctggtatc tccaaggatg gtcaaaccag agaacacgct ttattagctt
1081 acaccttagg tgttaagcaa ttgattgttg ctatcaacaa gatggactct gtcaaatggg
1141 acaaggccag attcgacgaa atcgtcaagg aaacctctaa cttcgtcaag aaggtcggtt
1201 tcaacccaaa gagtgttcca ttcgtcccaa tctctggttg gaacggtgac aacatgattg
1261 aaccatcatc taactgtcca tggtacaagg gttgggaaaa ggaaaccaag gctggtaagt
1321 cctctggtaa gactttgtta gaagctattg atgctatcga accaccaacc agaccaactg
1381 acaaggcttt aagattacca ttgcaagatg tctacaagat cggtggtatt ggtactgtgc
1441 cagtcggtag agttgaaacc ggtattatca aggccggtat ggttgtcacc ttcgccccag
1501 ctggtgtcac cactgaagtc aagtccgttg aaatgcatca cgaacaatta accgaaggtg
1561 ttccaggtga caacgttggt ttcaacgtca agaacgtttc cgttaaggaa atcagaagag
1621 gtaacgtctg tggtgactcc aagaatgacc caccaaaggg tgctgactct ttcaccgctc
1681 aagttattgt cttaaaccat ccaggtcaaa tctcctctgg ttactctcca gtcttagatt
1741 gtcacacagc tcacattgct tgtaagttcg acactttaat cgaaaagatt gacagaagaa
1801 ctggtaagaa gttagaagac aaccctaaat tcatcaagtc tggtgatgct gctattgtca
1861 agatggttcc atctaagcca atgtgtgttg aagctttcac tgactaccca ccattaggta
1921 gattcgctgt cagagatatg agacaaactg ttgccgtcgg tgttatcaag tctgttgaga
1981 agtctgacaa gtccggtaag gttaccaagg ctgctcaaaa ggctgctaag aaataagctg
2041 attaatgtag aattttatat tggttacttg ttttatatta ggctttttga atacatatga
2101 actttaaaaa tgattgtagc ctccgataag cactagctta ttgtctctgt aaatcgttat
2161 gtggcgtggc caagtatctg gcgcatgcac atttatcgct aaagactatt taatagaatt
2221 tgaacttcac actggcgaac cctactagtt aaacgacttt tatacttttc tccgagtaat
2281 aacaaagaac gtacctgacg ttataatcaa catatgccat atcaccttct aggtccttag
2341 gtattaatta atagcatggt gaaaattttt ttagcacaat agatactgta tacaaccaga
2401 tatcatgttc aactggaaat agatacagtt aaatgaactt tgttgataga gggtctattt
2461 gacatagaac cgtgttgacg ataagc
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Figure S2: Nucleotide sequence of the *D. macquariensis* strain D50 *IEF2* gene (bold text) with 5′ and 3′-flanking regions. The putative promoter sequence is pink.

```
   1 tcgtacgtta cattatatac actcctatat atgaagtaga ccaattcttt aacactgtga
  61 ccaacatcgt ttctgtacgt ctattggtcg aattcgccga aatatacata cttcctgtat
 121 atggtcagaa tcttcacatc ggtgttatta ggcgacaccg aaacccttaa acccccgctt
 181 cgcactcggt cggtcgtgtc tgggtaacaa atgcgttacg ctacacccat tcgctaaatc
 241 caaacgtcat tccataggtc gggtccgacg aaagcctcac ttccgcacac cacatccatt
 301 catcaggatc tgacttcgcg cagacgtcat cgacccctgg ggctcgtgtt cggtcttcgc
 361 ttcaatccca gggtgcgcgg tctttttccc ctctcccgga cgacctatca taccacaatt
 421 caagacggcc cttatgtgcc tgttctccaa cgtgtcctta tcagttcata atcgccacct
 481 ggttgtgtct caatcgccag atttaccggt tctcctaaat tgcgcctaca tttgtcgttc
 541 tcacgtcctg tgctctcttt ctacatggac gagttgctgc caacgaccat ttttcacggt
 601 atcaagtggt ggttagcctc ccggcgaccc tggacggctc gcttccgttg atccttccat
 661 actaattaac ggcctcggac ttttgtagcg cgaaatcatg agaatcacca aactcccggc
 721 aactagctcg gtcgtgcccg gcaccggggc ctctatggga ttcttcgccc cgggagtcca
 781 gcaataagaa catagtggaa aattataaat atgagtaatt cgccgtgcaa tcgacatgga
 841 gtatatttta aaggttatct tattattcaa ttgaatataa ttaactagta agaatattta
 901 ataattaaac atggctatca ctattggtat taacggtttc ggtcgtattg gacgtttagt
 961 cttaagagtc gctttagaaa gatctgacat caaggttgtt gccgtcaatg atccattcat
1021 tgccgctgaa tacgctgctt acatgttcaa gtacgattct actcacggta gatacaaggg
1081 tgatgtaagc tccaaggacg acaccttagt catcgacggt caatctatca aggttttcgg
1141 tgaaagagac ccagcctcga ttccatgggg taaggtcggt gttgactacg tcatcgaatc
1201 caccggtgtc ttcaccacta tggaaggtgc tcaaaagcac attgacggtg gtgccaagaa
1261 ggtcattatc actgctccat cctcagatgc tccaatgttc gttgttggtg ttaacgaaca
1321 aaaatacacc ccagacttga agattgtttc caacgcttct tgtactacta actgtttggc
1381 tccattagcc aaggttatca acgacacctt cggtattgaa gaaggtttaa tgaccactgt
1441 ccactccatc actgccaccc aaaagaccgt tgatggtcca tcccacaagg actggagagg
1501 tggtagaacc gcttctggta acattatccc atcttccacc ggtgctgcca aggcggtcgg
1561 taaggttatt ccagaattaa acggtaagtt gaccggtatg tctttgagag ttcctactgt
1621 cgatgtttca gttgttgatt taaccgtcag attgaagaaa cctgctacct acgaagaaat
1681 ctccgaagct atcaagtctg cttctaacgg tgaattaaag ggtgtcttag gttacactga
1741 agatgctgtt gtttccaccg atttcttagg ttccagctac tcttctatct tcgatcaaaa
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1861 cggttactcc accagagttg tcgatttatt agaacacgtc gccaaggctt ctaattaact
1921 agccgaccct aaactataat ttatttatgg tttatcgtcc ctagcatata tatgcgcaat
1981 aaaatgtatt tattttaaca ttaaaacact tgtatatgta gcgagtttgg catgtatgtg
2041 aattcttagg ctcgtatggg tttccaaccg tagctggtgt aggtgtgatg tacttttaaa
2101 ctatattaac cgttctaata tcttgtgcgt atttatttgt aaatattcac atatttgttt
2161 aaattctata catatacatt atcactatca catacattat cactattata tacacagtgc
2221 atatttcctt attacctaaa tttgacactg ctcctcgttg ttacaacggt ttctcttcat
2281 ggacaaatta tttctagatc aaacattcaa attatacaaa tcaaatgata ctgtacctca
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2401 gttggttaat gatatgatat cagattacag atcatttgag gatttactcc tagattttaa
2461 aatcactcat agctcgagac agtttaatca atttacaatc acatatattt ccataagaca
2521 caagggatta ttgcctcgac aaaccataat attcatcaaa gctactgata ctaacgacaa
2581 cgcatcatca ttcaatacgt tggtgatgat aaaaacaacg aactcatcct tattaaggat
2641 tctaattcag gcgattgaaa atctacctac agaagttccc ataatagtac gggaattaaa
2701 attcaacgag aaatatctca acttaattat aaataatgta tctaacagct tattatctat
2761 agataattat gctgaggtca taggtgacgt tgaattgatt tatcaaacta gccacctcgt
2821 atcgaacgat tcattaagaa acatcatcat caatattccc gaaaaagatg taagtattat
2881 atcggattcc aaaggactca ttaataacgt caatgatttc ttgaaacaaa cgagcctgtt
2941 aaatttttaat aacctacctt tgattcggtt cacttcaagg
```

Figure S3: Nucleotide sequence of the *D. macquariensis* strain D50 *GAP* gene (bold text) with 5′ and 3′-flanking regions. The putative promoter sequence is green.

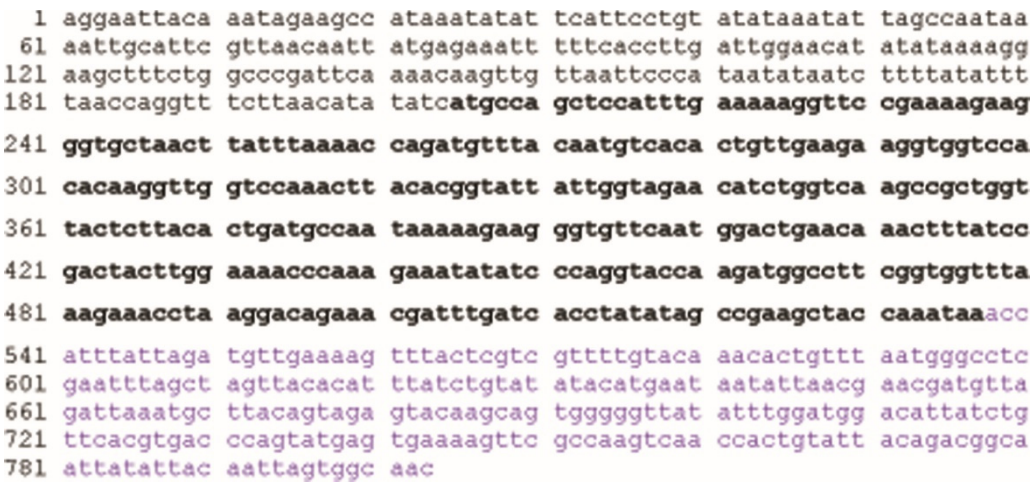

Figure S4: Nucleotide sequence of the *D. macquariensis* strain D50 *CYC1* gene (bold text) with 5′ and 3′-flanking regions. The putative transcriptional terminator sequence is purple.

Figure S5: Nucleotide sequence of the *C. santamariae* strain G12 *TEF1* gene (bold text) with 5′ and 3′-flanking regions. The putative promoter sequence is blue.

Figure S6: Nucleotide sequence of the *C. santamariae* strain G12 *CYC1* gene (bold text) with 5′ and 3′-flanking regions. The putative transcriptional terminator sequence is brown.

Table S1. Extracellular proteolytic activity and concentration of extracellular proteins of yeast strains isolated from soil samples collected from various sampling sites in Antarctica [1] after 72 h of cultivation.

Yeast strain	Proteolytic activity at pH 7.0 (nmol/mL × min)	Proteolytic activity at pH 4.0 (nmol/mL × min)	Extracellular proteins concentration (mg/mL)
Debaryomyces macquariensis D50	6.30	7.50	0.030
Debaryomyces hansenii IBT-D1	6.97	3.20	0.032
Goffeauzyma gastrica IBT-D7	21.11	8.68	0.060
Goffeauzyma gilvescens IBT-D13	16.18	8.56	0.096
Goffeauzyma gilvescens IBT-D15	11.45	12.36	0.112
Goffeauzyma gilvescens IBT-D16	11.84	14.54	0.136
Goffeauzyma gilvescens IBT-D20	15.98	24.47	0.122
Goffeauzyma gilvescens IBT-D60	13.02	15.79	0.178
Leuconeurospora sp. IBT-D59	38.63	17.70	0.362
Naganishia globosa IBT-D37	17.76	8.90	0.158
Naganishia adeliensis IBT-D58	11.45	12.43	0.215
Naganishia albida IBT-D62	27.60	18.30	0.329

Rhodotorula mucilaginosa IBT-D12	28.22	17.50	0.150
Rhodotorula mucilaginosa IBT-D34	18.55	12.17	0.105
Rhodotorula mucilaginosa IBT-D38	18.29	8.29	0.099

[1] Białkowska, A.M.; Szulczewska, K.M.; Krysiak, J.; Florczak, T.; Gromek, E.; Kassassir, H.; Kur, J.; Turkiewicz, M. Genetic and biochemical characterization of yeasts isolated from Antarctic soil samples. *Polar Biol.* **2017**, *40*, 1787-1803, doi: 10.1007/s00300-017-2102-7.