“Is Evolution Compatible with Christian Faith?”

Opening Statement

Thank you Jamie and the Socratic club for the invitation to be here this evening. And thank you Kevin, for being here tonight; I honor you for standing for the reliability of Scripture as God’s word and I join you in that cause. May God grant us both His grace as we debate this historically divisive topic.

I need to clarify that the opinions I express are not those of the University or the Department of Biochemistry and Biophysics. Also, I note both theology and evolutionary biology are complex topics I gladly admit that my level of ignorance still vastly exceeds my level of knowledge. I live with a lot of mystery and uncertainty in both these areas. I would encourage all listeners to think for themselves, as Scripture advises: “Test everything. Hold on to the good. Avoid every kind of evil” (1 Thess 5:14).

Tonight’s topic is important to me because I am a follower of Christ and I am also a Biochemist, who daily employs the theory of evolution in my work. I see truth in both of these, and I hope that this evening’s dialog will provide food for thought for those who see them in conflict.

Jamie, Kevin, ladies and gentlemen.

SLIDE 1: Does anyone else marvel at the beauty of a sunrise? I do and I praise God for it along with the psalmist “The heavens declare the glory of God; the skies proclaim the work of his hands.” (Ps 19:1) At the same time I accept our knowledge that natural forces, such as gravity, describe how the solar system behaves.

SLIDE 2: In 1633, 90 years after Copernicus published work that the earth revolves around the sun, the Church convicted Galileo of heresy for “following the position of Copernicus that is contrary to the true sense and holy authority of scripture.” For instance Ecclesiastes 1:5 notes “The sun also rises and the sun goes down, and hastens to the place where it arose.” This was taken as clear teaching that the sun moves! Only in 1758, 215 years after Copernicus’ work did the Church remove prohibitions against Galileo’s writings and in 1992, 450 years after Copernicus’ work, Pope John Paul II officially conceded that earth is not stationary. Which was wrong: Scripture or the interpretation of Scripture?
SLIDE 3: The debate tonight is not about the truth of Christianity or the truth of the theory of biological evolution. The debate is about their compatibility, the intersection of faith and science.

SLIDE 4: I will argue tonight that the theory of biological evolution is not only compatible with Christian faith, but Christians may without fear fully embrace evolutionary biology along with the rest of the natural sciences, as a part of humanity’s faithful fulfillment of our call to be stewards of creation (Gen 1:28).

Because this topic is at the intersection of faith and science, my arguments will touch on issues in both faith and science. In this opening statement, I will construct a tour pillars of understanding that do not dictate the conclusion, but that provide a firm foundation to thinking about this question. The four pillars relate to the topics of God, Science, Evolution, and the Bible.
SLIDE 5: Pillar number 1: God - The Bible reveals a God who is crucially involved in both natural and supernatural processes – in everything.

Colossians 1:16-17 says: “For by him all things were created: things in heaven and on earth, visible and invisible, ... He is before all things, and in Him all things hold together.” In Scripture, natural processes like rain, earthquakes, volcanoes, and even the roll of the dice are all attributed to God. According to scripture, God is the sustainer and Lord of all things - the mundane and the miraculous.

SLIDE 6: Consider the physical development of a baby. Our scientific understanding from fertilization through birth is quite extensive. Sperm, egg, two cells, four cells, etc. The first parts can even be done in a test-tube! The scientific description leaves no need for invoking supernatural intervention by God. Yet at the same time I don’t know a single believer who doesn’t see each pregnancy as a tremendous work of God and each baby as a gift. Scripture also is quite clear about God’s involvement: “For you created my inmost being; you knit me together in my mother’s womb. I praise you because I am fearfully and wonderfully made.” (Psalm 139) Think about it… in this very familiar process, somewhere along the line, something not very special – a sperm and an egg – become through God’s invisible touch something special – a person made in God’s image. Is this not a model for so much of life?

SLIDE 7: The first take home message is this: for a follower of Christ, it is NEVER, EVER a question of natural processes OR God. That is a FALSE choice. From a rainy day, to the development of a baby, to Christ’s resurrection from the dead … by faith a Christian believes that God is involved in and sustains them all; all are marked by “the fingerprints of God.” Scientific explanations never rule out God’s involvement… and God being involved in something never rules out that there may be a natural explanation!!
SLIDE 8: Pillar number 2: Science - The domain of natural science is the physical universe and physical mechanisms and processes; conclusions about supernatural/spiritual aspects of reality and things like value, purpose and morality are off limits.

Evolutionary biologist Eugenie Scott put it this way, “we cannot say, wearing our scientist hats, whether God does or does not act.”

SLIDE 9: When observations don’t make sense or fit their theories, scientists conclude “I don’t understand. I wonder what’s going on?” and NEVER “It was a miracle; it must be supernatural intervention!” When physicist and Christian Robert Gentry observed something he thought supported the instantaneous creation of the earth, he wrote in his peer-reviewed scientific publication “It is not clear how polonium halos may be explained on the basis of currently accepted cosmological models of Earth formation.” This is a scientifically sound conclusion. This self-limitation allows science to be a powerful tool shared by people around the globe.

SLIDE 10: This may sound highly limiting, but its not a big deal. In fact, in everyday life we’re all good scientists in this regard: we look for natural explanations for events. Imagine you arrive at work one day and put your coffee and donut down at your desk and go to the bathroom. When you return, you discover your donut is half eaten with teeth-marks no less. What do you say? … “Who ate my donut?!!” And if no one admits eating it, you continue to suspect someone is lying, rather than accept that it was a supernatural event. Even better, consider if you work alone, you would be very confused and think “I wonder what’s going on? This is really weird” and you’d hunt everywhere for an explanation rather than conclude that it was a supernatural event.

SLIDE 11: The take home message from this second pillar is this: EVERY scientific investigation and theory is faith neutral. And scientists are obliged to push for natural explanations. Whether it comes from the mouth of a believer or an atheist NEVER let anyone convince you that any theory from astronomy to evolution is “Godless” or “purposeless”; those are statements of philosophy, not science!! Do not be deceived!
SLIDE 12: Pillar number 3: Evolution - The theory of biological evolution is well-supported mainstream science, not a conspiracy.

According to Merriam-Webster the theory of biological evolution includes “a theory that the various types of animals and plants have their origin in other preexisting types and that the distinguishable differences are due to modifications in successive generations.” In its broadest scale, evolution encompasses lots of ways that variation can be generated, and how variation and selection have been at work over the ages to generate today’s diversity of organisms from what is currently supposed to be an initial living cell. This theory is incredibly powerful in making sense of the enormous amount we know about biology. Of course, the theory still encompasses many, many unknowns and there is much to learn. I’d like to give you a glimpse into one remarkable piece of current evolutionary theory, and how its development involved the same kind of scrutiny and review as other areas of science.

SLIDE 13: In 1967, Professor Lynn Margulis caused a stir by proposing the “Endosymbiont hypothesis” – an idea for how the complex cells of multicellular organisms arose from more simple bacterial cells. This is a huge evolutionary transition: simple bacteria becoming a much more complex cell type. An example of ‘macroevolution.’ Bacteria cells are basically a bag with DNA and other molecules dispersed in it. More complex cells have the DNA in a nucleus and internal factories called mitochondria and chloroplasts. Dr. Margulis proposed that these factories were once free-living bacteria that were engulfed by another bacteria-like cell and over time lost their ability to live independently. A key observation was that the internal factories had their own DNA, divided like bacteria, and had additional properties similar to a modern bacteria that could live inside of other cells. The scientific community was very skeptical about this proposal; it just seemed so far-fetched. Her manuscript proposing this relationship was rejected by about 15 journals before she finally found one that would publish it.

SLIDE 14: Now it is a mainstream part of evolutionary theory. Why? A major reason is that the DNA sequences determined decades later showed that the DNA contained in the factories was closely similar to the certain modern intracellular bacteria. The mitochondrion being most similar to the bacteria that can infect human cells and cause Typhus. Why is that compelling? If you visited ten islands and eight had unique languages but two of them that had 80% of their vocabulary the same, what would you conclude? That the languages on those two islands had a common origin. It’s just a natural inference.

Peer review is a powerful tool, and scientific paradigm shifts undergo a tremendous amount of scrutiny before they are accepted. And even after acceptance they remain targets for being disproven and/or improved on.
SLIDE 15: The take home message from the third pillar is this: the theory of evolution is the result of standard scientific investigation and inference. It’s the same careful process that has given us pasteurization, penicillin, productive agriculture and petroleum products. Like any developing science, it moves forward with fits and starts and aspects of it may be wrong. However, claims that it is a theory in crisis or a conspiracy against God are simply not credible. As a reminder, recalling pillars 1 and 2, the theory of evolution is science and only describes physical mechanisms and relationships; it does not imply anything about values and does not rule out God’s involvement. As a follower of Christ, by faith I see God as the author of evolution.

SLIDE 16: Pillar number 4: the Bible - The Bible is an inspired and inspiring gift from God; His reliable revelation to humanity about spiritual truths we simply cannot discover on our own, but that we need for knowing God, His purposes and ideals.

What scripture claims about its purpose is that it is “able to make you wise for salvation through faith in Christ Jesus. All scripture is God-breathed and is useful for teaching rebuking, correcting and training in righteousness that the man of God may be thoroughly equipped for every good work.” (II Tim 3:15-6). Leading people to salvation and maturity is the big picture of scripture that must never be forgotten!

Holding a high view of scripture demands respecting this self-stated purpose. Scripture never claims about itself that its purpose is to teach scientific facts about the physical world. You won’t find anything in the Bible about the periodic table of elements, sterile technique, or how tides work. Have you ever thought about how much trouble it would have saved humanity if God had provided us with that kind of information! But He didn’t. Instead God gave mankind the ability to reason and called on them to learn about the world and care for it.

Another point crucial to realize about scripture is that to be effective for its purpose, it must be a text that is written in a simple way that can communicate effectively to people across all generations and all cultures. This necessarily leads to simplifications of absolute reality – something theologians call “accommodation.”
SLIDE 17: So now we come to the crux of how the early chapters of Genesis are compatible with evolution. The bottom-line is to recall the purpose: to teach about spiritual realities and relationships. What truths does it teach? The Genesis narrative teaches one all-powerful God as a creator distinct from creation and who created ALL things, the special position of mankind as made in God’s image, the goodness of creation and a God who cares, a charge to be caretakers of the earth, a validation of both hard work and purposeful regular rest, the special relationship between a man and a woman, an explanation for a disrupted relationship between God and man, and a promise of redemption. Each one a timeless truth that comes through loud and clear.

SLIDE 18: Another thing to note is that the poetic form and simplistic descriptions allows Genesis to communicate these truths to people from before the time of Christ all the way through the most scientific society of today! Consider the list of items mentioned in the creation narrative: light and darkness; water and sky; land and plants; sun, moon and stars; birds and fish; and animals and people. If you think about it, this is a pretty good accounting of the categories of things that would be obviously visible to people independent of their education and culture…and the overarching message – God made them all.

I ask you, looking at this slide, does it matter to our spiritual understanding which was created on which day? Which do you think is the important message of Genesis? The specifics of the physical details seen here …

SLIDE 19: or the eternal spiritual truths illustrated here?

SLIDE 20: I offer an analogy. Consider a mother who is asked by her 2-year old where babies come from. She might answer, “Mommy & Daddy love each other, get married, and God gives them a baby.” Note there is nothing about sexual intercourse, nothing about eggs and sperm, nothing about pregnancy, labor and delivery, nothing. And taken scientifically, the details are misleading: it could be the couple does not love each other, and perhaps they are not married, and God does not instantaneously give them the fully developed baby. The answer is designed instead to convey the mother’s values and worldview to the child, not scientific mechanism.

I ask you, should the Mother be branded as untrustworthy for such a technically inaccurate answer? God forbid – she had something much more important in mind, laying a foundation for the spiritual and ethical maturity of her daughter. And she was totally trustworthy to her purpose! Similarly if Genesis is inaccurate about physical details of how life came to be, does that mean the Bible is untrustworthy? God forbid – like the mother, it has much more important messages to convey and is totally trustworthy to its purpose.
SLIDE 21: The take home message from the fourth pillar is this: Scripture’s purpose is to teach spiritual truth. Holding a high view of scripture demands we always respect that purpose, and resist being dogmatic about peripheral conclusions about the physical world that come from a literal reading of the text. Whatever else is true about Genesis, it is a creation poem that provides a framework for foundational spiritual truths. The mechanism is not the message and focusing on mechanism misses the point!

SLIDE 22: These four pillars provide truths about God, science, evolution and the Bible that are foundational to my thinking about this topic: God is involved in everything; science deals only with the physical; evolution is simply good science; and the Bible’s purpose is to reveal spiritual truth we cannot learn on our own.

Based on these four pillars, I trust you can see how I find the theory of biological evolution as not only compatible with Christian faith, but that Christians may without fear fully embrace evolutionary biology along with the rest of the natural sciences, as a part of humanity’s faithful fulfillment of our call to be stewards of creation. I emphasize that this is not a compromise position, but fully affirms the best science of the day and fully affirms the message and purpose of Scripture.

For those saying evolution is not compatible with the Christian faith, I would suggest that what separates us is not whether the Bible is reliable or not; the question is about its interpretation. I ask you, can you be sure know the mind of God so clearly that you are in a position to be absolutely certain that the early chapters of Genesis completely rule out the natural history of our planet that is well-supported by careful science?

SLIDE 23: Already in the 5th century, St. Augustine wrote this warning about interpreting Genesis: “in matters that are obscure and far beyond our vision … we should not rush headlong and so firmly take our stand on one side that, if further progress in the search for truth justly undermines this position, we too fall with it. That would be to battle not for the teaching of Holy Scripture but for our own.”

Let us not repeat the mistake the Catholic church made nearly 400 years ago with Galileo. Let us trust scientists do science and lead us forward in understanding the physical aspects of our world, even while we followers of Christ provide leadership in helping people come to know the spiritual truths we have been fortunate enough to be called to.

SLIDE 24: And all the while we can marvel and give glory to God – “The heavens declare the glory of God; the skies proclaim the work of his hands.” (Ps 19:1)

Thank you.

(The closing statement is on the next page)
Closing Statement

This has been a wonderful opportunity to talk about something that doesn’t get talked about enough. A point of huge tension in the intersection of the Christian faith and our modern culture. A topic that I have personally tussled with for years. Thank-you Jamie for MCing tonight and the Socratic Club for organizing and hosting this event. Thank you Kevin for traveling here to speak compellingly for your position. Thank you ladies and gentleman for your tangible contributions to the evening and for expressing your interest in pursuing truth by being here.

In closing, I would like to note that for me what is most important in life is not my view of origins, but my relationships. Jesus came that we might to receive power to live out the values of love, compassion and justice that He champions. The legacy that matters to me is not scientific discoveries that I make, but how faithful I have been to God’s call to love Him and to share the love I have received with my family and others.

Tonight I have argued using four pillars of truth that God is involved in everything and that science is not an enemy of faith, but a powerful tool giving insight into the physical workings of our universe. The pursuit of science is a major part of fulfilling God’s call to be caretakers of the creation and it has provided us an incredible array of tangible benefits. The theory of biological evolution is one part of the cathedral of scientific knowledge, and permeates and informs all of the biological sciences. It is not a conspiracy. God is certainly capable of having created via an evolutionary process over billions of years or in six literal days less than 10000 years ago, but the Bible’s point is to teach us spiritual truth and not science. To say that the early chapters of Genesis dictate God’s method of creation misses its purpose.

I have a dream that a future generation of Christians will know that there is nothing to fear in the theory of evolution or any pure science and that people of all walks will know that there is nothing in science that forces them to reject the good news that was brought to us in the person of Jesus.

Thank you.