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## Anti-Vaccination Lunacy Won't Stop

ROBERT DE NIRO MADE THE RIGHT CALL IN PULLING 'VAXXED' FROM HIS FILM FESTIVAL. BUT THE BOGUS MESSAGE ROLLS ON.

This week's fare at the Angelika Film Center in New York City includes "Vaxxed: From Cover-Up to Catastrophe," a purported documentary that began its run on Friday. If only the theater's schedulers had been making a droll point by choosing April Fool's Day to launch this dangerously misleading movie falsely linking vaccines to autism. Instead, they all too eagerly snatched up the film after it had been ousted on March 26 from plans for the Tribeca Film Festival later this month.

The decision to remove "Vaxxed" from the festival was the right one, and credit goes to organizers, in particular co-founder Robert De Niro, who has a son with autism, for having the courage to reconsider their plans. If "Vaxxed" had been submitted as science fiction, it would merit attention for its story line, character development and dialogue. But as a documentary it misrepresents what science knows about autism, undermines public confidence in the safety and efficacy of vaccines, and attacks the integrity of legitimate scientists and public-health officials.

As Mr. De Niro explained in announcing that "Vaxxed" would be dropped from the festival: "My intent in screening this film was to provide an opportunity for conversation around an issue that is deeply personal to me and my family. But after reviewing it over the past few days with the Tribeca Film Festival team and others from the scientific community, we do not believe it contributes to or furthers the discussion I had hoped for."

I am among those Mr. De Niro consulted. In a 45-minute phone conversation with him, I recommended that the festival withdraw the film from the "documentary" category and not screen it.

The filmmakers claim they have not stated that autism is caused by the measles, mumps and rubella vaccine,

known as MMR. However, that is the inescapable message of "Vaxxed." And it is certainly the stance of Andrew Wakefield, the discredited British researcher who is the movie's director and co-writer.



photo: getty images

I've known Mr. Wakefield since the late 1990s, when his (later retracted) paper suggesting a link between the MMR vaccine and autism appeared in the *Lancet* medical journal. He studied British children with developmental disorders and reported that they began to show signs of autism within weeks after receiving the vaccine. In subsequent papers, Mr. Wakefield, a former gastroenterologist, continued his quest to associate autism with the vaccine by reporting that children with autism had measles virus sequences in the gut, blood and cerebrospinal fluid.

The MMR-autism hypothesis initially intrigued parents and scientists, particularly given the rise in autism diagnoses. The frequency with which autism is diagnosed in the U.S. increased from 1 in 2,500 in 1985 to 1 in 68 in 2010, according to the Centers for Disease Control and Prevention. Nonetheless, the scientific community unequivocally agrees that the MMR vaccine is not implicated. Numerous credible studies, from the U.K.,

U.S., Canada, Finland and Denmark, have found no evidence linking autism to MMR.

The MMR vaccine was introduced in the U.K. in 1988 and appeared on U.S. vaccination schedules as early as 1983. Given that autism is infrequently diagnosed before age 2, and on average at age 4, if MMR were responsible for the increase in diagnoses, levels should have peaked in the early 1990s rather than continuing to rise. Many researchers suggest that the increasing frequency is the result of changes in diagnostic criteria and better detection; others believe there is indeed an increase in autism and are searching for explanations.

The true test of a scientific finding is reproducibility. In February 2001, I led a meeting at Cold Spring Harbor Laboratory, where Mr. Wakefield and his colleague John O'Leary reported that 91% of children with autism had measles virus gene fragments in their gut. Based on this information, we assembled a team of investigators from the Centers for Disease Control, Columbia University, Harvard, and Mr. O'Leary himself, to compare children who had both autism and GI disturbances with children who had GI disturbances alone.

We tested Mr. Wakefield's two major findings. First, whether MMR preceded gastrointestinal complaints (presumably leading to a breakdown of the gut wall, allowing molecules to enter the blood stream and travel to the brain to cause autism) and, second, whether we could find measles virus in the gut of the majority of children with autism. Neither finding held up.

In our peer-reviewed study, published in PLOS One in September 2008, we found that only 20% of children fit the Wakefield model in receiving MMR vaccine before onset of GI disturbances and autism. We found measles virus sequences in the gut of only one child with autism and one child with only GI complaints. Two other research teams, one in the U.K. and another in Canada, were also unable to find measles virus sequences in the blood of children with autism.

In 2010, after concerns arose about his research, the U.K.'s General Medical Council revoked Mr. Wakefield's medical license based on cross-examination of physicians and evidence from 36 witnesses. The council found that he had done invasive research on children without ethical approval, acted against the clinical interests of each child, failed to disclose financial conflicts of interest, and misappropriated funds. In 2010 the Lancet retracted the 1998 paper based on ethical irregularities and other misrepresentations. In 2004, 10 of the 12 authors who joined Mr. Wakefield on that paper explicitly disavowed any link between MMR and autism.

The movie "Vaxxed" mentions none of this. A film that distorts and omits established facts is not a documentary, and any venue screening it is complicit in knowingly misrepresenting science and disseminating misinformation.

If any good has come from it, the MMR controversy has sharpened the scientific community's focus on autism and may lead to insights into the biology of autism and new treatments. But "Vaxxed" contains no such insights. It misinforms parents about safe and effective vaccines that protect children from preventable diseases and distracts from the vital work on autism that lies ahead.

Meanwhile, when "Vaxxed" made its debut at the Angelika Film Center on Friday, a performance that included a Q&A with the director and producer was sold out. The movie will be shown six times daily for a week. In another dismaying sign that the movie's pernicious message still needs debunking, an online petition on Change.org garnered more than 30,000 signatures demanding the movie's reinstatement at the film festival. The wise Mr. De Niro shows no sign of relenting.

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