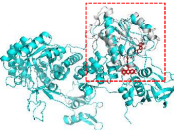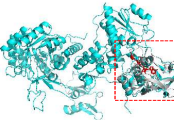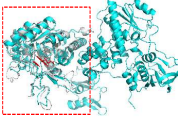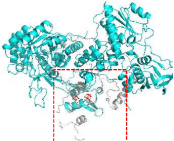# Structure-based amino acid sequence alignment between predicted *A. hadrus* PreT-PreA heterodimer and five pig DPD domains

Alignment	Schematic Diagram	Result	Sequence
Domain I (nFeS1,nFeS2)		RMSD = 0.786 (85 to 85 atoms)	21 TAMEEASRCLLCHDAPCSKSCPAKTD PAKFIRSLRFRNIKGAAETIRENNPLAGCCAEVCPYGQLCEQACSRTGIDK-PIEI GKLQKFLVEMEK 113 71 GALREAMRCLKCADAPCQKSCPTHLDIKSFITSISNKNYYGAAKMIFSDNPLGLTCGMVCPTSDLCVGGCNLYATEEGSINI GGLQQFASEVFK 164
Domain II (FAD)		RMSD = 0.596 (116 to 116 atoms)	128 GKIACVGAGPASLACARELALFGY-DVTIYEANEKAGGVLTYGIVPSRLPQEVVDFDIATIEKLGVTFKFNETIDAARL--E ELKAE-YDAVFVGTGL 221 369 VFTGGDMVNGGKTVVQAVAEGKDAAAMIAAYLN 401 188 AKIALLGAGPASISCASFLARLGYSDITIFEKQEYVGGLSTSEIPQFRLPYDVVNFEIELMKDLGVKIICGKSLSENEITLN TLKEEGYKAAFIGIGL 285 476 VFAGGDIVGMANIIVESVNDGKQASWYIHKYIQ 508
Domain III (NADPH)		RMSD = 2.284 (85 to 85 atoms)	242 DFLK-DARLNKENM--------TLGDTVLVIGGGDVAMDCVTTAKQLGAKAT-IVYRR---TIEEAPADIDEVMAVQSMGIP IIQEFAPGEIIGSKGHVTAMKFNGRD-------NESE---LTMKADQVVFAIG 353 308 DFLPLVAKSSKAGMCACHSPLPSIRGAVIVLGAGDTAFDCATSALRCGARRVFLVFRKGFVNIRAVPEEVELAKEEKCEFLP FL---SPRKVIVKGGRIVAVQFVRTEQDETGKWNEDEDQIVHLKADVVISAFG 439
Domain IV (5-FU,FMN)		RMSD = 0.619 (255 to 255 atoms)	6 DLSIDFLGVKCENPFFLSSSPVGSNYEMCAKALEAGWGGIYYKTIGIFI--PDECSPRFDITTKEGTPWVG----FKNMEQI SDKPLEVNLEYMRRLKQDYPNKVIVASIMGSN-DEEWTTLAKAVTEAGVDMIECNFSCPQMTSHAMGS-DVGQNPELVKHYCEVVT AATHLPVIAKMTPNIGNMEIPAIASMEGGAAGIAAINTVKAITNIDIENITAMPVVNG--KSSISGYSGAAVKPIALRFITQMKQH PDLVDVPITGVGGIETWRDALEFILVGASNLQVTTAVMQYGYRIVEDMISGLSHYMEDN 308 532 DISVEMAGLKFINPFGLASAAPTTSSSMIRRAFEAGWGFALTKTFSLDKDIVTNVSPRIVRGTTSGPMYGPGQSSFLNIELI SEKTAAYWCQSVTELKADFPDNIVIASIMCSYNKNDWMELSRKAEASGADALELNLSAPHGMGERGMGLACGQDPELVRNICRWVR QAVQIPFFAKLTPNVTDIVSIARAAKEGGADGVTAINTVSGLMGLKADGTPW-PAVGAGKRTTYGGVSGTAIRPIALRAVTTIARA --LPGFPILATGGIDSAESGLQFLHSGASVLQVCSAVQNQDFTVIQDYCTGLKALLYLK 841
Domain V (cFeS1,cFeS2)		RMSD = 1.023 (79 to 79 atoms)	313 LSDLVGLALPNIVPAEDLDRSFKLLPKFDEDACAGCGRCYVSCFDGGHQAIDWDEEARRPRLNTDKCVGCHLCLNVCPVMDC I 395 921 IKDVIGKALQYLGTFGELSNIEQVVAVIDEEMCINCGKCYMTCNDSGYQAIQFDPETHLPTVTD-TCTGCCTLCLSVCPIIDC I 1002