

Dear Chairman Beard and members of the Senate Education Committee,

I submit this testimony **in opposition to SB 2355**

My name is Dr. Robert Newman. I submit this testimony as a private citizen. I do not speak on behalf of my employer.

I am a biologist with a degree from an Ecology and Evolutionary Biology program (Ph.D. 1987 University of Pennsylvania). I have been on the faculty of the University of North Dakota for 30 years. I taught first semester Introductory Biology for 21 of those years and still teach an upper-level undergraduate course with major content on evolution. Evolution is so fundamental to our understanding of life on Earth that it appears in chapter one of every biology textbook I used or reviewed when I taught Intro. Although this bill is not aimed at higher education, our students get their start in K12 and need to be well-prepared with a foundation that they can build on when they attend college. Even if they do not attend college, it is still critical that they understand what science is, how it works, and how it helps society solve problems and generally make sense of the world. Religion is a different way of sense-making. There are other places students can learn about religious beliefs, but that should not be in a science class. It would be a setback to their progress if students come into that class believing Creationism/Intelligent Design has any validity as a scientific theory or if students were predisposed to be skeptical of evolution because of what they had learned prior to college.

This bill is another effort to inject a religious belief into science education, pure and simple. As such it represents state sponsorship of religion and will be found to be unconstitutional in the courts, as similar legislation has been found for decades. Just as importantly, it would undermine the education of students by claiming a religious belief held as a matter of faith is in any way comparable to scientific knowledge that is based on data and rigorous testing of hypotheses. Intelligent Design is Creationism masquerading as something other than religion. This is well-known and changes nothing about the religious origin of the idea.

I respect the right for everyone to follow their own religious practices, a right afforded by the first amendment, which also establishes that governments shall not impose any religious practice or teaching on anyone. That is what this bill seeks to do. Creationism is a religious belief, associated with a subset of Christianity.

<https://churchlifejournal.nd.edu/articles/the-catholic-church-has-never-had-a-quarrel-with-the-idea-of-evolution/>.

There are questions that science cannot currently answer, such as the origin of life on earth. But however that occurred, which we can date to almost 3.5 billion years ago based on fossilized remains of very early single-cell life forms (bacteria), the diversity of life emerged as a result of evolutionary processes subsequently. This is a well-established scientific principle, supported by multiple lines of evidence.

Evolution is the basis for understanding the diversity of life on Earth and also used in more applied ways that are directly relevant to North Dakota – crop and livestock improvement, combatting pest species and diseases, and medical research (combatting antibiotic resistance, for example).

Science and religion are separate and distinct ways of knowing. Science specifically provides mechanistic understanding of the world and is based on its ability to make and test specific predictions. The benefit of this should be immediately apparent – scientific knowledge is never perfect and is constantly improving, but we have for some time been able to make high quality predictions about storm tracks, earthquakes, and health outcomes of different therapies. Religion makes no specific predictions about anything around us, nor can its tenets be tested. It is a matter of belief, of faith, and serves a very different role in our lives. It is an important and for many people valuable part of the human experience, but it is not a substitute or equivalent to what we can do with science. Religious beliefs such as Creationism or Intelligent Design are not an alternative way of understanding phenomena that we teach in a science class and should not be presented as such. Students and everyone should understand this distinction.

Religion can be the subject matter in a number of disciplines (religion courses, history, social studies), but has no place in any science course.

States have passed laws mandating the teaching of creationism/intelligent design in the past. This has done harm to a state's reputation, making the state appear anti-science, and making it less attractive to high tech industries. Moreover, it has been found to be unconstitutional, and any new laws will certainly be challenged in court, incurring unnecessary and avoidable costs for school districts and the state. According to the [National Center for Science Education](#), “since 1968 U.S. courts have consistently held that "creationism" is a particular religious viewpoint and that teaching it in public schools would violate the First Amendment of the Constitution.”

<https://ncse.ngo/creationism-and-law-0>

<https://ncse.ngo/ten-major-court-cases-about-evolution-and-creationism>

For the good of the state of North Dakota and for the benefit of students in the state, I oppose SB 2355 and I urge you to vote against it.