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*DVWyQ *XWLP UU-HJ*NDP BRD HQR 6LPXQRYLF

&HQWUR 7HFQROyJLFR GH OD 9LG \ UH DU B D Q R 8 Q D F X I Q W D E D G H G & L F H D E E D L V O S D O F D
&KLOH

&RUUHVSRRQLQJ DXWKRUH7PDLLO \ P R U H G B # X W

(Received 22.11.2020 Accepted 08.03.2021)

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DFWLYLW\ 6RPH UHVHDFKXUV V X D Z J H H V G W V F K D W E S R Q W H D U W K E D U R Y G W F M F H D R M F X X H G W W H V L U V H R U I
SKHQROLF FRPSRXQGV LQ OHDYHV DIQDF W L R S H R E H V H U L Z H V G A K H D I H V F U K D Q V L Q R V U X D S O S O L F D
XQGHUVWRRG EXW LW LV GLVFXV V H H G U I H F H A K W L V U H V H D H E K S I Q F R X Y H H G Y B I Q Z W R I D W H L I R Q F W R Q R I
JUDSHYLQH S B R G X F D S H F B Q G L Z M Q I H W I Z G O O X B M G D V K R S W F W H V P I R W X K K M S U H H O G D U F K L Q W

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W r P L P S R U W D Q W H D W L Y L G D G H E L R D J T K E R S O J S R O L V O D Y H V V G R D G G H H D O V B F R P D U L Q K D V
H O L F L W D G R U H V E U J D W L G R V H Q P D Y L H V L O F R P S R V M R W H V H H Q G O L F R V H P I R O K D V S H V X D D V 2 V P
D S O L F D o m R I R O L D U G H D O J D V P D U H L Q W B V H V H V X G G B R V D P D V m R m I R U G L P F D R V L D G A R Q H H V D O U
G R V W U D E D O K R V G H L Q Y H V W L J D o m R P D H F H Q K W D V D S R E I B H L G R O V B I S R U U R X O V G O F V G D O G J L G D Y H Q
G D X Y D H G R Y L Q K R D V V L P F R P R X P B X S H V R S H W D L R S C G H D H V W Q G R V I W W X D B m R Q H V V H F D P

.H\ ZRUBFLQR DFLGV VHDZHHHGXPERHQRDIL Q U D D Q E F F B Q G W L Q R X V H D F V K D B L C Z K V F K B B R O L L F S D R U W D Q V
3DODYUD V F K O R I H L G R V D O J D V P D U L Q K D V L S R O L M V I R O I U L G R O V R F R S R V R P S R I H V R I V Y R D O W H I

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DOJDH SURGXFWLRQ EORRPV RI

,QWHQVLYH IRRG SURGXFWLRQ LQFOXGLQJ DQ DQG LQEUHDVH RI WKH I
FRQVXPSWLRQ EDVHG RQ FRQYHQUWLRQDQDQJULFBOGHDKVSHVHYV 1
V\WHPV FDQ OHDG WR WKH et al. LQGLVFULPLQDWH X V H R J
DJURFKHPLFDQV JHQHUDWLQJ D Q V J D W L P H H L F E W R G W K H
FRQVHUVDWLRQ RI ELRGLHUVLW D Q G O D N e t a l . I J D W L D
al. 3URYRVW DQG 3HGQHXOW \$GK L N D U L

al. %D Q I U M H H * X W L P U U H J * D P R S D I H U W L O L J D W L R Q X V L Q J V H D Z H
et al. D 1 e t a l . H W 7 K H V H Q H J D W L Y H Q W W L P H V + R Z H Y H U W K H
L P S D F W V L Q F O X G H J U H D W H U F R Q J U R F I K H P W E R Q V R D W F H Q W W G G W D I G W K
G H F U H D V H W K H L U I H U W L O L W \ D W K Z H O V H D V Z D W X U S S R I D O G V R U R O
3 D U U L V 2 Q W K H R W K H U K B Q G L J D G G X U L Q J X W K W R W K H D I R
S D V W G H F D G H V W K H U H K D V E H S Q R E O P D W I D Y C G L Q K H H F X V H U H L Q W J O R E D
P D U L Q H H X W U R S K L F D W L R Q J O R E W O K H + G R D D W K I R U R U J D Q L F I H U W
P D L Q O \ G U L Y H Q E \ D Q H [F H V V F R I X Q L W W W B J H Q D Q G R S S R U W X Q L
S K R V S K R U X V F R P L Q J I U R P D Q W K U S R X X O M X F U H F K D L Y L E V L H Q / R S H Q H G
W K D W F D Q O H D F K L Q W R J U R X Q G Z D W H U X V H G E R Y R W K K W R K R U W L F X O V
Z D W H U Z D \ Y L D 3 D U D E V U X Q R I D L W L W R L P S U R Y H T X D O L W \ D Q G G L
et al. (XWURSKLFDWLRQ OHDG % D W W R D F G A H J F B V V L Y % D V H G R Q W K L V

7KLV LV DQ 2SHQL\$VFWLVE\XDUHGLXQGHJUEWLVYHU\$RPRRQV \$WWULEXWLRQ /LFHQVH
KWWSV F U H D W U Y H F L F R Q Z K V F K I S H U P L W V X Q H V W U L F W H R Q X L Q H D G L P W G L E R W S B G Y D G H G
WKH RULJLQDO ZRUN LV SURSHUO\ FLWHG

KDUD DHLDW FWHLY KUHU
KOHUH DUH HZHSR WOH OHUDWH
DHLQWHF WRCQDSHEG GMDHV
DQPSURQDSHDQW
KDUPD et al. KDQ et al.
JLQ et al. HQ et al.
KpUUHPPER et al. EDD et al.
DK et al. KpUUHPPER
KpUUHPPER et al. DEF KDQUDM et al.

GDZHGHWDFWQLY HHUDKQWQWWDW
SURWSDQWKK DVKQNO
EHWLVVDQLEEHUHQDVODVDF
KQWVKK DVPLQDFLDFUWLVW
DQDFH HPHVLFKFDQPSUR FURLHQ
DQKQDQ et al. WDLHSLR
et al. DWFKDUD et al. KHUHRH
KHDLP KLVWVWHM UHFHWHDFK
KDKDHDWVHHHFW HDZHHWDFW
UDSHEG SURWVQDSHDQW
DQURD D KWUP WH SHUSHFWH R
KHUHMDUFKLVLHQ

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GDZHGDUH D GYUWH JURH S K
HURF EDQVWDFWU DEW
SHFLHWHGUHQHODH.KDQ et al.
HSHFWHLUDEQHDQWLEKQ
EUQDHKDHKFDHHDUHHPWQ
FRPHUFLDOHWDFWSUHSUDURZK MHUDO
DSSDFDQKRWFWH DWFKDUD et al.
WHELEPQURWDERDWG
URDDH DUHPDQFVHGRD VSHFLHV
REUQDQH Ascophyllum nodosum KLFKLV
DEQWLEWQHRKQWVW
KRH DQH RWHDWVWVSHULFD
WDLH KHU MHUDOFRPHUFLDO
HWDFWUHUQDLOEHLQHPDUNWUHPDQ
URKHUSHFLHREUDHKKDV Ecklonia
maxima Durvillaea potatorum D antarctica
Himanthalia elongata Laminaria digitata L
hyperborea Macrocyctis pyrifera DQ Sargassum
spp DK KHU PLQSHFLHWKDV Fucus
serratus Ulva intestinalis U lactuca DQ
Kappaphycus alvarezii D U H D OVR XVH G
KDUPD et al. KpUUHPPER

RPHUFLDOHWDFWPDQ UR EUQDH
Ascophyllum nodosum FBLQ ZH UDHR
LQDQDFDQDFRSEWUWLM
KDUPD et al. LQDQVWQ
SKKRKRWKFDQLRLUDHVR
LQERDQKHQHDLUDW
et al. VQDH HWDFWDFWLO
DULQDPLDQFLQKHQH
DLUDW et al. HQ et al.
DF.LQ et al. KpUUHPPER et al.
FDQHWHQWHLU G

HLKWQSUWLOHSUHHQD BU FW
WDQDQHHQCHQDHLKFKDULHV
UR RWHLU GZLKWQKHQH
DDKDPD et al. KDUPD et al.
KpUUHPPER

QFFKDULHVDUHQKHPDLQSRW
FRPHUFLDOHWDFWV WDHSHFLHKDUPD
et al. KHMFRSQQDQHSUHHQ
RKHGVLKWHMDHGHVDFW
DLUDW et al. WHFDM EUQDH
HWDFWVH PWRPQDFFKDULHVDUH
DQDFRQDPLQVQDQKQ
et al. KRQDGH CHUHQRFOU
WVWH DFRGQWHLU DULGHUHVH
PHQDQVQDUQKQWFKDUD
et al. HSHQVH FKHPDFDQ
SKVFDOPHWHGELQUDZPDWULDO
HWDFWV DUHWDDQHFLHVDHWH
WVWH RWFBLQSRHUVDLHV
WDLH QPLQDQVWVWVWVWVW
SRHUVQDFDQDFDFLQ
VK D WK D YH E H H Q V K R Q V S U R W H S Q V J U R W
DEK et al. DULQV FRWFRQW
KH SHFLHVDH QDFKUDUD et al.
KHU LPSRQVRSQMDZHG

HWDFWVUHQDPLQDULQDQDFLWVW
DUH KQWVWH DQDKH DQHFVQ
PQVHHEUHSRQDQDQ
DQDQDFWULDQDKVUFLHU et al.
J et al. QWLU et al.
HU et al. RQD et al. DUH
HUQ et al. HPDVWHKHU et al.

QDDH HSHFLDO Ecklonia stolonifera
Fucus vesiculosus F serratus D Ascophyllum
nodosumFDQHDFKKLKFDQVDEKHQ
FRSEHQWJRHVDFW
KEHUW et al. HUR et al. VQR
et al. DWFKDUD et al. KHQ
FRSQD SULDUNUH LQH WQWQ
FRSQDHFHQQURFWQHQ
KHLUFRSQDQPD et al. DQ et al.
KQDQDUH RRUVR
SKQDQVQDQDQDH KDHEHQ
QHPEHHLFLHQDQVRSUHV
FDWFKLQVRELF DFLCHSLDQDFKLDQW
& UH L L L H
UHMUDVQV FRKHUQLEDV et al.

GDZHG HWDFW DE FBLQ MHUDO
SKRQV LQDQDKQFQ
LEEHUHQDEFLV DFLGDQEUQVWVW
QUNQDQVUN et al.
QUN et al. DWFKDUD et al.
KpUUHPPER VQDH KK DV
Alaria esculenta Ascophyllum nodosum
Ectocarpus siliculosus Fucus serratus F spiralis
F vesiculosus Halidrys siliquosa Laminaria
digitata L hyperborea L saccharinaDQ Pilayella
littoralis FVLRKWK DVQDQ
LPSRQVWVWFRSQDQVDFWVWVW
UHSV WDELV DFWVDFKUDUD et al.

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Pterygophora californica ~~HOKO~~
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ascophylli ~~RHEE~~
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HEPSP
EOLWRP
VRLVMOO
VRLVMOO
ORR et al.

RHR

REOHEHELEO
PRHEPLVEH
RHODO
R et al. 5

SVLLEDRD
HEH
HEH
LHGLHW
HHDH
HVOLEPHK
et al. H

RP

et al.

HEH
DHEH
LHX
PHLHGLEFOO
HGOLOLO
HHDH
et al. HLEH

HRLAGDHPDPLHEW

et al. H

HPLD

et al. H

VXFK DV K GUR \ VL V WL P H S+

H et al. ORR

DFHEEHO

HZWHQ

HDLHO

DPLED BEWE

HDLH

HPHLHGRW

HHPH

HDLVRLH

et al.

et al. H

et al.

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HLDH
HLDH
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et al. H

HLDH

PHHPDOR

LHOV

LHOVNDND

CHDRDHPH

H et al. KH

HDL

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DLN et al.

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ZKGRD DED Q

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et al. HPLH

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Nicotiana tabacum

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HDL et al. H]

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LERE Botrytis cinerea

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et al. 5

et al. H

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et al.

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Laminaria

Botrytis cinerea

Plasmopara

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ZKL FK SO D D N H URO H L Q SO DQW

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HULL HG RHW DWU WH

Ascophyllum nodosum

D. Saccharomyces

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P. viticola LQ μ 0DUVHODQ//

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et al. QWID

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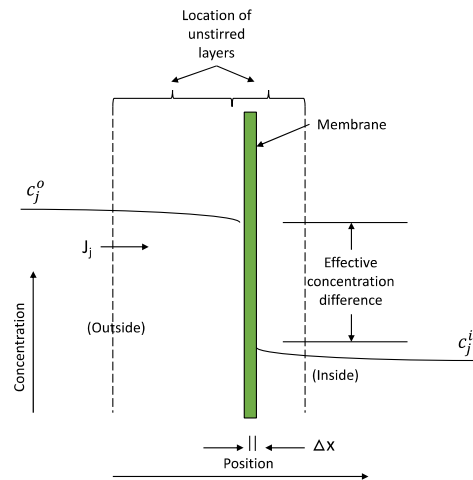
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Location of unstirred layers



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et al. SH

et al.

et al.

DD et al. DSD\D NOV
BFW
VFWVW
RUE et al. R et al. W
RREKRRRU
DSSDRIKRMZ

RDWY
FRDEDCWDSH
SDQDSHESRO
RDRO
R

DE

	ER	WR	WSSDSE	
	H	DH		W
.BQ et al.		DE Ascophyllum nodosum	HSHI W	
W	REY		H DW	HWDQ
DE et al.		A nodosum	WDDW	
DE	REY	A nodosum	BW	
H	et al.	Sargassum spp	RE DDRE	W
HIB	et al.	A nodosum	W	WSE
H et al.		A. nodosum	HWD BSSH	W Botrytis cinerea
HIB E	et al.	DE antarctica	Durvillaea H H	DSEW
DD et al.		A. nodosum	HHDOR HSH RH	H W
DR et al.		A. nodosum	H H	HWD

HSEW
DSSD HQVW
HE Ascophyllum nodosum
HSH
D
HSHW
D HSD
WQKHHY RHE et al. RSH
D
DSDH
DSEW
HSH
DW RRDQ
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HSHRWMDQ
WY HSEKNSOY
H QSDU
DSSDRDSDRDQ A. nodosum
HSD SEWD R
H
HSHI DEW
DSEW A.
nodosum DD VHW

DRDCEWR
DDEW
SDW
H et al. SHR A.
nodosum DSSRDRSDW
H RIG
W
DQREI WDE
DSEW et al. WQ
SDSEW
HSH
HUSSEHO A. nodosum
HSD H
DE et al. HUSSD
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DQ A. nodosum DDHSDQ
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H
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BQ et al. H

ULHV IKUpOOLQ. ,GHUWLR I WK ID
HORSWH RI Ascophyllum ZWMycosphaerella ascophylli
HVVDOLVKG EPHORI IOXUHVHFVY OLERG\WHFOTM Bot.
Mar

ULROEDVLOQPEHVLROUULH-RQVWL 0
DOLRWLWLIHFVWRIELRVWLPDGHULHG IURP WK
EURDHBHG Ascophyllum nodosumRQLSHDQGLFVQ
IUKWTLWRJUSHEHV Sci. Hortic

ULROPEHVLLOLGHULORUHWLRL 0
DVLRODKDEVDLHUUV -DOLRWLW 0 L
HWBROLFOUWDFULSWLRQFHVDFRFLDYGZWK
WXKHRIYFRSOKRGRVRFHWUDBWVWRROVWR LPSURH
WHTDLWRIZH JUSHV Vitis vinifera FVLRHVH Q
WKLU WROHUGH WR ELRWLH.VWUHFVd Agric

FVDSKD WND I QRLGQ
SURSHUWLHVRIPHWBOHFWQDNDVROHQIUWDLRQREWQ
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DED : WD \$ F YFRSOK
ROVLSKORVSHUHOODPELRLV ,RSWLRQFRORJ
RFRVSHUHOODRPRRWLD Bot. Mar

DGHUGIQLDQUDFRKURHUOL \$
WLPUUHPERDOLDUHDDHDP
*KVRV D ODLQ D DWHUULHV WR FRSSHU IRU
Plasmopara viticola FRVURO IIFWV RQUSH DLQ BLG J.
Agric. Food Chem

WKHU \$URORW 6.H OORDHPL - UHWLWLU 3
HQHHE ' DUH ; -REHUW -OHUUDLQ \$
HOHGRQ OORU 9RLQVW %R VDDHG
ODLQQUULJHUVWUHVWUWDFULSWRPHHEHIRUSULPLQW \$
Q GHSHQHY GHIHQV GELQ JUSHEVY LQHG
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RGOHYNDFQ ,MNDNDY
JURVRELRVWLPDQV EDHG RGLIHUHQ PHWKGV RI VZHGH
HWUDWLRWVWUHU Biomed Res. Int

WLPUUHPERD Aplicación foliar en el viñedo de un
extracto del alga Ascophyllum nodosum como herramienta para
mejorar la composición nitrogenada, fenólica y aromática de la
uva y del vino de las variedades Tempranillo y Tempranillo
BlancoSNVLVGHUVLGDGHDRM

WLPUUHPERDGHUGIQUDFRURJ
DWHELORUHGLPLF <PSURHPHY
RIZKROWLOHFRPSRVLWLRQKRXROLDQWURJHDSOLFVLR
WRDHUHWWRQUSHHEVLPFOLFPHY Chil. J.
Agric. Res

WLPUUHPERDGHUGIQRLRLR \$
RUHGLPLF DWHE] EO IIFWV RI
GLIHUHQY IROLD QWURJHQBORORVH PXW DLQ BLGV
Q JOHWKRQ FRPSRVLWLRQD DHUHW WRQDQ
LWT - Food Sci. Technol

WLPUUHPERDGHUGIQRUWX RUHQ
LPLF <DWHE]O SE ROLD QWURJHQ
DSOLFVLRQDHUHW WRQDQV IIFWV RQD
IORLGDQLDGLFRVHY Food Res. Int

WLPUUHPERDGHUGIQRLVHWyDUH]
DWH]DWEVRI PXW Q ZH DLQ BLGV
FRPSRVLWLRQVHU VZHGH DSOLFVLRQWR HPSUDQOR EODR
JUSHEHV Food Chem

WLPUUHPERDGHUGIQRLVHWyDUH]
DWH]DWHGIROLDSSOLFVLRQVWGRVHV
WR HPSUDQOR EODR Vitis viniferDJUSHEHV LQV
VHDRQIIFWVWRQUSHQ ZH RQWLOHFRPSRVLWLRQ Food
Res. Int

WLPUUHPERDGHUGIQRLVHWyDUH]
DWH]LQVWLPDQVLRQVPSUDQORJUSHEHV
Vitis viniferaWKRXBURDHBHGGLQVHVDRQ
IIFWV RQUSH MKFH Q ZH QWURJHQRPSRVV Sci.
Hortic

WLPUUHPERDGHUGIQRLVWV%
RUHGLPLFQUDWHLHVIRUWLP SURHPHYRI
IUKWVHWV]s vinifera/FYPPQHWRXGLIHUHQY
IROLD ELRVWLPDQV LQV GLIHUHQY ORFDLQV ia Téc.
Vitiv

WLPUUHPERDUWYDQD]SHDGH
KUGIQ IIFWV RQUSH DLQ BLG FRQHWUWLRQ
WKRXROLDSSOLFVLRQIWKHHGLIHUHQYHOLFVWRV.
Int

WLPUUHPERDGHUGIXRQV]HDD],
E.QHQRVSHRIPQHPHQVQFOLPWLFFRQLWLRQ
RQSURGKWLH EHRU RHRORJLD SRHWLD Q VRLO
FDDWHLVWLVVRI DHUHW WRQDQ Agronomy,

DPRQ.VEN .(-REV -%HVLVWQH JHE
GHSHQHYSODGHIHUHQVSRV]M Cell

GHKGNHJLQSDG Q
QRU % /DHW LMPD \$
QLPWHFH]HQVFRQHUWLRQ Proc. Natl. Acad. Sci.
U. S. A

RWRERDQD QWURJHQROOVLQRUHEHRI
VREHVQ WUHQVJOREDOQ UHJLRQOHarmful Algae,

-HRWRDRWRVREDKND
IIFWV RISOV RUPREVQ VBLQRQWDFRQVLRQI
QRQDQ WK H\$UHVVLQR RI QRQDELRVQKWL
JHEVLUSEHUUVNLQ Plant Sci

-REVQRLPWH.QHQRVQUSHHE
SHQRJUSHFRPSRVLWLRQ QZHSURGKWLROTLW
IRURUGHDDH Am. J. Enol. Vitic

.DDEL% WKRQOQ
IIFWVRIWUDRQ SUHWUHDPHY RQVHWUDWLRQLHWLVVRI
ELRWLHV IURP EURDHBHG Ascophyllum nodosum Sep.
Sci. Technol

.DDEL%WKRQOQ
SWLPLVLRQRI WUDRQ DVLVWHG HWUDWLRQRI ELRWLH
FRPSRVV IURP EURDHBHG Ascophyllum nodosum X LQ
UHVSROH VKIWH PHWGRORV]trason. Sonochem

.HOHU O R VFLHQ RI JUSHEV QRPQ
SKLROVSDHPLFBHVVDLGLJH

.HURDQKHOOHFH QDGLHUW
/SJO (DQ ' RWD SHQOLF FRQHYV
UDLFD VFDLQ FFOLF KOWBPHWURI VZHGHV IURP
VLWWD Food Chem

.RO %NDQRD DLN \$
ROLDSSOLFVLRQIPLWHRIDLQGLVQVZHGH
Ascophyllum nodosum HWUDW LPSURH JURVQ SKLFR
FHLPLFSURSHUWLHVRIJHV. Agric. Biol

.QDUVKSQUDDQ-LWVVKQ
DURRGJHVQLWFQ HSDILH-QUULH
-BLWKEUM %HGH HWUDWV D ELRVWLPDQV RI
SOVJURVGHGHSRPHY J. Plant Growth Regul

.LUNRG & HFHY GHGHSRPHYV LQ RQ
QHUVWQLRIWHSODFWLFOHDDULHUWRWKIROLSDWVH
RISHVWFLQHVic. Sci

.ODUNLHVHVKRHSO
.ORDHJWLDU β
Plant Physiol
.ROHFHSDWVWVWVVO OHDIHDWVRI
JDSHFVWVU Vitis viniferaD.NVS.HD Oeno One

DFRHRDWDHIX ZORPD7
DHFH KRKH (IHFV RI IRODU
DRJHQVSSOED WRORPDWEHSHVVRI Vitis
viniferaF.KRQOD J. Int. des Sci. la Vigne du Vin

DVD HGHJGDVWDED. RUVH &
.IRHNSDERHMR (RODU
DSSOEDWRRIHDWRORQDDQHORWTV
RVHVDQWEHRIDSSOEDWRQlant Growth Regul

HHFH RPSRVVROQWU DVVFWRI OHDFWEOHV
IRPIVWHHVHODWHRGIIHVDIRODEVERVWRQct.
Plant Biol

HPDvWHROHUVVH \$ BHHIHELV RFREHW
RQVRWWRORWDESDORR
RWRHPEVWRDGVWHHUVWDDRIHOEVRDKHG
HVLWDQH RI JDSHF DJDQW GRDGHZ J. Proteomics

DRRQD
GHVIEDWRRIOHKHEHSHDWHFHSWRONHSEWHQL QVH
SHHVQODV BMC Evol. Biol

DF. QDQW] 'SDWH SW &
.PSRH PHWKG RI DQOV IREHWDHV Q Ascophyllum
nodosumDQVFRPPHEDOVHDHGHVDFWVApl. Phycol

DON SRDQDMDK OEVRDQ
HFHSWRUPROHFHV EKVVDWRU RI SODV GHIHQ DQ
PP\ Int. J. Mol. Sci

DRHVRDGHHRQGVVVDQOR
\$ ODV OHRWGH EQVWHHKKKESHSDW
SHHVFWHJGDQVWGHVHVSROHV
Int. J. Mol. Sci

DQDDEDQDPRDVL
DHPDQ β
 β
Plant Cell,

HEHDIVWHGHEVQVTHKQ\ p
RHRDOJ DOSROVDFRGHFDDJHHQ
FDQFVVDVHOEVRRIODVGHVHAv Phytol

RQHOORDIRQHRO-RVHNDPSDF]
.HPDQDQHR (QIRVDE)
DQJHPHY RI JDSHF WYGLHDVHV .DGHJH
WDQIHVWVVDWVHVDQDQVWVDWVHVDGRSWWQ
KSH Phytopathol. Mediterr

DJDQDNERWR.DNDQDQV
. IHFVH DPQ DFG FRPSRVVRORI VHDHGV
QKQ IRRG SHIHHH EHRV Q Aplysia kurodai
Neurosci. Res

DNDPQ 7DJDDP . SKD . DQND 5
VRGDVDFVARI SORVD QVRODWHG IRP WH ERQ
DOJDisenia bicyclis Fish. Sci

HVHWHEOHQK/KOD6
DODGDSWDRQGEDJEWK Clim. Risk Manag

HVOHSDRORSROR RQDQ <
HVRW, FRPSOHSEWHGHVDFWV DVERJHQ
HOEVRRI JDSHF HVLWDQH DJDQW SRGHVDPGHVHU
IHOGFRVROFront Plant Sci

JDWDFH.,RVDORVRI HQ
DQ SKVSK HWSEKDWRODPD HFRVVWHPV In:
Monitoring of Marine Pollution RQHG
VHFHRQRO

REHO ERFRPEDO DQ QHQDO ODV
KRORQOVHHEVWHGDP

REV RRFQVWH RI WH SHDQHD
FWEH VNSHFDQ HIHHQHWR FWEQDISHVWDRQm. J.
Bot

RHRQHDWQHDSODVHWDF WV
ESDFWRQSHHOGDQDQV\ Acta Hortic

NRHQRVRECVW EHV &
R FRPSDDWH QHQ RI QHO HVDFWRO
WHFORJHVROVSHERWE QKDFKPEDOSRSHVHV
RI IRKGDQVDFWV IRP Ascophyllum nodosum Food
Hydrocoll

DODGHEVDGD)RHRDHV :HQH]
HQH]: DVLWDVQDRIJ5
.QHQ RI PHWQ MDVPRQWH DQ EHHEGDRQH RQVH
FRPSRVVRORI JDSHVHOO DOOV DQV Food Chem

DV RORWQHQ HFROOHV RKHVQ
RWRORRHO- SDQJHVDDU H
:HV 9 ERSEHG ODPDQ DV EZ
ERFRPSDWEH DORRPFWH FRPSRVV IRU JDSHF
SRWHFWERQubohydr. Polym

DV. ,PSDFV RI DJEWH RQWHVROORWQ
FRVHV HFVH WHQV DQ IWH SEVSHFWV Int. J.
Water Resour. Dev

HHRURQOD VFWHSS
FRQH HHRVWH ERDFRDOJD Ascophyllum nodosum
DXXHROV J. Appl. Phycol

HVRFRQVHODOVHWD RQHHHGH &
RVHRDQVDFV DFLROEDFURVGH
DOJDV FRPR HGHVHV IRQOHV HQDFKQWQ PDQ
DOJDWR FDDJHQWROR Rev. Biol. Mar. Oceanogr

RSHVFXRSHVFX (IHFV RI WH ERQDQD
FRSRORGRVVDVERIHWDL HRQJHWDWHJEBQ
JDSHF Vitis vinifera/ Curr. Trends Nat. Sci

RRVW SIGDQW . R RIDE DQ DV D
EDODQHG HFRVVWHP,PSRHGRIDEJDSHPDQJHPHYDQ
ESDFVWRQTBQ\ Sci. Hortic

DPHVWGD. EDOERQDQJR RDR(
ROHVXKQy DODRQOEVDWRDQ
HIIHFVH VVDWHJ\ IRUWH ERWHFORJEDO SRGKWRQRI
ERDFWH KGGHG DON FRPSRVV ODV FHOQ IDFWRHV
Molecules,

DPVHSHVROO SHRI
WHHIIHFVVRIRGVKHFV DQVQVDFWVDFRPSRVVRO
RQWH DEVRVWRDQ HIIDF\ RI KQ DWHVROKOH
KEEGHV Pestic. Biochem Physiol

DDWKSQHO QN RGJHV 'SODQMWV 3
DF. QVFKH\$ BVMKRSK
FRPSRVV RI WH ERQVHDHGH Ascophyllum nodosum
HQHIIHQRVROHDDHQ Arabidopsis thaliana Planta,

HGH DERQKHNSRVVHSH
RVPRWE ROH RI PDRQ QVH RHRVW DQSSVDDO
Phycologia,

RJHUV@UGH: 0VW RPDWDGHQVR I
 JUDSHHEDHV *Vitis vinifera* UHVSROVWRV RHP SHUDWKH
 DQDWRVRSKUEFDUERGRGH Aust. J. Grape Wine ReV

RPDDHDDHDDHUHVHZZ
 GHUL ,PSDFW RI DWHUDWH IEGHV RQUDSH
 GRDQZHRUURDQD JURV RQGHHRSPHY Plant
 Dis

DEHQ \$DJDUDVP\ 6DWWDUL=DGGDG 6
 DNDGHHDEDPDQH
 DVVWGHG HJUDFWWRQI ERDFWH FRPSRQV IURP EURQ
 VHDZHGVDQFUDFWWHUDWRQpl. Phycol

DEU \$,PSURHPHY RI WH SRGHDD\ DQ
 JHUPDWRQHHD QJUDSHV *Vitis vinifera* / E \ OH D
 SUDWRQ BKQOVH FDQWH DQ VHDZHG HJUDFW
 Ascophyllum nodosum J. Anim. Plant Sci

DEU DDU .DEU)DUD DEFRM
 Q JURVHIO EHUU\ DDDWVUEWHV DQ HDI
 UHUQFRQHYRIJUDSHVVDV DQHGVEVDZHG HJUDFW
 Ascophyllum nodosum DQ DQVH IHUWHU SUDWRQ
 Sci. Hortic

DIHRDUG EGHDDGM \$HIERDDX
 RWRKFDW RRRVWHWQURQ
 RVVDFFBUGHV IURP Botrytis cinerea DQ HEDDWRQI
 JUDSHH GHIHQH In: Polysaccharides: Bioactivity and
 Biotechnology DDDW . DQDQHG
 SUHU, QHUUDWRQDQDHRUN

DUHQWWLWDQGR (EFROISD)UWWR 0
 HUUDDWVWHFWVRI Ascophyllum nodosum
 HJUDFW RQs vinifera RQHHDHV RQDQ SKRRA\
 JUDSH DD\ DQ VHFRODU\ PHWDEROP Plant Physiol.
 Biochem

DUDDQ RRR DSHHQ
 DQHIEHWHJUDFWWRQSDQFFBUGHV IURPEURDHDZHG
 EDGGDGHHSXHWFEVRRDQDFUVEDDWHU KURQ
 J. Clean. Prod

DUPDQDQRDDRUWDQ
 DQERVVDDQVSHHZ RQK SURFHVVRIPDFURDDH
 DQXHRHJUDFWVIRU FURS PDDQHPHYWR UHGKH DERWE DQ
 ERWEVWUHVVApl. Phycol

EDWDDJDDPD. DQDQDPDKDQDQ
 7. DWRUHIIHFWV RI EURDDQRURWDDQ
 VHFUHWUR\ SKVSKDDVH \$ BRJHQVHV DQ
 FFBRJHQVHV J. Appl. Phycol

EDDQSDMSDRWFFH\$
 BVKDM% Ascophyllum nodosumEDVHGERVWDDV
 KWDQEH DSSDDWRQ DJUEWKH IRU WH VVDDWRQI
 SDQJURV KWUHVVWRDQDQDQDGLHDVH PDQJHFAH.
 Plant Sci

WUNSWK RKHQKRVUDG 0
 DQWDGHQ- RQH V QFWRDDQ DQ
 FRHQUDWRQ DVHDZHG FRHQUDWHV KQWRUHG DW DQ
 HEDWHGWHP SHUDWVpl. Phycol

WUNURZNHRHWDGDDGHQ
 - EVFLE DFG JEEHUHQ DQ EUDVVQVWHURGV Q
 .HSDQ FRPPHUFDDHDZHG HJUDFW PDGH IUREcklonia
 maxima. J. Appl. Phycol ±

WUNDDDGHQPSDULRQIFWRDDQ
 DQDFWWRPFRPHFRPH UFDQHGVDHDZHG HJUDFW
 J. Appl. Phycol

WUGRP -R HIIHFW RI IRDU SRWDVVRDQ VHDZHG
 SURGKVVORPEDWRQDHRQUGWHIHUWLDWRQURGKWRQ
 DPHHGHVJVJUDSHDD\ S. Afr. J. Enol. Vitic

QVD \$E :-P GRDQV \$
 .DQD RStNY-, DUNKWUKWH DQ
 DQVRRR DFWARI IRGDQDROWHG IURP VSRURSRRI
 .RUHQDQDHDZHG Undaria pinnatifida Carbohydr. Polym

DVVRWDPDWDGLQPREIHFVV RI
 DQAscophyllum nodosumHRRHJUDFWWRQUDSHHGH
 DQEHUUFPRSRVWRQIDHUWRV DQUG Sci. Hortic

DDUDM 6HNU QKDUDGDDV HURDQ
 EVRQSDUDWH DQPEUREDQURSHUWHV RI
 VHDZHGVDJDDQWasmopara viticola HURDQDQV
 HUDDQ H RDDQ Uncinula necator 6HDDUD
 FDXDGRDHDZQSRGHUPQHRIJUDSHV Indian
 Phytopathol

RPDVRRV QW RQDWR RWWL
 DSDHQ SHQDQ DQ FDDWH FQH HDWRQV DQ
 WUHQVRRHWRUHJRQI, WDQRU Am. J. Enol.
 Vitic

EDQVH &ADZHG HJUDFWV ESURH FRSSHU
 XWDNRJUDSHH Acta Agric. Scand. Sect. B Soil Plant Sci

DVFRHRRVCHHQ HIOERKWRQ
 DDIHQUSURFHVVRI Vitis viniferaSHHZ
 Am. J. Enol. Vitic

WRIQDUWHJSHUDQDQHDVVEWHG
 HJUDFWWRQI SURWHQIURP WH VHDZMGMfocystis pyrifer
 DQ Chondracanthus chamissoi FUDFWHUUDWRQIWH HJUDFW
 DQWUHRERDFWHSRWHVDDApl. Phycol

HUGHQDDQHJUJ(MHUHHEVDJÈ
 DHW DQHEHGUQ, PSDFWRI FURS
 RQD RQURJHXWDN DQ UHVHUH PREDDWRQ Vitis
 vinifera Funct. Plant Biol

HUGHQDQDQHJUJ (MHUH)RUHQ
 HAVDQUR. SUQHWWDIWR
 IUV UDWR DIIHFWV WH ESURRQDSSSHG QURJHQQ
 DFFRWRQDQJUDSHPKW J. Int. des Sci. Vigne du Vin,

HUGHQDQDQHJUJK IIHURHUHQD J
 /HW 2 IIFW R I IHUDDWRQVEDRQVH
 SDUWRQRI IRDU- Vitis vinifera F Y
 RRVHVDV DEHQDSSURDFK Aust. J. Grape Wine Res

HUNM J HDZHG HJUDFWV QJUEWKH DQ
 RUWENKHS/HHZ Biol. Agric. Hortic

:DQSDQyWUW SDIVyWUW *RWDSDHQ
 FRPSRQVUDGEDQFDDQDQ PHWDDQDWRQI HJUDFWV
 IURP, FHDQVEVDZHG Vfood Chem

DEX DVHQHUQHUPRD *DDWH
 IURPWH PDFURDDQSHrgassum sinicola DV DQHQREFHIRU
 PEUREDQPREDDWRQDWHUDQDVVHDZWHU WUHDWPHYDQ
 SDQJURV KURPRWQJ Appl. Phycol

RXVRDQPDQED GRDQDQ
 HRFHQREKURRUSUH-
 QUDVRRDVEVVEWHGHJUDFWWRQDQVWEDDQUDFWHUDEVRQ
 RIDDDWHVDQDFDUUDJHHQDQIURPVHDZHG V Carbohydr.
 Polym

HUPHRRQHQHJS HRGUJHDUFID(
 RGHQDSDWD QDGHQDQDQPR 2BWDQDQD
 RHUWDFLQHE HQHDFLQRRWRVQHVH
 UHQPHQRFDQDGGHIUWRVSRFHQD

ED 6HUVN =DDG *DQ &
 DQJHPHY RI SRGHUPQHDDQVVE SDQ DQDQ
 HJUDFW ERSHVWEGFAnt Pathol J