Have media, scientists overstated what in biology epigenetics can explain?

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Epigenetic marks are undoubtedly crucial for our development. Yet, some high-profile studies have recently suggested something more: that the environment can change your epigenetic marks later in life, and that those changes can have long-lasting effects on health.

However, criticism of these studies has been growing. Some researchers argue that the experiments have been weakly designed: Very often, they say, it's impossible for scientists to confirm that epigenetics is responsible for the effects they see. According to researchers John Greally, Ewan Birney, and George Smith, the field of epigenetics needs an overhaul.

In some cases, changes to epigenetic marks don't cause disease, but are merely consequences of disease. In other cases, apparent changes in epigenetic marks may actually be the result of different kinds of cells becoming more or less common in people.

"There's nothing wrong with an exploratory study, but call it an exploratory study and acknowledge the fact that it may merely be reporting noise," Dr. Greally said.

Read full, original post: Growing Pains for Field of Epigenetics as Some Call for Overhaul