

## Supplemental Data S1. DEK1-Linker sequences of charophyte algae

>*Coleochaete orbicularis*

RPRKTKLMARDAIMSLRPELVVQAIMRSAGGTRTSFSAAFPTAHHGMSSSIIQVLDPSISLERAQSIMPNADLNRLRRELAKRVR  
AAGFWCHRSTMPEDDISHDYRTDDKPGAHAHAKILSLEAAIDKEFQDMWEKFGGYLLCVLGLAARAQHTQDDARLRKFLDGVGF  
AGLSVDRIRTWTAERQRFEIVQERYLAQEQLLEEDMIQKRREEELGKLRRELLNKEEKRRRELEAEVMSSAPHVNSKQAVAI  
MTALRTVGDGVHVDDHDLISEMTHVDDGAGMKGDNYDRILTRILTTQRNKRAAETKVEGAFVLDQPRRPRGRINLPLDPSV  
LGTEHLTISA AVIMEASISPVCI VGFELPEKRGCIEMYVTGGDPSQKGGRIGFRYVQVLNGSERVAQEWIMGNSYIADRRWHTV  
TLTLEADSSVAVGVFDGKQESYDDEITIPSYDILQGTAMCIGFWPESDVEARAKAEHKGKRVAIQVMDVFLWGRALMDEDV  
LEVHTSTLSQDRPLSPRAPDNTSGTHPFKRYGSTDTDDDENSGRKRKGDVSLIPARPKKLRTRDTSETLEEINSKMRA

>*Klebsormidium flaccidum*

SRPRITVKMMETALMYLSEEDIKLAITKATEKIQKTGASRGAQRDPLPEGDIKWLRKQLRKQELAAGPWLRRSFRLGRSAGGGP  
LSRRGSGIDKAEVDLSLEHHRLTDGDDITLPRSTRMHAKHEILRLERAIDDEWLTMWGSFGGYLLLTIGLFAEREKKQDDVRLRF  
QDHLRDQHKCDFSLQMRKWSRGGRRERAKLLELEEFFDWQQRKEERIARKREEEARGKQRHEKRREMSAEAEATRRLERAR  
MTKVPGCVCIEHSEPAFGGRYAGDIPPIADLVTVLSAAVRITSLAPDERAVVLGTSGQRRGVGHCLLELILRRRSESGGARAML  
GLRVVSERRDGDVPPQEFIFEGDGA VGIEDTNWHCVLVLDAVAGSASVYVDGEEDTWRRGIFFPDGP SGVWKT TDEI WIG  
QACPLDANQYHWT PRANLEIMDVFLFDHALNVREAWFVHKSTVVDGYQVVDGPPDDDIGEGDSSMTQPAPPVPMHEAM  
LDARGGSSGIYGMGRPSISDGHGTATPSRYSQSGPLRRGDYSRSDARPLKRRKPWTSMGDGFVRRKLPTFEESVTDIN

>*Nitella mirabilis*

RPRITFKMMEDALEYLKDERIACILAQCSAQTRRQTAGAVSLSHRSVSGISVMMAGDTSSRLHSQGSTVAMTQRTDLTHLRLL  
REQEELSRGWLSCCKSVINCEGSGSYCWGDETRGRERSFGSMNACGKGGVNKNDEESGWLHEAAVGGDGTWASFYERK  
VKAHYRILEEEEEIDTEWVEMWGRFGGRLLLLLGLAARAERVQDDTRLRCLDAIGFKDVTASKIRNWNPEQRREFEIVKESYLR  
GREQEDLSMQLRREEAEIGKNRRLALLEEERKRRNPNVCPHLANNILSKSFHRDSGTQTPSHTKILTRLATKEREAHAGKIGVP  
GAVCLDDRPRAGFKVPYNLDPKVLGTECLTISAAIVLPRGMSWVCIFGIEIMNGSELGCCIEMLTNDGFSQLGLRLLLETNPQQGQ  
SVGKDLTIGRTNLADGRWHCVLVLNGQTGFAEAYVDGMKDGLFEPLVLPWEGGIPESGVNFYIGNWPEADPAVEISRSFT  
NSGTTPHNPTFGRCATLSQRSRSQSQRSLTGS LRQVVGLEMMDMLLWGRALTKEIWNVHRMTVADGYAVKTPPAVWS  
VENLDRSQTGDEDLYTGSTEGWRKGRSEGVGALLPAEDSRFQMALTSEEELKERFR

>*Mougeotia scalaris*

PSSVGPISCSCSLALTVAFALSRRKRITARMVEDAITYLHDDVISQVLLRASAKIRREALGTHYVVNSSNPYPNPNPRQSHEALANT  
STVIELSHMPSRGDTSVGVGDSSDELVPRWRSHGRILDLEDNLQNSWISMWQQFGGYFLLILCLAAQRERVQDDARLKAFLE  
YVGFSERESRQCENLSVTEQERVREAQSRYFQEKERGELIVALRREEEAIGKQRRKQMLEREGRRRRHIEASVWSTIPEANSLQV  
STIVATLGAIGDQSVSLLMCEEGSTAAAYSADHQSFESVLWQYMHASKTFRAEQIGVEGAVCLADDLPRTPRVCVPLTPALH  
GASCLTFSASICVSPDHDAVCIIGAHSPAQHLCLEILVPGNSQISKCGYLTVRVTQTPAGVEPLPWVREWTVGMQSVADNKWH  
GIAVSIDSQSGVTTTYVDGHLDGSRDALEGLTGCRIWQPGTQVWLESWAENSGSGVQLLDVYMWGRLLASEVRKVHSSFG  
FSTFSSQARRGSSGDYQVHSSQNQAWKEEVLKTYSLNLPWYSQPAMDGGPTTVS QLYSSNPRLNPRKRCAPSRSSEVSATLDPQ  
LTEISKLLILGGPRAQFRA