

**Breaker Laboratory**  
**Molecule of the Year<sup>1</sup>**  
**1995**

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**SDS**

**Fig. 1.** The chemical structure of SDS.



**I**n recognition of the importance of SDS (sodium dodecyl sulfate) in preventing the non-specific adhesion of nucleic acids to the surface of polypropylene microfuge tubes, it has been conferred the status of Breaker Laboratory “Molecule of the Year”.

**E**ngineering functional nucleic acids by *in vitro* evolution typically relies on the successful isolation and manipulation of infinitesimal concentrations of RNA and DNA. Therefore, the loss of even attomole quantities of RNA and DNA can be severely detrimental to the molecular engineering process. In 1995, it was established that SDS concentrations as low as 0.001% (w/v) are sufficient to preclude the loss of trace amounts of DNA due to non-specific adhesion to the surface of microfuge tubes. The application of SDS in this fashion is one of several critical technical advances that make possible the success of challenging *in vitro* evolution experiments.

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<sup>1</sup> The “Molecule of the Year” award was established by the Breaker laboratory in 1998 and retroactively applied through year 1995 when the laboratory was founded.