Antisense therapy reverses symptoms of type III spinal muscular atrophy (SMA)

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Researchers show how loss of key tumor-suppressor protein promotes acute myeloid leukemia

The tumor-suppressor gene p53, known as the "guardian of the genome," is a tumor suppressor that prevents cancer by activating a series of "checkpoints" in the cell cycle. When p53 is mutated, it fails to activate these checkpoints, allowing cells to become cancerous. Mutations in p53 are found in over 50% of acute myeloid leukemia (AML) cases, most of which lead to a tendency to be resistant to treatment.

A team led by Steven Lin, Ph.D., in collaboration with Fred E. Stojadinovic and the Salk Institute, has identified a new mechanism by which the combination of two mutations can lead to resistance to treatment. The team found that a combination of these two mutations changes the interaction of p53 with a protein called MDM2, which is involved in the regulation of p53 activity. The study, published in *Nature* on June 1, 2018, shows that this mechanism can lead to resistance to treatment and points to new therapeutic strategies.

**Events and announcements:**

The 2020 DNA Seminar Camp program at CSHL will continue to offer a series of talks by leading scientists on various topics related to DNA studies. The program will feature daily seminars and workshops on cutting-edge research in DNA science. The seminars will be held from June 15 to July 31, 2020, in the Salk Institute's Salk Seminar Room. For more information, please visit the CSHL website.

The 2020 CSHL Cultural Series will feature an array of events, including concerts, lectures, and discussions. The series will kick off on September 15, 2020, with a performance by the renowned pianist, known for his interpretations of classical music. The series will conclude on November 10, 2020, with a performance by a leading contemporary composer. For more information, please visit the CSHL website.