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Correction

Correction: Spiegelzymes® Mirror-Image Hammerhead Ribozymes and Mirror-Image DNAzymes, an Alternative to siRNAs and microRNAs to Cleave mRNAs *In Vivo*?

The *PLOS ONE* Staff

There are errors in Figure S1 and Figure S2. The authors have provided corrected figures here.

Supporting Information

Figure S1 Heterochiral D/L-RNA-duplex showing either right- or left-handedness. The duplex shown consists of the short sequences D-(5′-CGCCA-3′) and L-(5′-UGGCG-3′) and the base moieties are paired in a canonical Watson-Crick manner. The D-RNA strands are always shown in red, whereas the L-RNA strands are shown in blue. Interestingly, due to the heterochirality of the base pairs, D/L-duplexes can show either right- (**A**) or left-handedness (**B**). **A**. The D/L-RNA duplex shown in its right-handed, anti-parallel conformation. The D-RNA strand (**red**) is in a natural A-RNA form configuration, whereas the nucleotides of the mirror-image L-RNA strand (**blue**) show ribose rings, which are rotated about the N-glycosidic bonds, which connect the bases with their ribose rings. This arrangement of the nucleotides leads to a smaller minor groove and a larger major groove of the duplex. One can say that the D-RNA strand has forced its natural (right-)handedness upon the L-RNA strand. Only for comparison reasons: The transparent **red** D-RNA strand shown arranged together with the opaque red D-RNA strand would form a natural, right-handed D/D-RNA duplex in A-RNA form. The atom positions of the base moieties of the natural D/D-duplex and that of the D/L-RNA duplex are identical. **B**. The same D/L-RNA duplex, but now shown in its left-handed, anti-parallel conformation. The L-RNA strand (**blue**) is in its preferred left-handed A-form configuration, whereas the nucleotides of the natural D-RNA strand (red) show ribose rings which are rotated about the N-glycosidic bonds connecting their bases. In this case, one can say that the L-RNA strand, for which the natural handedness is left-handed, has forced its handedness upon the D-RNA strand. For comparison reasons: The transparent blue L-RNA-strand shown arranged together with the opaque blue L-RNA strand would form a conventional, left-handed L/L-RNA duplex.
(TIF)

Figure S2 The detailed view of ribonucleotide conformations in homochiral and heterochiral complexes. The natural nucleotides are shown in **red**, whereas the mirror-image nucleotides are shown in **blue**: **A**. Comparison between the natural D/D-base pair (above) and the right-handed conformation of the D/L-base pair (below). **B**. Superimposition of the D/D-with the D/L-base pair. **C**. Diagonal side-view of the D/D-base pair superimposed with the D/L-base pair. As one can see, the D-ribose ring and the L-ribose ring show a common symmetry plane as soon as the necessary ribose ring rotation has taken place.
(TIF)

Reference

1. Wyszko E, Mueller F, Gabryelska M, Bondzio A, Popenda M, et al. (2014) Spiegelzymes® Mirror-Image Hammerhead Ribozymes and Mirror-Image DNAzymes, an Alternative to siRNAs and microRNAs to Cleave mRNAs In Vivo? PLoS ONE 9(1): e86673. doi:10.1371/journal.pone.0086673

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