Mark J. Daly, a geneticist at Massachusetts General Hospital, and his group published a report saying that alterations to a tiny piece of chromosome 16 contributes to roughly one percent of cases of autism in children. These alterations, which are spontaneous, can either be the duplication or deletion of this section of DNA. Daly also reported that the alterations increase a child’s chances of acquiring autism or any related disorders. The research group plans to continue studying how changes to the DNA section promote autism. According to the article autism and other related developmental disorders affect about one in one hundred and fifty children by the time they are three years old.

The research team used a new DNA-screening method that identifies variations in the number of copies of each gene in the genome. They tested people from 751 families; where each family had two or more children diagnosed with autism or a related disorder. In their study there were a total of 1,441 children that were affected with autism or a related disorder. Their results showed that there were five autistic children whose DNA segment (of study) on chromosome 16 was deleted. The children’s parents did not show the deletion of the DNA section on their chromosomes. Daly proposed that the deletion of the section probably occurred during genetic recombination or around fertilization.
The group also found five more cases of the section deletion among 512 children that were referred to the Children’s Hospital Boston. Only one of the five children had inherited the DNA deletion from a parent, but it appears that the other deletions occurred spontaneously. They also found similar results in 3 out of 299 people in Iceland that had been diagnosed with autism. Their study also showed that 2 out of 18,834 of the people who did not have autism showed the same deletion of the DNA section. On the flip side of deletion, there were seven people and four children with autism in the original study that had extra copies of the DNA section on chromosome 16.

Another study conducted by Aravinda Chakravarti at Johns Hopkins University reported that inheriting only one variant of a brain-related gene increases the chances of having an offspring develop autism. However in this study a link was shown between a small part of chromosome 7 and autism. The study shows that children with autism inherited a specific version of a gene in that area. The gene has been suggested that it makes a protein that helps with the growth of nerve projections that are necessary for neural communication. The article also raises the question that vaccines given to children have increased autism rates. It has shown that there could be environmental factors that also contribute to children developing autism.

I think that these two studies show that scientists are getting closer to finding a cause of autism, but they are still far away from finding the true causes. Once the causes are found, then solutions can also be found. Following with the first study, the key to eliminating autism will be to find what is causing the DNA sections to be deleted or copied, and finding a way to stop that from happening. This is a good step towards an answer, but it’s probably going to take more research into finding the cause because these two studies have shown that more than one gene
could be responsible for causing autism. Also, even if the causing genes can be found, there could be other environmental factors that can cause autism which will have to be found.