

LET'S CELEBRATE OUR SUCCESSFUL DEMONSTRATION IN A FANCY RESTAURANT

WITH OUR TRAINEE?

OOH YES!

COOL!



THIS WINE IS TAINTED



STAY CALM, GOOD MAN...

THE CORK HAS DONE NOTHING TO YOU



As is FREQUENTLY THE CASE, LIFE IS FAR MORE COMPLEX THAN EXPECTED

LET ME INTRODUCE YOU TO...

TRICHODERMA LONGIBRACHIATUM

THIS STYLISH FUNGUS IS RESPONSIBLE FOR OUR WINE'S TAINTED TASTE



[sic]



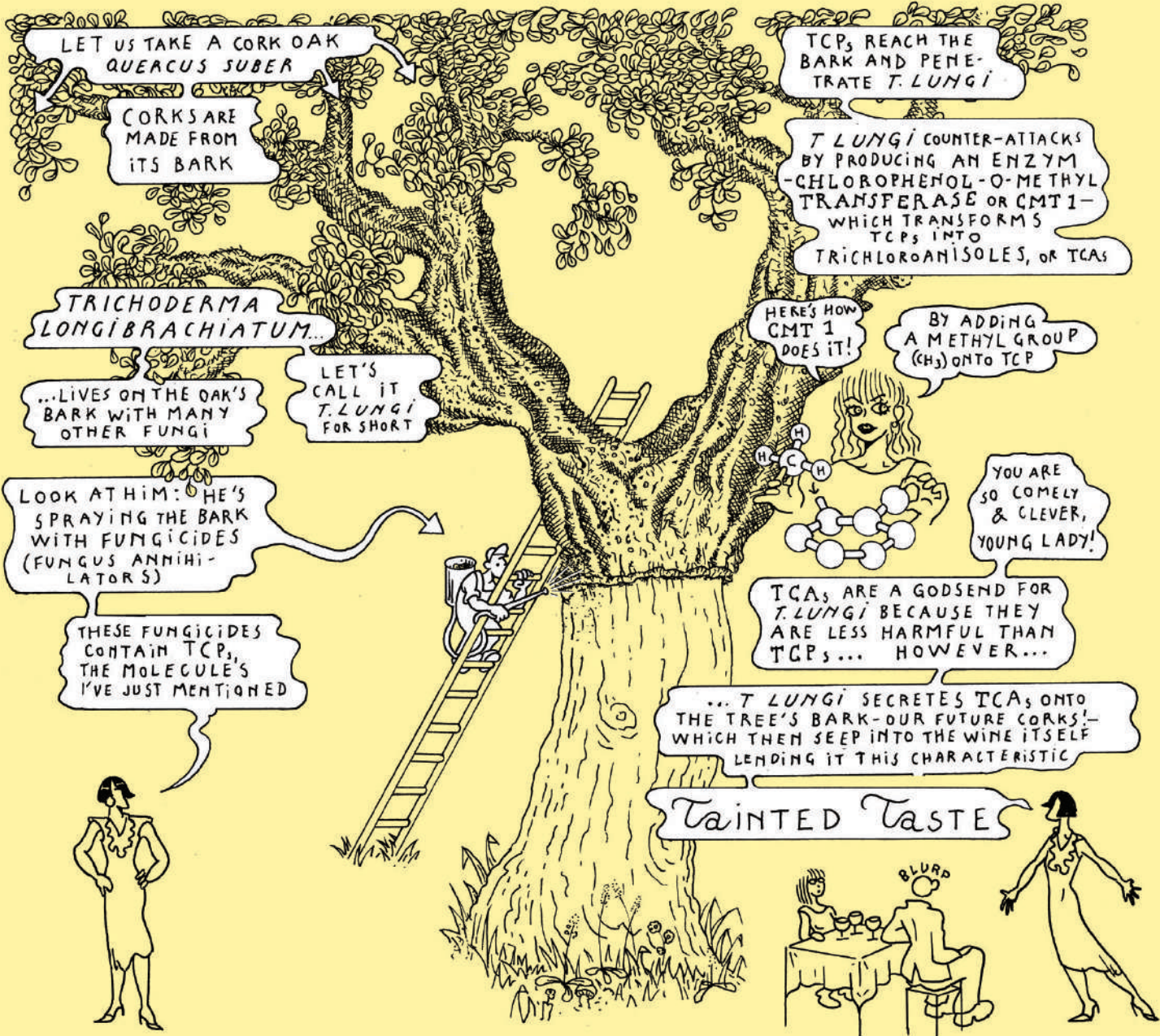
BUT NOT SOLELY...

NOT ONLY DOES IT REQUIRE A CORK

BUT IT ALSO NEEDS MOLECULES KNOWN AS TRICHLOROPHENOLS



TCP



LET US TAKE A CORK OAK
 QUERCUS SUBER

CORKS ARE
 MADE FROM
 ITS BARK

TCPs REACH THE
 BARK AND PENE-
 TRATE T. LUNGI

T. LUNGI COUNTER-ATTACKS
 BY PRODUCING AN ENZYM
 -CHLOROPHENOL-O-METHYL
 TRANSFERASE OR CMT1-
 WHICH TRANSFORMS
 TCPs INTO
 TRICHLOROANISLES, OR TCAs

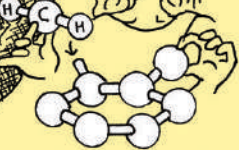
TRICHODERMA
 LONGIBRACHIATUM...

...LIVES ON THE OAK'S
 BARK WITH MANY
 OTHER FUNGI

LET'S
 CALL IT
 T. LUNGI
 FOR SHORT

HERE'S HOW
 CMT 1
 DOES IT!

BY ADDING
 A METHYL GROUP
 (CH₃) ONTO TCP



YOU ARE
 SO COMELY
 & CLEVER,
 YOUNG LADY!

LOOK AT HIM: HE'S
 SPRAYING THE BARK
 WITH FUNGICIDES
 (FUNGUS ANNIHI-
 LATOR S)

THESE FUNGICIDES
 CONTAIN TCP,
 THE MOLECULE'S
 I'VE JUST MENTIONED

TCAs ARE A GODSEND FOR
 T. LUNGI BECAUSE THEY
 ARE LESS HARMFUL THAN
 TCPs... HOWEVER...

... T. LUNGI SECRETES TCAs ONTO
 THE TREE'S BARK-OUR FUTURE CORKS!-
 WHICH THEN SEEP INTO THE WINE ITSELF
 LENDING IT THIS CHARACTERISTIC

Tainted Taste

IF WE EXTRAPOLATE, HUMANS
 ARE IN FACT RESPONSIBLE
 FOR THE TAINTED TASTE
 OF WINE!

AND WERE WE TO EXTRA-
 POLATE FURTHER:
 CMT1 MAKES OUR LES TOXIC

ALTHOUGH THIS IS NOT ITS
 INITIAL ROLE

NOT AT THE
 TABLE!

WHICH
 IS STILL
 UNKNOWN

