Crystal structure of the RNA binding domain of NS2 from BTV Carmen Butan and Paul Tucker
European Molecular Biology Laboratory (EMBL) c/o DESY, Notkestrasse 85, D-22603 Hamburg, Germany

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The RNA binding domain of the non-structural protein 2 (NS2) from Bluetongue virus (BTV) has been crystallized and its structure determined and refined to a resolution of 2.4 Å. The structure reveals a three dimensional (3D) domain swapped dimer where the C-terminal segment (134-160) of each subunit is swapped into the major domain (8-134) of the other subunit. Three dimensional domain swapping has been described as a mechanism for forming oligomeric proteins from their monomers (1,2). Indeed, repetition of the monomer-monomer interactions, as previously described, gives rise to an infinite helical structure in the crystal with a pitch equal to the length of the **c**-axis (77.92 Å). We hypothesize that point mutations placed at the dimer interface will destabilized the monomer-monomer interactions and thus offer important insight into the mechanism of oligomerization.

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