

## Nanosuspension: a new treatment breakthrough?

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Nanosuspension is a formulation of very small crystals which have been reduced to approximately twice the diameter of an HIV particle. A presentation at the conference on nanosuspension of rilpivirine reported on a study when this was given to HIV-negative subjects in single doses. The tolerability and plasma concentrations of rilpivirine was studied over time, after each single dose. The study found good tolerability and there were no significant adverse events except injection site reactions around the point at which the injection was given. The investigators report that very long, sustained plasma concentrations of rilpivirine were maintained out to 12 weeks after the single doses.

This type of depot formulation could be useful in treating HIV as long as a companion drug to go with long-acting rilpivirine can be identified. If this approach is successful this may be the first agent for a new paradigm of HIV treatment. It would be of great benefit in helping overcome many of the difficulties with drug adherence. Further study of this drug is planned at more concentrated doses.

Verloes R, et al. TMC278 long acting – a parenteral nanosuspension formulation that provides sustained clinically relevant plasma concentrations in HIV-negative volunteers. 17th International AIDS Conference, Mexico City. Abstract Poster TUPE0042, 2008.

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