



SCIENCE + FAITH + WISDOM

SAGI:
THE GREATEST
Experiment

CHRONICLE OF THE SAINT ALBERT THE GREAT INSTITUTE



Thematic Issue (Illuminating Life)

SAGI: The Greatest Experiment

Our Mysterious, Glorious & Everlasting Gift of Life

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Words of Wisdom: There is nothing more meaningful for humanity to reflect upon than its own existence, the wondrous nature of family, and how we may understand life as a mysterious, glorious, and everlasting gift from God. In this article published on the inaugural issue of *SAGI: The Greatest Experiment*, it is my hope to unify our noble endeavor with all who are seeking virtuous science, inspiring faith, and encouraging words of wisdom. May our good work provide hope a reality, illuminate the majesty of life, and seek truth for the glory of God.

GOD THE CREATOR OF LIFE AND THE BEGINNING

The first words of Genesis are very profound for billions of human beings who have pondered upon God the Creator of all things, including the gift of life. These words of Genesis powerfully reveal to us that God is the Author and the Inimitable Designer of Life. God creates through His Word, and we are created in His Image. God gives us the ability to think, speak, see, hear, and share life experiences with one another as well as the opportunity to participate in His Divine Life. Among the many Aspects of God is Perfect Love, which illuminates the True, the Good, and the Beautiful. An important vision and purpose of the Saint Albert the Great Institute for Science, Faith & Wisdom will be to convey knowledge and wisdom which illuminates the Truth, Goodness, and Beauty of Life. As stated by Louis Pasteur, *"The more I study Nature, the more I am amazed at the work of the Creator"*. Likewise inspired, SAGI will seek to illuminate the majesty of life.

SAGI's SCHOLARLY QUEST TO ENDEAVOR TOGETHER

The history of the world reflects the efforts of many scholarly achievements that have positively impacted humanity to enable its rise as a civilization. Now, we live during a time which has a great resource of knowledge and educational faculty to enable a scholarly renaissance, embracing God in our quest to understand who we are and what constitutes a good life. Three quotes that may inspire contemplation of such points on knowledge and education include: *"Your Word is a lamp for my feet, a light for my path."* (Psalm 119:105); *"Knowledge is love and light and vision."* (Helen Keller); and *"Education is simply the soul of a society as it passes from one generation to the next."* (G.K. Chesterton). SAGI will focus upon a project which we have entitled *"Illuminating Life!"* to establish a multidisciplinary portfolio of scholarly resources to fortify a God-centric education at all levels and the next generation. May we be inspired by the words of Saint Thomas Aquinas, *"An angel can illuminate the thought and mind of man strengthening the power of vision."*

SCIENTIFIC ODYSSEY PURSUIT OF VIRTUOUS SCIENCE

Throughout the last two millennia, many great discoveries have been made in science that deserve celebration. SAGI will invite expert scholars to share their knowledge of key breakthrough concepts and scientific advancements in this great odyssey. SAGI aims to simultaneously address the underlying bioethical implications of science with both philosophical and theological perspectives. There is nothing more exhilarating than the “eureka moment” to first understand what has not yet been known or demonstrated. Yet, the scientific odyssey must be accountable when great discoveries are not used for good purposes. We must be ready to propose changes to redirect science to do good and avoid harm. SAGI will seek ways for which great science has an alliance with a virtuous purpose to promote the sanctity of life.

Human beings are not God, and there is a need for humility in science (and any scholarly quest). Three quotes that convey such humility include: *“If I have seen further than others, it is by standing on the shoulders of giants.”* (Sir Isaac Newton); *“We don’t know one millionth of one percent about anything.”* (Thomas Edison); and *“The best way to have a good idea is to have a lot of ideas.”* (Linus Pauling). Finally, addressing the determined nature and passion of scientists to embrace virtue, are the inspiring words of Albert Einstein, *“In the middle of difficulty lies opportunity.”* May SAGI support the pursuit of virtuous science as we recognize that God has provided human beings with the gift of intelligence and inspiration to do what is truly good work.

THE GREATEST EXPERIMENT

Scholars may have very different opinions of how to define the word “experiment”. Likewise, the definition of the “greatest experiment” deserves thoughtful analysis in terms of the consequences that may or will emerge because of performing it. Trust and truth are powerful concepts underscoring our relationships with one another. Such are also inherent to science, as there exists powerful technology and know-how to essentially do anything that was once unimaginable only a few years ago. So, may we trust and seek truth in God by the inspiring words of Saint Albert the Great, *“The greater and more persistent our confidence in God, the more abundantly you will receive all that you ask.”* Otherwise, science will be at risk of lacking integrity or being dismissive of veracity as was Pontius Pilate in asking Jesus Christ, *“Quid est veritas?”*.

May we be inspired by God in whatever we do and may we seek to always do good work. The greatest experiment is yet to be achieved. Although we may think of God as the Greatest Scientist and acknowledge life as the Greatest Experiment, God’s Word and God’s Work are not confined to what we may define as the principles of experimentation. God gave humanity the intelligence and abilities to imagine, learn, teach, work, share, pray, love, unite, and behold what might be the greatest experiment. Perhaps, our collective good works for the glory of God may truly constitute the Greatest Experiment? This is my inspired thought to capture your imagination!

DEDICATION OF THE INAUGURAL ISSUE & SPECIAL ACKNOWLEDGEMENTS

This first article and the entire Inaugural issue of *SAGI: The Greatest Experiment* is dedicated to Saint Albert the Great, a multidisciplinary scientist, theologian, and philosopher. This inaugural issue will be focused on the topic of “Our Mysterious, Glorious, and Everlasting Gift of Life”. This inaugural issue will include future articles to be accessible upon editorial review. Thank you to the SAGI Leadership Team, SAGI Scholars, and SAGI Torchbearers who have made special contributions to this inaugural issue through their editing, support, and prayers.



Thematic Issue (Illuminating Life)

SAGI: The Greatest Experiment

Saint Albert the Great: Scientist, Theologian & Philosopher

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Words of Wisdom: "I shall not conceal a science that was before me revealed by the grace of God; I shall not keep it to myself, for being afraid of attracting its curse. What worth is a concealed science; what worth is a hidden treasure? The science I have learned without fiction I transmit with no regret." St Albert the Great, *The Compound of Compounds* [a work on alchemy]

Doctor of the Church

Every Catholic center of learning, however humble, ought to take care to acknowledge the inestimable contributions of those saints who are distinguished by the illustrious title of *doctor of the Church*. Currently the Church recognizes 37 saints as doctors or teachers of the Church.

The doctors of the Church remind us that *God can be known*, even if only in a limited, indeed imperfect way, by the human mind. St Albert the Great, a member of the Order of Preachers, demonstrated, throughout his highly productive apostolate as a scholar and teacher, that God can be known not only through philosophy and theology, but also through the natural sciences. God, after all, is the Creator and Ruler of all things. St Augustine reminds us that every creature therefore bears the traces or "fingerprints" of the Triune God who brought it into being.

A Dominican Friar, Scholar, Professor and Bishop

Today natural scientists, researchers, and indeed all lovers of truth, invoke their patron saint. Albert, now known as "the Great," was a Dominican friar, scholar, professor, and bishop whose life spanned most of the "golden" thirteenth century (1206-1280). As a teacher and mentor of the illustrious St Thomas Aquinas, St Albert was the first to recognize the exceptional brilliance of his fellow Dominican friar. Accordingly, Albert warmly recommended Thomas to the attention of his superiors, thereby advancing the academic career of that towering theological and philosophical mind.

Albert, like his prize student Thomas, enjoyed high social advantages owing to the noble status of his family. He was the eldest son of the count of Bollstädt, a Bavarian title. In fact, Albert was born in the family castle at Lauingen on the Danube, in the duchy of Swabia, southwest Bavaria, Germany.

From his early youth, Albert cultivated an ardent devotion to the Blessed Virgin Mary. Albert shocked his family, however, when he announced his plan to join the Dominicans. The Order of Preachers had received official approbation from the papacy only a decade after Albert's birth, and its friars collected alms through mendicancy. Albert's aristocratic family could scarcely contemplate their beloved Albert joining a band of begging friars.

Nevertheless, Albert persevered in his Dominican vocation, and eventually distinguished himself as one of the foremost theologians of his day. Today this holy polymath is acclaimed as the "Universal Doctor." Albert exercised his teaching apostolate in a wide variety of places: Cologne, Hildesheim, Freiburg im Breisgau, Regensburg, Strasbourg, Paris, and Rome. He even served for a brief period, in the mid-1250s, as personal theologian to the pope. Albert was appointed bishop of Regensburg in 1260 but resigned his see two years later in order to devote himself full time to his teaching and research.

Mentor and Lifetime Friend of Saint Thomas Aquinas

One of the great joys of Albert's teaching career was his discovery of the extraordinary Thomas Aquinas, whom he delighted to teach for four years. An inferior character would have been envious of the great prodigy, and perhaps might even have felt threatened by Thomas' formidable intellect and vast knowledge. Instead, in the tradition of the best educators, Albert did everything he could, in and outside the lecture hall, to foster Thomas' intellectual formation. Albert welcomed the younger Thomas as a colleague and as a friend. Their friendship ended with the death of St Thomas in 1274.

Patron Saint of Sciences and Many Written Works About the Natural Sciences, Logic, Metaphysics, Theology, and Sacred Scripture

Albert himself played a prominent role at the Second Council of Lyons in 1274. He died at Cologne on 15 November 1280 after suffering a loss of memory and a subsequent steep decline in health. Some today speculate that he suffered from a form of dementia not unlike Alzheimer's disease.

By the time of his death, Albert the Great had published 38 books on topics that included biology, botany, human and animal physiology, mathematics, physics, chemistry, alchemy, mineralogy, geography, and astronomy, as well as logic, metaphysics, theology, and sacred Scripture.

Albert brought to his study of theology a great love of the natural sciences; hence after Pope Pius XI canonized him and declared him a doctor of the Church in 1931, his successor, Ven. Pius XII made St Albert the heavenly patron of the natural sciences. Owing to his astounding array of interests and expertise he now enjoys the epithet of "universal doctor."

The Hand of God in All Wonders of Nature and Inspiring Faith of Scientists

It is good for us to see, as Albert so eminently did, the hand of God in all the wonders of nature, for it was the hand of God which formed all things and brought them into being. For Christians there is no quarrel or conflict between faith and science. Contrary to the positions of skeptics and fideists alike, faith and reason are not mutually exclusive. Indeed, truth itself is the aim and the governing principle of both faith and reason.

The Church prays that scientists may see the hand of God at work in the creation which, in His mystery, He has summoned into existence. The more diligent the scientist, the more

attentive he or she must be to the overwhelming mystery of all that God has called into being. Divine mysteries certainly excel our understanding, but they do not contradict it. We therefore should apply ourselves with diligence and zeal to all the branches of learning available to us. If we are attentive to what our eyes see and our ears hear, we may well discover more profoundly the God who sustains everything in being and who wants us to come to the knowledge of Him and to be drawn into His eternal love.

The Logo of Wisdom that Reflects Virtue, Truth, and Torchbearer for All

The logo of the St Albert the Great Institute features a half-length portrait of St Albert framed by a hexagonal prism, rather like a window. The hexagonal window suggests the cell within the comb of a honeybee, a creature known for its industry and associated with perennial wisdom. Both virtues aptly reflect the character of Albert the Great. Emerging from this symbolic window, the saint wears the white tunic and black cloak of the Dominican habit and is crowned with the miter of a bishop. With the quill in his right hand he transmits his thoughts in a book, emblematic of his scholarship, while his left hand holds aloft a torch of truth, in the light of which Albert carried out his research. Not only does the saint use the torch for his own purposes; he extends it for the benefit likewise of the viewer. This gesture exemplifies the motto of the Dominicans: *Contemplare et contemplata aliis tradere* [to contemplate and to hand on to others the fruits of contemplation].

The torch alludes to a wondrous vision closely associated with the origins of the Dominican Order. In sacred iconography, St Dominic Guzman (1170 to 1221), the founder of the Order of Preachers, is frequently depicted with the hagiographical attribute of a dog bearing a torch in its mouth. Sometime before Dominic's birth, his mother, Bd Juana of Asa, had a dream in which she gave birth to a dog which ran through the world with a flaming torch in its mouth. Disturbed by this dream, Juana sought guidance from the abbot of the monastery of St Dominic of Silos. The abbot interpreted Juana's dream as a message that the child that she was to bear would bring the light of the Christian gospel throughout the earth. The Order of Preachers came to be nicknamed "the hounds of the Lord" [*Domini canes*], who, like untiring sheep dogs, would protect the Lord's flock from error and enemies of the Faith.

St Albert the Great, in his day, took up the torch of Truth [*Veritas*, another Dominican motto], entrusted to him by his ecclesiastical superiors. Lovers of the Truth can themselves participate in the apostolate of the St Albert the Great by bearing the torch of Truth in their respective missions, projects, and endeavors. Living in and by the Truth ennobles every human enterprise. Moreover grace, which is a sharing in the divine life, elevates each work to the level of the supernatural.

Under St Albert the Great's influence, torchbearers can themselves grow in wisdom, knowledge, and holiness while sharing the light of Truth with colleagues, partners, and students. Albert's example of industry, fidelity, and sanctity may inspire creativity and joy in the investigation of Truth in a variety of areas, while his heavenly intercession may fortify us in persevering in the path of virtue and ethical responsibility.



Thematic Issue (Virtuous Science)

SAGI: The Greatest Experiment

What is Virtuous Science?

James Brown, Ph.D.

SAGI Director, Virtuous Science

Words of Wisdom: All of us should strive to be virtuous in our work. Proverbs tells us “The just walk in integrity” (20:7), but the complexities of the modern world and science can make this walk both confusing and challenging. What does it mean to do virtuous science? We examine the definition of virtuous science in different contexts and review how various religious groups think of the concept. We are called to think, study, and pray to discern the best moral path for our scientific work and the goal of the St. Albert the Great Institute is to support those who seek to elevate virtuous science.

A HUMBLE APPROACH TO VIRTUOUS SCIENCE

The Saint Albert the Great Institute (SAGI) has an incredibly bold, aspirational mission that both inspires and humbles me. I am honored to participate as the Director of Virtuous Science, and I have been occupied by a particular part of the mission — the “cultivation of the virtues of science”. As we begin our journey, we must seek to understand what we mean by virtuous science. It is my hope that as the Institute grows, we will continually examine our mission, what it means in the world, and how best we can fulfill it.

As is often the case when I begin to think about a topic, I quickly realize that I'm not as smart about virtuous science as I thought I was. The simplest concept is often the best place to start, so I humbly began with the dictionary definition of “virtue”. The common theme in definitions is the concept of a standard, whether of morality, excellence, social value, or other similar desirable quality. A standard requires judgment; either a behavior or object achieves a standard or it does not. Achieving as a standard may not be a purely binary question and a hierarchy may exist: some behaviors or objects are closer to the standard than others. As we begin to think about virtuous science and the basic definitions of the words, we immediately find ourselves counter to the culture. Judgment is often regarded as bigotry, and standards a means of oppression. If the definition of the concept itself elicits a hostile reaction, we can only imagine the challenge of pursuing it — hence the need for the SAGI!

A TREK FOR WAYS TO DEFINE VIRTUOUS SCIENCE

An increasingly popular step these days in researching a topic is to ask one's favorite artificial intelligence. I asked Microsoft Copilot “What is the definition of virtuous science?” and it dutifully provided the following response:

Virtuous science refers to the application of **moral and intellectual virtues** within the realm of scientific practice. These virtues play a crucial role in shaping scientific theories and methodologies.

Relative to this definition, one may delve into this concept further to define the moral and intellectual virtues with respect to science as follows:

1. **Moral Virtues in Science:**

- **Honesty:** Upholding truthfulness and transparency in research.
- **Integrity:** Adhering to ethical standards and avoiding misconduct.
- **Open-mindedness:** Willingness to consider diverse perspectives.
- **Fairness:** Treating colleagues and subjects equitably.

2. **Intellectual Virtues in Science:**

- **Testability:** The ability to subject hypotheses to empirical testing.
- **Empirical Accuracy:** Ensuring that scientific claims align with observed data.
- **Simplicity:** Favoring simpler explanations when multiple options exist.
- **Unification:** Striving for theories that unify diverse phenomena.
- **Consistency:** Avoiding contradictions within a scientific framework.
- **Coherence:** Ensuring internal logical consistency.
- **Fertility:** The capacity of a theory to generate new insights and hypotheses.

These above virtues guide scientists in their pursuit of knowledge, ethical conduct, and the advancement of human understanding.

These all seem like reasonable virtues that one would want to guide one's "scientific practice." There is certainly overlap with Judeo-Christian concepts from the Ten Commandments (thou shalt not bear false witness) and the deadly sins (e.g., pride, envy). Armed with a general definition of virtue as well as a starting point for specific virtues applied to science, the next step, common to any scientific endeavor, is to understand what prior work has been done in the field.

Microsoft Copilot's definition of virtuous science did not include references to any work in the field, and it was limited to essentially dictionary definitions. I took an "old school" approach and did a simple internet search on "virtuous science", and the results provided me with helpful websites. These included [The Virtuous Scientist Project](#) at the University of Notre Dame. The admirable goal of the "project is to develop a program to ensure scientists in training are made aware of the intellectual virtues during their undergraduate and graduate education." Their focus on intellectual virtues explicitly presented in their list of exemplars and course descriptions — attentiveness, carefulness, courage, honesty, humility, open-mindedness, thoroughness, tenacity, and wonder — is more concerned with what Copilot would call intellectual virtues and less concerned on the moral virtues. This is likely because moral virtue would be addressed more generally in other courses and departments at an institution like the University of Notre Dame.

There are several other sources that discuss virtuous science. The journal [Science and Engineering Ethics](#) is "an international, multidisciplinary journal dedicated to exploring ethical issues associated with science and engineering, covering professional education, research and practice as well as the effects of technological innovations and research findings on society." An article from this journal, "[Developing a Scientific Virtue-Based Approach to Science Ethics Training](#)", addresses intellectual virtues along the lines of *the Virtuous Science Project*. A more recent publication "[How Do Scientists Perceive the Relationship Between](#)

Ethics and Science? A Pilot Study of Scientists' Appeals to Values", although citing values, focuses on the *conduct* of scientific research. "Virtue and the Practice of Science: Multidisciplinary Perspectives" is a collection of essays that examine virtues through time, "everyday" considerations, scientific education, virtue frameworks, and looking to the future. Like the *Virtuous Scientist Project* and *Science and Engineering Ethics*, its focus is on intellectual virtues and how science is executed.

While SAGI is not exclusively Catholic, its namesake reveals the Catholic influence on its founding and current membership. The most notable group of Catholic scientists is the Society of Catholic Scientists (SCS). Less than a decade old, "The Society of Catholic Scientists is an international organization founded in June of 2016 to foster fellowship among Catholic scientists and to witness the harmony of faith and reason." The SCS further states:

The Society of Catholic Scientists is an answer to the call of Pope St. John Paul II that "*members of the Church who are active scientists*" be of service to those who are attempting to "integrate the worlds of science and religion in their own intellectual and spiritual lives."

In supporting its mission, SCS articles published on its website are mainly apologetic in nature. They address topics such as extraterrestrial intelligence, evolution, and transubstantiation. This is certainly in the realm of virtuous science, as all virtuous scientists should defend the faith and use their talents to show the harmony between God's creation and what we discover when we seek to understand it.

SAGI's mission "cultivates the virtues of science" and is aligned within the moral and intellectual virtues as defined by Copilot and faithfully pursued by groups such as *The Virtuous Science Project* and the Society of Catholic Scientists. Also, SAGI's mission "advances the power of faith and proclaims the truth, all for the glory of God" and therefore extends beyond these definitions of virtue. Copilot's virtues and the groups pursuing them focus on *how* science is done; they do not address *what* science should do. In the context of the virtuous science that SAGI pursues, questions will not be limited to how experiments are conceived, developed, and executed or how data is collected, interpreted, and presented. SAGI will also ask the most challenging questions — what experiments should be conducted and what data should be generated.

One organization that addresses the question of what science should do is the National Catholic Bioethics Center (NCBC) which "provides education, guidance, and resources to the [Catholic] Church and society to uphold the dignity of the human person in health care and biomedical research." The NCBC focuses on the practice of medicine and provides ample resources to support moral and ethical decisions in biomedical research. Another resource is the journal *First Things*, which describes itself as "America's most influential journal of religion and public life" and publishes insightful articles on the morality of scientific advances that can inform the conscience. SAGI will "create a renaissance of science and faith" by synthesizing these and similar resources together with the expertise, experience, and devotion to God of its members into new ideas, collaborative discussions, and original publications that engage the scientific community. SAGI will directly address the hard questions, like "What should we be doing to give glory to God?"

There is no more important moral imperative than acknowledging the value of God's highest creation, human life. All decisions must be made in the context of this highest value. Navigating scientific advances and cultural forces to make the wisest moral decision is complex and often requires careful consideration of many factors that can overwhelm

individuals who must make decisions. Recent controversies regarding *in vitro* fertilization (IVF) show the conflict between a desire to have a family (a moral good), and a method that achieves it which invariably results in the killing of embryos (a moral evil). Scientists can face more nuanced decisions — if a product or service one is developing can be used for IVF or other immoral purposes, but can also be used for virtuous intentions, is it morally permissible to create it? Karyotyping is commonly used to examine chromosomes for abnormalities. A Catholic colleague of mine worked for a company that did this testing, and he knew that in most cases the information would be used by parents to decide whether to abort a child. Yet, he was just running a test and providing data. What is his moral obligation? He eventually quit his job as the moral implication was too much to bear.

The Church has provided some advice on these topics that can apply to scientists, such as the Vatican document "Instruction *Dignitas Personae* on Certain Bioethical Questions." In the case of using biological material of illicit origin, the document addresses "people of good conscience involved in research" and their "duty to refuse to use such "biological material" even when there is no close connection between the researcher and the actions of those who performed the artificial fertilization or the abortion." It further states "in organizations where cell lines of illicit origin are being utilized, the responsibility of those who make the decision to use them is not the same as that of those who have no voice in such a decision." To coin a phrase, the devil is always in the details. How does one make the proper moral decision when faced with a research project, selling a service, or a collaboration with colleagues that involves material of illicit origin?

A SPECIAL MESSAGE

The purpose of SAGI is to elevate virtuous science. We will address all these questions and more, supporting those who face them and those who may suffer because of their decisions. SAGI members will help one another and provide witness to truth, goodness, and beauty in science. A mainstream cultural answer to the question "*Quid est veritas?*" is often "*Non est veritas*". Contrary to this nihilistic proclamation, SAGI will instead stand with Saint Albert the Great and with Jesus Christ as He proclaims, "*I am the Way, the Truth, and the Life.*" (John 14:6).



Thematic Issue (Virtuous Science)

SAGI: The Greatest Experiment

Virtuous Science Requires More Virtue in the Experiment

James Brown, Ph.D.
SAGI Director, Virtuous Science

Words of Wisdom: The effort we put into work and career is important and fixed—effort spent on one task is effort not spent on another task. We must devote some effort to understanding what it means to be virtuous in science, and not blindly put all of our effort into the work of science, regardless of the impact on our career.

“It is not how much we do, but how much love we put in the doing.” (Mother Teresa)

Mother Teresa’s quote takes the cliché “it’s quality, not quantity” to the appropriate level. Success in our culture is almost always expressed in terms of some measured value provided for others—money, fame, prestige, etc. With money, you have provided economic value; with fame, you have provided value that results in people noticing you; with prestige you may have provided advice, knowledge, or leadership. Typically, the value created is in some way a function of the effort expended, but not always—someone could have a flash of brilliance that produces an idea that is very valuable. Mother Teresa turns these standards inside out, dismissing the quantity of value in favor of emphasizing the love put into generating the value. Love is willing the good of the other, so this should be the most important aspect of what we do. A drug dealer provides value to the drug user, but does not do so in love. Before we even undertake an enterprise, in our case scientific discovery and application, we must ask, are we doing so in love?

In my prior article we examined what virtuous science is, what are the appropriate moral and intellectual virtues, and how groups including SAGI approach the topic. We said SAGI will directly address the hard questions, like “What should we be doing to give glory to God?” To do this, we need a worldview and framework upon which we can base our answers to these hard questions. This worldview has to be based on love, and the framework a Christian and Catholic set of ethics. A competing worldview that has captured much of the culture and many scientists, almost by definition, is scientism. According to Wikipedia, “Scientism is the view that science and the scientific method are the best or only way to render truth about the world and reality.” I won’t debate here the arguments against scientism, as others have already eloquently done so, including Bishop Robert Barron ([Why the Supposed Conflict between Science and Religion Is Tragic Nonsense](#)). A properly formed conscience

based on love and Christian and Catholic doctrine is the first step to answer these hard questions.

Scientific and technological advances occur with ever increasing speed and impact. Our incredibly connected world can disseminate ideas and improvements rapidly—who would have thought “going viral” would be used to describe ideas in addition to dangerous viruses? The moral issues and decisions we face are driven by an incredibly complex set of circumstances that can seem overwhelming. It has become increasingly difficult to evaluate our options and assess the impact of our work to ensure our actions are consistent with our worldview and align with our ethics. Yet, we cannot simply throw up our hands and surrender to the conclusion that the impact of our work or how others will use it is “not our problem,” absolving ourselves of any responsibility. We must do everything in our power to make decisions based on “how much love we put in the doing.”

All of us are under tremendous pressure to deliver value in our professional lives. In science, as in many areas, this leads to ever increasing specialization, as we endeavor to develop expertise that results in value creation. Within a particular discipline, like science, this can lead to myopic thinking that limits creativity and entrepreneurship. In his article “The dangers of overspecialization in academia” from Big Think, writer Mike Colagrossi states “People that are overspecialized in one discipline begin to take on an arcane and esoteric view of their subject” ([The dangers of overspecialization in academia - Big Think](#)). Efforts to encourage cross disciplinary work and collaboration are important and many organizations and professional associations make this a priority.

In addition to limiting progress in the subject matter itself, an “arcane and esoteric” view can limit our ability to put our work in the broader context of what gives glory to God. On the opposite end of the spectrum, executing standard tasks without much thought, seeing our work as a cog in a larger machine about which we know little, can likewise prevent us from seeing the broader context. An extreme example is the Manhattan project in which, due to secrecy, many workers had no idea what they were working on or how it would be used ([WWII's atomic bomb program was so secretive that even many of the participants were in the dark](#)). Secrecy concerns may make this situation unavoidable, but even in these cases one must consider the impact of one's work. For example, if one is working on a confidential project within a large organization and that project could be used for an immoral purpose, e.g., facilitating abortion, one cannot ignore the possibility—ignorance is not bliss, it's moral risk. We have a responsibility to understand, to the best of our ability, the implications of our work, and must put in the time and effort to do so.

Once we understand the impact and possibilities of our work, we face an often even more daunting task of determining how to move forward. In the context of these complex, confusing, and often contradictory questions, developing a properly formed conscience is not easy, and also requires time and effort. There are many resources

available, including groups and individuals with expertise and experience that can provide advice and counsel. All this requires study. In addition to limiting our viewpoint, the drive toward specialization does not provide us the time and resources to pursue these questions. The current focus on science, engineering, technology and mathematics (STEM) fields often leaves little room for theology, philosophy, and ethics. It is more important to spend at least some time on these than becoming 1% better at a specialized field. Those pursuing STEM degrees often complain about liberal arts degree requirements in history, English, and philosophy. Many are questioning the value of the four-year degree and pursuing focused education resulting in a certification of competence in the field. This emphasis on specialization has replaced the notion of the well rounded “gentleman” or the Renaissance man. In his book “Ideas Have Consequences”, published in 1948 with amazing prescience about the moral challenges we face today, Richard Weaver puts it well:

By far the most significant phase of the theory of the gentleman is distrust of specialization. It is an ancient belief, going back to classical antiquity, that specialization of any kind is illiberal in a freeman. A man willing to bury himself in the details of some small endeavor has been considered lost to these larger considerations which must occupy the mind of the ruler. The attitude is well expressed in King Philip’s famous taunt to his son Alexander, who had learned to perform skillfully on the flute: “Are you not ashamed, son, to play so well?”

Being “ashamed...to play so well” is unheard of in our culture—I would go so far as to say many wouldn’t even understand the concept. Our culture is “lost to...larger considerations”. Educational paths can vary, but any path that eliminates subjects required to inform moral and ethical decisions is unacceptable.

All career advice recognizes that rapid technological advancement requires “lifelong learning” and there are many books, courses, and mentors that provide guidance. We should take the same attitude toward moral and spiritual development. The Saint Albert the Great Institute exists to encourage and inspire everyone to appreciate creation and our part as co-creator of a world that gives glory to God. All career advice also recognizes the importance of good habits and consistent practice, which should be applied to the moral as well as the technical. Aristotle makes this case in *Nicomachean Ethics* 1103b:

We become builders...by building, and we become harpists by playing the harp. Similarly, then, we become just by doing just actions, temperate by doing temperate actions, brave by doing brave actions.

Just as we aspire to improve our technical skills and advance our careers, we should cultivate an even greater aspiration to improve our moral skills and advance our holiness.

As we seek to develop the moral character and attitudes to navigate our scientific professions, the journey must start with prayer and right praise of God. This can seem counterintuitive—what does singing at Mass on Sunday have to do with a decision to work with human embryonic stem cells? Right praise of God puts “first things first” and recognizes that the highest value and duty we have is praising God. Time spent in praise, whether singing poorly as part of the congregation or painting the ceiling of the Sistine Chapel, is time spent not doing other things. It is a recognition that man does not live by bread alone, but by every word from God. Pursuing the elimination of human suffering and the extension of life are noble pursuits, but they are not the *summum bonum*, the highest value. Prayer and praise inform our decisions by recognizing that at all times, in all places, and in all circumstances, God is the highest value. This allows us to forego a promotion or delay progress on a life-saving treatment if it compromises higher values.

In addition to devoting time to prayer, we must devote time to understanding what it means to do virtuous science in our specific situation and consider it a pragmatic skill for daily life for which we must develop aptitude. We face complex questions for which there are no easy answers, and those of good conscience can often come to different, even opposite, conclusions. We need to solicit counsel from trusted colleagues who share our desire for virtue and spend time in study and discussion. SAGI seeks to provide some of this through the collegiality of its volunteers and to the community at large through the content on its website. The importance of imitating those with virtue is described by Plato in his *Republic*, in which Socrates (395c-d) states:

if [the young guardians of the Republic] imitate anything, they must imitate right from childhood what is appropriate for them—that is to say, people who are courageous, moderate, pious, free, and everything of that sort.

We are all in awe of God's creation and pursue science because of our love of the field and its potential to help us all lead happier, healthier lives. We are driven by our responsibilities to provide for our families and care for one another. We are motivated to sacrifice our time and energy to understand biology, chemistry, physics, and mathematics to achieve goals that benefit our families and communities. Although a contradiction of sorts, we do virtuous science when we spend less time on science and more time on prayer and forming our conscience to make the best decisions with God as the *summum bonum*. This is the path to true success: “Entrust your works to the Lord, and your plans will succeed.” (Prov. 16:3).



Thematic Issue (Inspiring Faith)

SAGI: The Greatest Experiment

March the Month of Saint Joseph

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Words of Wisdom: The month of March is dedicated to St Joseph, the chaste spouse of the Blessed Virgin Mary and the foster father of our Lord Jesus Christ. Little is known about this humble carpenter from Nazareth who placed himself completely at the service of the Virgin Mother and her divine Son. The few details of St Joseph's life and mission recorded in sacred Scripture are limited to the Infancy narratives in the Gospels of Matthew (1:16-25; 2:13-23) and of Luke (1:27; 2 *passim*; 3:23).

A CARPENTER OF ROYAL LINEAGE & HEAD OF THE HOLY FAMILY

Although descended from King David, and, therefore, of royal lineage, St Joseph did not enjoy the luxuries that his royal background might have suggested and perhaps even warranted. Joseph led his life in the obscurity of the northern region of Galilee, not in the religious and political hub of Jerusalem. He labored as a carpenter and builder by the sweat of his brow and the skill of his hands. Joseph's unique vocation was to serve as a chaste spouse for the Virgin Mother of God, Mary Most Holy, and as the putative father of Jesus Christ, the Son of God who was conceived by the power of the Holy Spirit.

As the head of the Holy Family at Nazareth, St Joseph strove to provide daily sustenance and secure shelter for his sacred charges. According to the divine economy or plan, Jesus and Mary were the very reasons for Joseph's existence, and, consequently, they formed the center of his life. He lived for them and rejoiced in their presence. This daily familial contact with Jesus and Mary afforded Joseph ample fruit for contemplation and constituted a constant source of singular grace for him, the dedicated servant.

Despite Joseph's industry and diligence, the Holy Family was not affluent. At the time of the great census decreed by Caesar Augustus, Joseph went with Mary to Bethlehem for the enrollment, they had to settle for a stable as their lodging (Lk 2:4-17). When it came time to present the Christ Child in the Temple at Jerusalem, the Evangelist Luke points out (Lk 2:24) that St Joseph provided a pair of turtle doves – the offering of the poor.

OBEDIENCE TO DIVINE WILL & PATRON SAINT OF THE CHURCH

The Gospel of Matthew records that St Joseph surrendered at once to the Divine Will, by relocating from Israel to Egypt in order to rescue the Child Jesus from imminent peril to his life (Mt 2:13-15). This meant uprooting himself altogether from his cultural heritage and personal history as well as undertaking the daunting task of reestablishing himself personally and professionally in a foreign and often hostile land. Nevertheless, Joseph sought first the Kingdom

of God, and he took the Child Jesus and His Holy Mother to Egypt, until he was told in a dream about the deaths of Herod and those who had sought the life of the Infant Savior.

A "lover of poverty" and a "model of all who labor," as he is acknowledged in his Litany, St Joseph displayed the humility that God loves and rewards abundantly. Like his namesake, the patriarch in Genesis (37; 39-50) whom Pharaoh appointed viceroy of Egypt, St Joseph was placed by God at Nazareth as "lord of His household and Prince over all His possessions" (Ps 104/105:21). In 1870, Bd. Pope Pius IX (r. 1846-1878) extended this scriptural analogy by declaring St Joseph the principal patron saint of the Church. By this official proclamation, Pio Nono implored the protection of St Joseph's intercession for the universal Church at a time when the hostile forces of the Risorgimento threatened the spiritual and temporal authority of the Church in the Italian peninsula.

St Joseph enjoys two feast days on the liturgical calendar. His principal feast occurs on 19 March. Since this feast nearly always falls in the penitential seasons of Lent or Passiontide, the Church offers a second feast, that of St Joseph the Worker, which takes place in the Easter Season. This latter feast ranks of the first class in the classic form of the Roman rite. In the calendar revised in 1969, St Joseph the Worker is observed as an optional memorial.

A SPECIAL MESSAGE

As a model of the interior life, St Joseph is aptly invoked during the season of Lent, when the Church prepares for the celebration of the paschal mystery of Our Lord Jesus Christ. His quiet meditation on Jesus and Mary encourages us keep these figures before our eyes in prayer and to follow them faithfully on our pilgrimage through Lent to the Easter season, flowing with milk and honey.



Thematic Issue (Inspiring Faith)

SAGI: The Greatest Experiment

St. Anthony of Egypt, Abbot, Confessor (250-356)

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Words of Wisdom: In a church building crowded with many members of the faithful, the Gospel is proclaimed before, and heard by, most of the congregation. Nevertheless, there may be a few people in that gathering who hear something in the Gospel or the homily that they had never before noticed or heard in quite the same way. By some mystery of God's generous grace, they hear the words of the Gospel speaking to them in a personal and direct way, such that they had never before experienced. Consequently, significant conversions take place amidst the sacred liturgy.

A RICH YOUNG MAN WHO WAS GREATLY INSPIRED BY CHRIST'S WORDS

One such conversion to a deeper Christian life took place when a young man of eighteen years named Anthony, who was from a wealthy and highly prosperous family near Memphis in Egypt, walked into church one day and heard from the pulpit the words of Our Lord: *"If thou wilt be perfect, go, sell what thou hast, give the money to the poor; and come follow me. And thou shalt have treasure in heaven."* These words originally had been spoken to a rich young man who, sadly, turned away from the Divine Master's challenge and invitation. The full account occurs in Matthew 19:16-26.

However, the rich young man Anthony heard those words as though the Lord had addressed them directly to him. Anthony had been considering for some time the dialogue between Christ and the rich young man in reference to his own situation. When Anthony heard these words being proclaimed as he entered the church on this occasion, he took it as a confirmation of a generous impulse stirring within him. He now knew that he had to answer this calling, this vocation.

Anthony's parents had died six months earlier, leaving Anthony and his younger sister orphans. Anthony was now responsible for both raising and educating his sister. He therefore entrusted her to the care of nuns in a local convent and provided for her future. As for himself, Anthony left his comfortable world, sold his land and property, and went out to the edge of his city to live on his own.

He lived first in a cemetery to test whether he could endure a life of loneliness. There he faced terrible temptations, particularly of the flesh. The constant reminder of the shortness of life provided by the tombs in the cemetery helped him to overcome these trials. In a vision, an angel encouraged Anthony to persevere and to live in great austerity. Anthony prayed the

psalms faithfully each day; he ate only bread and water once a day; he slept on the bare ground.

Eventually, by 285, Anthony opted for greater solitude and moved to an abandoned fort on a nearby mountain. For twenty-five years he led a life of prayer and peaceful solitude holding fast to a strict routine and diet. Other like-minded men who heard of Anthony's austere lifestyle came to live at the base of the mountain and ascended it to ask the saint for advice. These men formed the first Christian monastic community in the year 305, just as the persecution of Diocletian was distressing the Church. They took vows of poverty, chastity, and obedience to their spiritual father Anthony, who served as their first abbot.

The great doctors of the Church recognized in simple souls like that of St. Anthony of Egypt, “manifestations” or “epiphanies” of Christ’s life in their own day. They identified within the saints living “icons” or “images” of Christ present in the world.

A KINDRED SPIRIT OF ANTHONY — ST ATHANASIUS OF ALEXANDRIA

St Athanasius of Alexandria (296-373), the great champion of Catholic orthodoxy against the threat of Arianism, found within Anthony of Egypt a kindred spirit in terms of his love of theological orthodoxy and his zeal for holiness. Athanasius intuited, moreover, the peculiar genius of Anthony for living the religious life not just as an anchorite, but as a leader of other monks. Athanasius, who himself suffered exile from the See of Alexandria no fewer than five times, sought out Anthony in one of these periods; Athanasius invited Anthony to confront a gang of Arians with no preparation other than that which Anthony's austere life of prayer and spiritual reading of the canonical Scriptures (especially the Psalms and the Gospels) already afforded.

Athanasius was delighted by the way that this simple and humble man, Anthony, defeated the sophistries of the Arians by sharing with them the insights he had received directly from God Himself. Spiritual authors refer to this kind of knowledge as *docta ignorantia* – ignorance informed or instructed by divine grace and insight. Anthony was without formal education and worldly wisdom. Yet, from his very youth he had surrendered himself completely and without reserve to the life of contemplation and asceticism, dwelling in the wilderness away from the hurly-burly of social life and temptations to tepidity and corruption.

Anthony transitioned from life as a hermit to a monk in community, and, ultimately, as an abbot, who was sought out by many for spiritual advice and counsel. This likely was never Anthony's original plan for his own life. He merely allowed God's Will and the needs of the Church to direct his path.

Anthony lived to a ripe old age; he died on 17 January 356 at age 105. His biographer St. Athanasius points out, for the benefit of those who fear mortification and ascetic practices, that Anthony was in excellent physical condition at the time of his death. His regularity of life and ascetic diet had only enhanced his health; they did not impair it.

Athanasius' *Life of Anthony* served for centuries as the standard manual for ascetics, and ushered in a genre of hagiography which was imitated by St. Jerome for St. Paul the Hermit, by St. Gregory the Great for St. Benedict of Nursia, and by St. Bonaventure for St. Francis of Assisi. Each of these doctors of the Church pointed to simple souls taught by the Holy Spirit as the best examples of the highest holiness.

THE INSPIRING LIVES OF THE SAINTS AND AN OPPORTUNITY TO BECOME LIVING BRANCHES OF SO GREAT A VINE AS CHRIST (JOHN 15:1-11)

The lives of the saints serve as great resources of information and, moreover, inspiration. It is a worthy custom to read the life of a saint each day of the calendar year in order to both grow familiar with our forebears in the faith and be inspired by their example to do the will of God in our own personal circumstances. Butler's *Lives of the Saints* remains quite popular, but scholars, particularly of the Middle Ages, will profit by a yearlong reading of James of Voragine's *Golden Legend*.

Lent affords readers an ideal occasion to select the biography of a saint for deeper consideration. St. Athanasius' *Life of Anthony* remains a classic that every student of Catholic culture ought to read. Like Anthony himself, the biography is simple and straightforward. Athanasius wrote it in plain language. For centuries Christians have been reading this life of a saint by a saint with insight and great spiritual profit. Athanasius points out that, after the lapse of twenty years in the desert, "Anthony was 'thoroughly immune to the vanities of the world, like a man unswervingly governed by reason, established in inner peace and harmony.'"

Anthony did indeed find treasure in heaven and left an outstanding example of the joy found by one who listened to the voice of the Lord and who allowed Christ to lead him on a path scarcely planned by himself, a path leading to the riches of the life of God. Anthony did not fear death. By mortification and that spiritual discipline known as *ascesis*, he had died daily to himself, and had lived exclusively for God's good pleasure. With even a fraction of such detachment, Christians today can likewise overcome their deepest fears, and live peacefully in the palm of God's hand. Then they become living branches of so great a Vine as Christ (cf. John 15:1-11).

FURTHER READINGS ON SAINT ANTHONY

The Life of Anthony by St Athanasius is easily obtained online at New Advent. A convenient hard copy is *Athanasius: The Life of Anthony and Letter to Marcellinus*, Edited by Robert C, Gregg (New York: Paulist Press, 1980).



Thematic Issue (Inspiring Faith)

SAGI: The Greatest Experiment

St. Fidelis of Sigmaringen

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Words of Wisdom: *"I came to refute your errors, not to embrace them; I will never renounce Catholic doctrine, which is the truth of all ages, and I fear not death" (1).* Such were the words of St. Fidelis shortly before his martyrdom at the hands of the Church's enemies. While his executioners strove to forever silence him by the sword for preaching the Faith, St. Fidelis continues to be a witness to the truths of Christ's one Church by the history of his holy life and death, even centuries after his martyrdom. *"Precious in the sight of the Lord is the death of his saints,"* declares the Psalmist (2), and this is strikingly evident in the deaths of the martyrs who, like St. Fidelis, offered themselves so completely as witnesses to the truth. However, speaking of a holy death in general, many of the saints have remarked that only those who have lived well may reasonably hope to likewise die well. Faithful to God unto death, St. Fidelis understood and lived by the aforementioned truth, and he shows us by his example how imitation of Christ during our lives is the best preparation for our deaths. An exceptional source for learning about saints like St. Fidelis is Reverend Alban Butler's *The Lives of the Fathers, Martyrs, and other Principal Saints*; thus, it is this work which I have chiefly employed in writing this article.

PHILOSOPHER AND ADVOCATE

Mark Rey, who would later be known as St. Fidelis, was born in Sigmaringen, Germany, during the latter half of the 16th century. As a young man, when he undertook his studies of philosophy and law at the University of Freiburg, he began to be recognized among his peers for his virtuous life, especially for his humility, purity, and spirit of mortification. Filled with fraternal charity, our saint sought not only to live a holy life himself but also earnestly desired the sanctification and edification of his friends. In faithfully imitating the ultimate Exemplar of virtue, Jesus Christ, Rey was a holy example to those who encountered him. Joining prayer with the intellectual life, he became a teacher of philosophy at the University of Freiburg and, eventually, began working as a skilled advocate in law (3).

CAPUCHIN FRIAR AND PREACHER OF THE WORD OF GOD

As careful as our saint was in observing justice in every aspect of his work as an advocate, it is not surprising that he quickly became dismayed with the evil dealings and practices of others in his profession. Author Reverend Alban Butler describes the incidents which became a turning-point in Mark Rey's career: *"[T]he injustices of a colleague in protracting lawsuits for gain, and his finding fault with our saint for producing all his proofs for his clients in the*

beginning, in order to the quicker dispatch, gave him a disgust of a profession which was to many an occasion of sin..."(4). Rey soon resolved to leave his worldly occupation behind and devote himself entirely to the service of God, entering the religious life as a friar of the Order of Capuchins, a branch of the Franciscan Order. At the beginning of his novitiate, his superior chose for him the religious name of *Fidelis* (Latin for "faithful") — a meaningful, if not prophetic, allusion to the fidelity to God by which Rey strove to live and which would culminate in his future martyrdom (5). Father Fidelis, who was already known for his great love and generosity for the poor, and having himself embraced a life of poverty as a Capuchin friar, desired that the entirety of his possessions be given to those in need. For example, he bequeathed his inheritance to the poor students of a seminary. It is said that even before he became a friar, his compassion for the poor was such that he did not hesitate to clothe them with his own attire (6) — a work of charity reminiscent of Our Lord's words: "Amen I say to you, as long as you did it to one of these my least brethren, you did it to me"(7). Having completed his studies of theology, Father Fidelis became superior of the monastery of Weltkirchen. In the surrounding area of this monastery, his preaching and apostolic labors bore much fruit, for he won many souls over to Christ and His Church (8).

MISSIONARY AND MARTYR

Father Fidelis did not remain at the monastery of Weltkirchen. He was sent to Switzerland as a missionary, as the heresies of John Calvin had become widely-accepted among the Swiss people. Father Fidelis was accompanied by several other Capuchin priests whom he prudently directed in their specific missionary duties (9). Father Fidelis knew very well the dangers of the work he was undertaking and the likelihood of his missionary efforts terminating in his martyrdom. However, despite death threats and the indignation of the Calvinists at the arrival of the missionaries, Father Fidelis, ready to sacrifice all for the glory of God and the salvation of souls, went forward courageously to his new mission. His labors were not in vain, for many souls were converted at his preaching — so many souls, indeed, that the heretics whose hearts were hardened against conversion became outraged with the missionary's constant success, and they came to a resolution to put an end to his holy work. At this point, remarks Rev. Alban Butler, "*The holy father . . . thought of nothing but preparing himself for his conflict, passing whole nights in fervent prayer before the blessed sacrament, or before his crucifix, and often prostrate on the ground*"(10). On April 24, 1622, being then forty-five years old, Father Fidelis encountered a group of Calvinist soldiers on the road during his travels in Switzerland. Having called him a false prophet, they admonished him to become a Calvinist (11). Faithful to God, and full of fortitude, the saint replied: "*I came to refute your errors, not to embrace them; I will never renounce Catholic doctrine, which is the truth of all ages, and I fear not death*" (12). A soldier then struck Father Fidelis upon the head with a sword, but the holy Capuchin, having fallen, lifted himself to his knees, "and stretching out his arms in the form of a cross, said with a feeble voice: '*Pardon my enemies, O Lord: blinded by passion they know not what they do. Lord Jesus, have pity on me. Mary, mother of Jesus, assist me*'"(13). Father Fidelis received his eternal reward shortly thereafter, having been further assailed by the Calvinist soldiers. Three hundred and five miracles have been associated with his intercession, and six months after his death his body was found to be incorrupt.(14)

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Thematic Issue (Inspiring Faith)

SAGI: The Greatest Experiment

St. Louis IX of France

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Words of Wisdom: *"In the old pagan proverb about kings being philosophers or philosophers kings, there was a certain miscalculation, connected with a mystery that only Christianity could reveal. For while it is possible for a king to wish much to be a saint, it is not possible for a saint to wish very much to be a king. A good man will hardly be always dreaming of being a great monarch; but, such is the liberality of the Church, that she cannot forbid even a great monarch to dream of being a good man." (G.K. Chesterton, in St. Thomas Aquinas) (1).*

A YOUNG AND HOLY MONARCH

Thirteenth-century Paris was home to such acclaimed figures of sanctity and learning as St. Albert the Great, St. Thomas Aquinas, and St. Bonaventure: holy friars and devoted theologians, vowed to poverty and lives of self-denial, who would all eventually be raised to the altars of the Church as saints. Not far from the university in which they studied and taught, however, lived another holy man — neither a friar nor a theologian — under the roof of the palace of the French monarchy. Could one have suspected that the name of this man, who wore the crown of the king of France, would become immortal, not only in the annals of the French monarchy, but also in the Holy Catholic Church as a canonized saint — an intercessor in heaven and an example of righteous living for Christians everywhere?

St. Louis IX sprang from the royal Capetian dynasty of France. His father, King Louis VIII, died in 1226, bequeathing the throne to his young prince who was then twelve years old. Queen Blanche of Castile, Louis IX's mother, acted as regent for her son; meanwhile, she saw to his education, directing him carefully in Christian virtue (2). Her instruction was deeply impressed upon his memory: throughout his life, Louis often brought to mind his mother's admonitions, especially "that [she] had sometimes told him that she would rather he died than that he committed a mortal sin" (3). During Louis' childhood, Queen Blanche took him regularly to the chanting of the Divine Office and to hear sermons preached on feast days (4). Louis would continue to hold great esteem for the Divine Office throughout his life, remaining faithful to its daily recitation (5).

Having come of age to rule, Louis applied himself diligently to the duties of a monarch. He is described as having possessed a peaceful and humble disposition as well as having been a valiant and tireless leader. Amidst his numerous cares, he maintained a joyful spirit and was known for his generosity toward the poor and suffering. "He was extremely humane and very agreeable in conversation," notes Reverend Alban Butler (6). He was the devoted husband of Queen Margaret of Provence and an exemplary Christian father to their many children (7).

"THE GREATEST KING FRANCE EVER HAD"

"Extraordinarily devout," remarks historian Warren H. Carroll, "a dutiful son and a loving husband and father, St. Louis was by any reasonable standard the greatest king France ever had, whose life and holiness cast a luster on the French monarchy..." (8). If Louis received great spiritual strength and divine light during his reign, it is because he sought such graces from God in prayer and strove to correspond with them. Notwithstanding the many political cares which pressed him daily, the holy king spent several hours each day in prayer and attended Holy Mass with piety and recollection (9).

Louis was particularly devoted to praying for the souls in Purgatory: of the two Masses he usually attended daily, one was a Requiem Mass (Mass for the Dead). Additionally, in private, he and a priest recited the Office of the Dead together each day (10). Although the hours Louis spent in prayer were never to the detriment of the execution of his duties as king, there were some people who nevertheless complained of the amount of time he spent in his devotions: "He only answered, that if he employed that time in hunting, tournaments, gaming, or plays, they would not take so exact an account of the time which he lost at them" (11).

THE RELIC OF THE CROWN OF THORNS

It is a noteworthy detail that the history of St. Louis and his reign is intimately tied with the relics of Christ's Passion. Louis and the country under his governance were blessed with a truly extraordinary gift: the relic of Christ's crown of thorns. The relic was given to Louis by Emperor Baldwin II "in gratitude for [Louis'] great largesses to the Christians in Palestine, and other parts of the East..." (12). Entrusted to two Dominican friars for its transportation, the crown of thorns was brought to France and received by the king with great ceremony. Louis, not content with the St. Nicholas chapel of his palace as the lasting residence of this sacred gift, initiated an ambitious and costly undertaking: the construction of the famous Sainte-Chapelle, with its soaring Gothic architecture and ornate walls of stained-glass windows. It would become a suitable sanctuary in which the relic of the crown of thorns, as well as other relics of Christ's Passion, would be kept (13).

Louis, in his great reverence for the relics of the Passion and in his care to provide for them a proper and respectful place for their veneration, demonstrates what importance he held for the exterior respect and honor of holy objects, as well as for the value of frequent remembrance and meditation upon Christ's Passion and Death. The sanctuary of

Sainte-Chapelle became a favored place of prayer for Louis; thus, “the holy king, when he resided at Paris, used to spend a considerable part of his time [in Sainte-Chapelle], and sometimes to pass whole nights in it in prayer...” (14).

PARAGON OF THEOCENTRIC GOVERNMENT IN CHRISTENDOM

Not only did King Louis himself serve as a model Christian, but his reign, likewise, became a paragon of theocentric government. Civil government ought to assist, rather than hinder, man in attaining his last end, which is God; thus, it is imperative that a sovereign always have this ultimate, supernatural end in view. Regarding this important truth, St. Thomas Aquinas, a friend and consultant of St. Louis, wrote the following:

Therefore, since the beatitude of heaven is the end of that virtuous life which we live at present, it pertains to the king's office to promote the good life of the multitude in such a way as to make it suitable for the attainment of heavenly happiness. That is to say, he should command those things which lead to the happiness of Heaven and, as far as possible, forbid the contrary (15).

A faithful son of Holy Mother Church, King Louis took great care to promote what things would help direct his people to heaven and to prohibit those things which would lead them away from God. He preserved and augmented Christendom in France, built numerous churches and monasteries, and always sought justice and peace in his political dealings. Louis absolutely forbade all blasphemy in his kingdom, illegalized the practice of usury, and worked to ensure justice was maintained in the relationships between lords and vassals (16).

Louis, dedicated to the cause of regaining the Holy Land for Christendom, participated in two crusades in his lifetime, the second of which would be the occasion of his death. Though his first crusade was ultimately unsuccessful, the king's courage and determination were exemplified in the countless hardships he faced during those times — not the least among them being the grave illnesses he faced, as well as his imprisonment by the Saracens (17). Such was Louis' conduct that “[t]he very sight of his devotion and piety was a moving sermon; forty Saracens at Acre were by it converted to the faith all at once...” (18).

Louis was prepared to sacrifice his life for the interests of Christendom, and, although on many occasions during his crusades he came very close to martyrdom, another kind of death was destined for him. In Africa, during Louis' second crusade, many of the soldiers in the camp of the Christians contracted fatal illnesses, and thus many deaths ensued (including the death of John Tristan, one of Louis' sons). The king himself soon fell ill with dysentery, and less than a month later, at the age of fifty-five, he received his eternal reward in heaven after a holy death (19). Moreover, as Abbot Guéranger says:

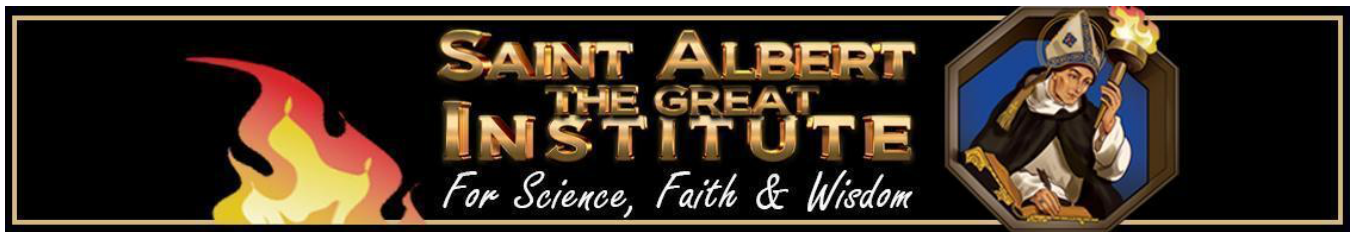
Louis's death was like his life, simple and great. God called him to Himself in the midst of sorrowful and critical circumstances, far from his own country, in that African land where he had before suffered so much; these trials were sanctifying thorns, reminding the prince of his most cherished jewel, the sacred crown of thorns which he had added to the treasures of France (20).

A FINAL NOTE

As we consider the present state of affairs in the world — especially with regard to the failure of leaders in helping direct the people of their respective countries towards their supernatural end — we may reflect with illumining hope upon the moral uprightness and thoughtfulness by which leaders such as St. Louis governed their nations. Certainly, though, as we are experiencing what seems to be nothing less than a continual devolution of society's observance of even the most basic moral principles, we must pray and work fervently toward a return of the societal reign of Christ the King. It is only by worldwide recognition of Christ's sovereignty that order and justice can be restored.

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Thematic Issue (Inspiring Faith)

SAGI: The Greatest Experiment

St. Hildegard von Bingen – Abbess & Scientist

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Words of Wisdom: In the lives of the saints, we may easily find inspiring and admirable examples of men and women who shared similar states of life, professions, or interests with ourselves. Canonized scientists of the past, such as St. Hildegard (d. 1179) and St. Albert the Great (d. 1280), exemplify the harmony which may exist between a holy life and the pursuit of scientific understanding. Although certainly not all persons are meant to embrace the cloistered life of St. Hildegard or the mendicant and episcopal life of St. Albert, nevertheless, both these saints demonstrate a theocentric approach to science that is imitable by Catholic scientists of all states of life.

THE REALITY OF THINGS: NATURAL & SUPERNATURAL

“There are more things in heaven and earth, Horatio, / Than are dreamt of in your philosophy” (Shakespeare, *Hamlet, Prince of Denmark*, 1.5.175-176).(1) Hamlet’s assessment of the reality of things, both natural and supernatural, which exceed the comprehension of man, appropriately expresses the limits of human knowledge. Indeed, Sacred Scripture poses the questions:

Who hath numbered the sand of the sea, and the drops of rain, and the days of the world? Who hath measured the height of heaven, and the breadth of the earth, and the depth of the abyss? Who hath searched out the wisdom of God that goeth before all things? (Ecclus. 1:2-3 [D-R])(2)

Although the mysteries of the natural world and the mysteries of the supernatural are beyond human comprehension, this certainly does not prevent us from making efforts to advance our understanding of both natural and supernatural truths. St. Hildegard von Bingen, doubtlessly as intrigued about the mysteries of the natural world as any scientist may be, was additionally a saint, mystic, and theologian. As a Catholic scientist, she exemplifies the truth that the Catholic faith and right reason are by no means in opposition. This is a lesson for modern man, in an age so steeped in naturalism (the denial of the existence of the supernatural), for the one God is the Creator of all things.

STUDENT & BENEDICTINE NUN

At the beginning of the twelfth century, the glorious monastery of Disibodenberg stood mightily on German soil, nestled near the Nahe and Glan rivers. Its holy Irish founder and namesake, St. Disibod, had long ago planted the seeds of what became a flourishing community of Benedictine monks and the home of one of Germany’s most renowned saints and mystics, St. Hildegard von Bingen.(3)

The tenth child of noble parents, Hildegard, at the age of eight years, was entrusted to the care and instruction of a young lady named Jutta, who occupied a small dwelling attached to the Disibodenberg monastery. Within this recluse's cell, in a rural atmosphere of monastic silence, Hildegard was given a modest education by her instructor: for example, she learned to read and recite the Psalms in Latin, and she was taught how to play the decachord, a ten-stringed musical instrument.(4)

When Hildegard came of age, she desired to remain at the monastery of Disibodenberg and become a nun within the small group of female religious which began to form an important part of the monastery. She received the habit of the Benedictine Order, and, despite her sickly constitution, she subjected herself as far as possible to the strictness of the Benedictine Rule, whose motto is *ora et labora* (pray and work).(5) Therefore, her days were characterized by the chanting of the Divine Office in choir, the application to manual labor and study, and the living in common with the other nuns.

ABBESS & FOUNDRRESS

After the death of Jutta in 1136, Hildegard, being about forty years old, was elected abbess of the monastery—doubtless owing both to her sanctity as well as her natural aptitudes.(6) Hildegard governed her nuns with great maternal care, seeing to their progress in the virtues of religion. Although her responsibilities as superioress were numerous, Hildegard “seemed still to live always in the presence of God, always united to God, always conversing interiorly with God,”(7) while at the same time attending with prudence to the spiritual and physical needs of the souls under her charge.

As Hildegard's community continued to grow under her direction, she decided to move her nuns from the monastery of Disibodenberg to a new establishment: the convent of Rupertsberg near Bingen. Such an exploit met with numerous difficulties, but God granted the establishment of the new convent, which was located approximately fifteen miles from Disibodenberg.(8)

MYSTIC & PROPHETESS

From a young age, Hildegard was a prophetess and visionary. Her most well-known writing of mysticism is *Scivias*, which was the work of ten years. In this book, Hildegard recounts her visions of heaven and earth and records many of her prophecies, a considerable number of which have an eschatological character.(9)

The “*Scivias*” represents God on His Holy Mountain with mankind at its base; tells of the original condition of man, his fall and redemption, the human soul and its struggles, the Holy Sacrifice of the Mass, the times to come, the son of perdition [the Antichrist] and the end of the world. The visions are interspersed with salutary admonitions to live in the fear of the Lord.(10)

Notably, St. Bernard of Clairvaux, a celebrated Benedictine reformer and contemporary of Hildegard, undertook an investigation of Hildegard's spirit of prophecy; he, among others, became convinced of its divine origin.(11) Hildegard herself gave a description of the gift of prophecy she received and how, when a child, she was surprised that others were not endowed with the same gift:

...I saw much, and related some of the things seen to others, who would inquire with astonishment, whence such things might come. I also wondered and during my sickness I asked one of my nurses whether she also saw similar things. When she answered no, a great fear befell me. Frequently, in

my conversation, I would relate future things, which I saw as if present, but, noting the amazement of my listeners, I became more reticent.(12)

ADVISOR, SCHOLAR & SCIENTIST

The collection of Hildegard's letters is as extensive as it is varied; she kept correspondence with both religious and secular dignitaries: "[T]he Wiesbaden manuscript contains letters to and from [Popes] Eugene III, Anastasius IV, Adrian IV, and Alexander III"(13) as well as correspondence with figures such as Emperor Frederick Barbarosa and King Conrad III. St. Bernard of Clairvaux, numerous bishops, superiors of monasteries, and priests and religious of all ranks likewise corresponded with Hildegard.(14)

Hildegard is known not only for her spiritual wisdom and sound advice, but also for her wide range of scientific and other academic interests, as expressed in her many writings. In *Physica*, a book she wrote about the natural sciences, Hildegard treats of numerous subjects including medicine, zoology, mineralogy, botany, and entomology. Further, as historian Régine Pernoud observes, "Only two medical works are known that are written in the West in the twelfth century: both are works of Hildegard. She compiled a veritable encyclopedia of her age's knowledge in Germany, in the field of natural sciences on the one hand, and in that of medicine on the other."(15)

Among Hildegard's other writings, we may mention biographies of Sts. Disibod and Rupert, as well as a commentary on the Rule of St. Benedict. She even developed a secret language known as *lingua ignota* for use among her nuns. Hildegard also cherished an especial love for music and singing: a collection of seventy of her Latin hymns and musical compositions is extant.(16) These musical works may be heard today on classical radio stations, and they are also available in various media formats, such as CDs and MP3 files.

THE DEATH & LEGACY OF HILDEGARD

After a long life of much labor in the service of God, Hildegard died peacefully in the presence of her spiritual daughters on September 17th, 1179, at the age of eighty-two years. Although, regrettably, many of the details of her death had not been recorded, an account has been preserved of several miracles of healing that occurred at Hildegard's tomb through her intercession.(17)

St. Hildegard, like a subsequent holy German scientist, St. Albert the Great, demonstrates the value and importance of directing our studies, knowledge, and talents toward the One from Whom we have received all things: God. St. Hildegard's life remains a great source of encouragement for Catholic students and scholars everywhere who strive to make generous efforts toward sanctity in their respective states of life, and who thus offer their application to study and academics for the greater glory of God.

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Thematic Issue (Inspiring Faith)

SAGI: The Greatest Experiment

St. Louis Bertrand: Apostle of the New World

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Words of Wisdom: God will bring about the greatest good in ourselves and in others if we are pliable in the Hands of Divine Providence and are open to doing His Holy Will in all things. St. Louis Bertrand, in a spirit of humility and docility, devoted himself to accomplishing God's Will, no matter what kinds of sacrifices and sufferings it entailed. Thus, not only did he become a means by which God brought about many blessings, but he also found the greatest happiness and fulfillment where it alone can be truly found: in God's Holy Will.

A SAINTLY CHILDHOOD

St. Louis Bertrand, born on January 1, 1526, was the eldest of nine children in a Catholic family in Valencia, Spain. The son of a royal notary, there seemed to be nothing about Bertrand, nor about the circumstances of his childhood, that would indicate that God destined him to become one of the greatest missionaries of the New World. While a young child, however, Bertrand began to dedicate himself to the service of God, applying himself seriously to prayer and mortifications, such as fasting and sleeping on the floor (1). Under the guidance of his spiritual director, Bertrand often visited the hospitals of Valencia, and he found great joy in helping tend to the sick (2).

ASPIRANT TO THE ORDER OF PREACHERS

When Bertrand was fifteen years old, he developed a desire to join the Order of Friars Preachers, also known as the Dominican Order, of which a relative of his, St. Vincent Ferrer (d. 1419), had been a prominent member and who continues to be a great intercessor in heaven (3). Indeed, it was no coincidence that, as an infant, Bertrand had been baptized in the same font in which St. Vincent Ferrer had been baptized many years earlier (4); Divine Providence likewise arranged that the Dominican monastery to which Bertrand applied was the same monastery in which his holy predecessor had dwelt (5).

Bertrand's first attempt at joining the Dominican Order met with difficulty: his father, wishing to keep him at home, argued that young Bertrand was an unsuitable candidate for the religious life because his delicate health would pose an insurmountable obstacle to his fulfilling the daily demands of life at the monastery. The prior agreed to this, and Bertrand was refused entrance to the community (6).

Although this denial was an occasion of great sorrow for Bertrand, he did not lose his aspiration to become a Dominican; thus, he waited patiently for the prior's term of office to expire, in the hopes that a subsequent prior would be willing to admit him into the community.

In the meantime, the friars allowed Bertrand to be an altar server at the monastery and to tend to their garden. When the time came for a new prior to be elected, the choice of the community fell on Fr. John Mico, a gifted theologian who spent his childhood as a poor shepherd (7). Notwithstanding Bertrand's poor health, Fr. Mico was convinced that God willed Bertrand to embrace the religious life in the Dominican Order. Fr. Mico promptly accepted the young candidate into the community "and conducted the fervent novice in the path of true virtue by the love of the cross and humiliations, the contempt of earthly things, and the exercises of obedience, humility, and charity" (8).

PRIEST AND NOVICE MASTER

In 1547, Bertrand was ordained to the priesthood by St. Thomas of Villanova (d. 1555), an archbishop and member of the Order of St. Augustine (9). Bertrand's soul was penetrated with the realization of the holiness of Mass; further, to prepare himself to say Mass, he often spent several hours in prayer beforehand. Additionally, his reverence and recollection at the altar was striking to all who saw him, and he often wept while saying Mass (10).

Bertrand is said to have possessed a certain angelic quality about his countenance and a radiance which shone especially in his eyes (11). "In demeanour he was grave and apparently without any sense of humour, yet withal possessed of a gentle and sweet disposition that greatly endeared him to those with whom he came into contact" (12).

The Order of Friars Preachers, as its name denotes, is devoted to the study of divine truths and their transmission to others by preaching. Thus, Bertrand, as a Dominican friar, was expected both to become well-versed in theology and to develop competence in public speaking. "While he could lay no claim to the great intellectual gifts and ripe scholarship that have distinguished so many of the saints of the Dominican Order, [Bertrand] applied himself assiduously to study, and stored his mind with the sacred truths expounded in the pages of the 'Summa'" (13). Further, although Bertrand naturally faced difficulty in preaching, through perseverance he eventually surmounted such an obstacle, and his sermons became very successful (14).

Bertrand's virtues did not go unnoticed by his superiors: about three years after his ordination to the priesthood, he was appointed Master of Novices. As such, his responsibilities primarily consisted in the formation, instruction, and correction of the new members, or novices, of the monastery. When speaking with the novices under his charge, Bertrand sought to instill in their hearts a spirit of self-denial in order to embrace perfectly the will of God in all things; he likewise encouraged them to strive perseveringly for union with God by prayer and other good works (15).

MISSIONARY TO SOUTH AMERICA

An epidemic, which began to afflict the people of Valencia, became an occasion for Bertrand to apply himself again to the care of the sick—a work he so cherished in his childhood. With his own hands he buried the bodies of those who died of the plague, and he also encouraged others to perform such corporal works of mercy (16).

After the plague had ceased, Bertrand approached his superiors with a request for permission to preach the Gospel to the yet-unevangelized tribes of America (17). His superiors consented, and he was informed that he would be sent to New Granada (18). In 1562, accompanied by another Dominican friar, Bertrand began his journey across the ocean,

quickly converting the ship's sailors to a holy life by his example and preaching (19).

Having reached the New World, Bertrand and his companion took up residence at the Dominican friary of the province of Golden Castile. To prepare himself for his missionary work among the pagan tribes, Bertrand practiced fasting and other bodily penances, asking God for the graces necessary for his preaching to be successful (20). As he assessed the state of affairs in South America, Bertrand soon realized that he was about to face exceptionally difficult circumstances in his missionary labors: "It was very unpromising. The people were devil-worshippers. They lived in a country almost impossible of access, and they spoke a medley of languages that seemed impossible for Europeans to understand"(21).

Despite all such obstacles, God suited the holy missionary to undertake the work to which he had been assigned. Although Bertrand preached in Spanish to the Indians, they miraculously understood his words in their own language (22). Further, his efforts in evangelizing were so successful that the number of souls who received baptism after hearing his preaching is estimated to have been approximately 25,000 in the span of seven years (23). Bertrand traversed mountains and jungles to reach those to whom he would bring the Gospel. Among the many wonders which surrounded Bertrand and his works, it is recorded that he raised the dead, restored sight to the blind and hearing to the deaf, had the spirit of prophecy, and was miraculously preserved from several attempts on his life (24).

PRIOR AND REFORMER

In 1569, at the order of his superiors, Bertrand left South America and sailed back to Valencia. He was assigned to the position of prior in two Dominican monasteries consecutively. As prior, Bertrand sought to bring about a reform of his monastic communities, which had grown somewhat lax in their practices, so that they would again embrace the strict observances of the Dominican Order (25).

Bertrand became a friend, confidant, and advisor of the famous reformer of the Carmelite Order, St. Teresa of Avila. When Teresa confided to Bertrand her plan of reforming the Carmelite Order, he assured her that God certainly willed it, and he prophesied that within fifty years the Carmelite Order would become one of the most exalted Orders in the Church (26).

Bertrand spent his last years preaching to the people of Spain. His sanctity of life and sound judgment were such that he was consulted even by Spanish government officials (27). Although his fame spread throughout the country, and he was often lavished with praises, Bertrand preserved humility of heart and sought only the glory of God (28).

A HOLY DEATH

During the last two years of Bertrand's life, he continued preaching in Spain despite the sicknesses and fevers which afflicted him. However, on one occasion, as he was preaching in the cathedral of Valencia, he fell gravely ill and was carried from the pulpit to his deathbed. Bertrand, surrounded by all the friars of the monastery, "appeared cheerful at the approach of death, having foretold the very day to several friends in secret, almost a year before"(29). Bertrand died on October 9, 1581, at the age of fifty-five years (30).

A MODEL FOR ALL CATHOLICS

Although the imitation of many of St. Louis Bertrand's deeds—especially of his extensive missionary labors in South America—is outside the scope of most priests and faithful, nevertheless, his humility, docility, and trust in God's ineffable Wisdom is a worthy and imitable example for every Catholic. As exemplified in the life of St. Louis Bertrand, God suits each of us for the particular vocations which He has chosen for us, despite all apparent obstacles and difficulties. By humbly following the will of God in all things, St. Louis Bertrand became an effective instrument through which Divine Providence brought about the conversions of many souls. The French Trappist and spiritual author, Dom Chautard, O.C.S.O., reflects on the truth that, through prayer, souls can receive great strength from God, despite their weaknesses:

The immense labors accomplished, in spite of precarious health, by a St. Augustine, a St. John Chrysostom, a St. Bernard, a St. Thomas Aquinas, or a St. Vincent de Paul amaze us. But we are still more astonished to see how these men, in spite of their almost unceasing work, kept themselves in the most constant union with God. Quenching, more than others, their thirst at the source of life, by contemplation, these saints drew from it the most unlimited capacity for work (The Soul of the Apostolate) (31).

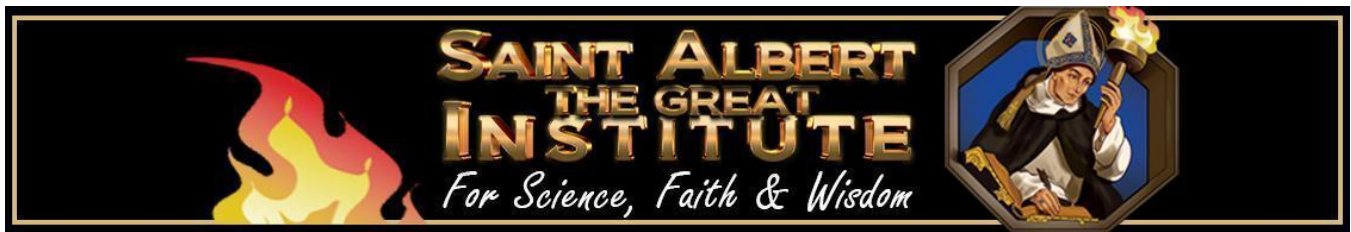
Although Dom Chautard does not mention St. Louis Bertrand by name, nonetheless, Bertrand is certainly in the great company of the aforementioned saints, for he, too, suffered from poor health and, despite this, brought about a tremendous amount of good. Indeed, "the weak things of the world hath God chosen, that he may confound the strong.... That no flesh should glory in his sight" (1 Cor. 1:27, 29 [D-R]) (32).

As evinced in the lives of the saints, God is often pleased to work some of His greatest designs through those instruments which to man seem only insufficient and weak, that all glory be given to His Holy Name.

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Thematic Issue (Seeking Wisdom)

SAGI: The Greatest Experiment

Seeking Wisdom at the Crossroads of Science, Faith & Truth

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Words of Wisdom: *Wisdom is a gift from God. Here we contemplate wisdom in pursuits of virtuous science, inspirational faith and unwavering truth, to help humanity to do good works for the glory of God.*

WISDOM AS A GIFT FROM GOD

Wisdom is one of the seven gifts of the Holy Spirit given to baptized people alongside understanding, counsel, fortitude, knowledge, piety and fear of the Lord (1,2). The seven gifts complement the twelve fruits of the Holy Spirit, which are charity, joy, peace, patience, kindness, goodness, generosity, gentleness, faithfulness, modesty, self-control, and chastity (2). Whereas the gifts are described as permanent *dispositions* in us to do good works, the fruits are the *effects* of living a good life. These dispositions to do good are called virtues. Thus, wisdom, the first of the seven gifts of the Holy Spirit, is moreover an intellectual and moral virtue. For the wise person works towards understanding the first principles (metaphysics) of life, reflecting on and exercising the vocations to love of God and neighbor.

Wisdom not only captivates the human imagination, imparting creative genius, but it also instills spirituality – a sense of seeing more clearly the sacraments or signs of God in life. In fact, Wisdom proper has been personified as the literal breath of the power of God (Wisdom 7: 24-25). Within the Old Testament of the Bible, there are seven “wisdom books”: Job, Psalms, Proverbs, Ecclesiastes, Song of Songs, Wisdom, and Sirach. Within these passages we see wisdom described, and we learn some means to gain wisdom as well as promulgate it.

Blessed is the one who finds wisdom, and the one who gets understanding. (Proverbs 3:13)

For the Lord gives wisdom; from his mouth come knowledge and understanding. (Proverbs 2:6)

The mouth of the righteous utters wisdom, and his tongue speaks justice. (Psalm 37:30)

The fear of the Lord is instruction in wisdom, and humility comes before honor. (Proverbs 15:33)

The fear of the Lord is the beginning of wisdom; all those who practice it have a good understanding. His praise endures forever! (Psalm 111:10)

When pride comes, then comes disgrace, but with the humble is wisdom. (Proverbs 11:2)

By insolence comes nothing but strife, but with those who take advice is wisdom. (Proverbs 13:10)

I turned my heart to know and to search out and to seek wisdom and the scheme of things, and to know the wickedness of folly and the foolishness that is madness. (Ecclesiastes 7:25)

Let the wise hear and increase in learning, and the one who understands obtain guidance. (Proverbs 1:5)

Listen to advice and accept instruction, that you may gain wisdom in the future. (Proverbs 19:20)

For wisdom is better than jewels, and all that you may desire cannot compare with her. I, wisdom, dwell with prudence, and I find knowledge and discretion. (Proverbs 8:11-12)

This also comes from the Lord of hosts; He is wonderful in counsel and excellent in wisdom. (Isaiah 28:29)

Complementarily, in the New Testament, we find explicit mentioning of wisdom in the Letters of Saint Paul and the Gospels of the Evangelists. These verses further describe how wisdom comes from the triune God, as requested from the Father, bequeathed through the Holy Spirit, and perfectly manifest in the Person Jesus Christ, who is the "Way, the Truth, and the Life" (John 14:6):

If any of you lacks wisdom, let him ask God, who gives generously to all without reproach, and it will be given him. (James 1:5)

That the God of our Lord Jesus Christ, the Father of glory, may give you the Spirit of wisdom and of revelation in the knowledge of him. (Ephesians 1:17)

And we impart this in words not taught by human wisdom but taught by the Spirit, interpreting spiritual truths to those who are spiritual. (1 Corinthians 2:13)

And because of Him you are in Christ Jesus, who became to us wisdom from God, righteousness and sanctification and redemption. (1 Corinthians 1:30)

For I [Jesus Christ] will give you a mouth and wisdom, which none of your adversaries will be able to withstand or contradict. (Luke 21:15)

Let the word of Christ dwell in you richly, teaching and admonishing one another in all wisdom, singing psalms and hymns and spiritual songs, with thankfulness in your hearts to God. (Colossians 3:16)

And so, from the day we heard, we have not ceased to pray for you, asking that you may be filled with the knowledge of his will in all spiritual wisdom and understanding. (Colossians 1:9)

The wisdom from above is first pure, then peaceable, gentle, open to reason, full of mercy and good fruits, impartial and sincere. (James 3:17)

Walk in wisdom toward outsiders, making the best use of the time. Let your speech always be gracious, seasoned with salt, so that you may know how you ought to answer each person. (Colossians 4:5-6)

Everyone then who hears these words of mine [Jesus Christ] and does them will be like a wise man who built his house on the rock. (Matthew 7:24)

Beyond the scriptures, a Doctor of the Church and student of St. Albert the Great, namely St. Thomas Aquinas, wrote extensively on wisdom in his *Summa Theologiae*, describing how wisdom is practical in that it directs human action according to Divine standards. Because human standards are imperfect and often fail, it is essential to pray for wisdom to seek out God.

With enduring wisdom, St. Thomas offers this prayer for students:

***Come, Holy Spirit, Divine Creator, true source of light and fountain of wisdom!
Pour forth your brilliance upon my dense intellect, dissipate the darkness
which covers me, that of sin and of ignorance.
Grant me a penetrating mind to understand, a retentive memory,
method and ease in learning, the lucidity to comprehend,
and abundant grace in expressing myself.
Guide the beginning of my work, direct its progress,
and bring it to successful completion.
This I ask through Jesus Christ, true God and true man,
living and reigning with You and the Father, forever and ever.***

Therefore, we ought to seek wisdom in our day to day lives. We should pray to exercise the gift of wisdom daily in all that we say and do. For wisdom reflects the Divine Life. In this lens, a reflection from the Worldwide Call to Prayer from Cardinal Raymond Burke (<https://novena.cardinalburke.com>) expounds upon wisdom as the most perfect of the gifts of the Holy Spirit:

***Embodying all the other gifts, as charity embraces all the other virtues,
Wisdom is the most perfect of the gifts.
Of wisdom it is written "all good things came to me with her,
and innumerable riches through her hands."
It is the gift of Wisdom that strengthens our faith, fortifies hope,
perfects charity and promotes the practice of virtue in the highest degree.
Wisdom enlightens the mind to discern and relish things divine,
in the appreciation of which earthly joys lose their savor,
whilst the Cross of Christ yields a divine sweetness
according to the words of the Savior:
"Take up thy cross and follow me,
for my yoke is sweet and my burden light."***

VIRTUOUS SCIENCE IS EMPOWERED BY WISDOM

The Saint Albert the Great Institute seeks to help scientists recognize and exercise the gift of wisdom in their daily work and public communications. Oftentimes we are presented with complex situations that require the patient discernment that wisdom offers to know the best course of action to take. Scientists should seek wisdom with the intention and persistence to do *virtuous* science, discerning what is not only physiologically good for human life on earth but also spiritually good for cultivating a deeper relationship with God in preparation for the afterlife. Reflecting on the historical achievements within modern life sciences, including developments in technology and medicine, we should always consider their objective impacts on human life as well as the subjective influences that brought them about, including the personal motivations, intentions and expectations of those behind the advancements.

Many individuals throughout history have contributed to humanity's treasure of virtuous science. The mystery of God empowering humanity's natural wisdom to the supernatural gift of wisdom proper can be pondered for people over history who have significantly impacted the world through their scientific work. For some of these individuals, faith in God may have been the driving force cultivating supernatural wisdom to advance human science. Others were likely driven by natural wisdom and a selfless vocation to help humankind. Some individuals to reflect upon include: Aristotle (384-322 BC), Archimedes (c287-c212 BC), Nicolaus Copernicus (1473-1543), Galileo Galilei (1564-1642), Sir Isaac Newton (1643-1727), Andre-Marie

Ampere (1775-1836), Michael Faraday (1791-1867), Louis Braille (1809-1852), Gregor Mendel (1822-1884), Louis Pasteur (1822-1895), Thomas Edison (1847-1931), Giuseppe Mercuri (1850-1914), Nikola Tesla (1856-1943), Marie Curie (1867-1934), Guglielmo Marconi (1874-1937), Albert Einstein (1879-1955), Georges Lemaître (1894-1966), Stanley Jaki (1924-2009), and Jerome Lejeune (1926-1994). Regardless of their personal motivations, God allowed these scientists, and many others, to bring about good works that build up the economy of salvation, or Divine Economy. For the pursuit of wisdom, especially supernatural wisdom, can only lead to thoughts and actions reflecting truth, goodness, and beauty (3).

Accordingly, we ought to view scientific endeavors as sacrificial works to make manifest the glory of God. The advance of scientific works should not be motivated by financial reward but rather by the opportunity to provide patients with unmet needs medicine to thrive. We must recall that helping those in dire need is a vocation from God to benefit humanity – to love one's neighbor.

For example, recent drug discovery has been focused on life-threatening or debilitating diseases, such as cancer, cardiovascular and metabolic disorders, endocrine, neurological and ophthalmic diseases, and pathogenic infections. We now know that many of these systems represent complex pathologies which involve multiple biological mechanisms. A single medicine that modulates only one mechanism may be insufficient to fully treat the illness. This is the challenge of today and it requires multidisciplinary effort and innovative technology to advance novel and superior medicines. There is an opportunity to seek wisdom from initial conceptualization of these studies to clinical trials, ensuring ultimately that the treatment or therapy is safe and specifically effective.

CONCLUDING REMARKS AND INVITATION TO SAGI TORCHBEARERS

We hope that this inaugural article for the thematic series on "Seeking Wisdom" motivates future contributions reflecting upon the gift of wisdom that the world presently needs. Wisdom is principally a gift from God that we may earnestly exercise in our thoughts and actions. A subtle comment or deed may be the change that brings peace to troubled hearts and minds. Our temporal acts have eternal consequences. In this spirit of wisdom, we wish to close this article with the following quotations from St. Augustine and St. Albert the Great:

***To wisdom belongs the intellectual apprehension of eternal things;
to knowledge, the rational knowledge of temporal things.***
(Saint Augustine)

***The greater and more persistent your confidence in God,
the more abundantly you will receive all that you ask.***
(Saint Albert the Great)

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1. USCCB Catechism of the Catholic Church, The Grace of Baptism, pp. 321-324 (CCC 1262-1274).
2. USCCB Catechism of the Catholic Church, The Gifts and the Fruits of the Holy Spirit, pp. 450-451 (CCC 1830-1832).
3. USCCB Catechism of the Catholic Church, God, "He Who Is," Is Truth and Love, pp. 58-59 (CCC 214-221).



Special Feature (SAGI Torchbearers)

SAGI: The Greatest Experiment

INVITATION TO BE A TORCHBEARER FOR ILLUMINATING LIFE!

We welcome you to join SAGI and our *raison d'être* to be a unifying force with worldwide outreach and inspiration for sharing good works together!

SAGI LEADERSHIP — OUR INAUGURAL TEAM & BUILDING FOR THE FUTURE

SAGI has a dedicated executive team for its inaugural launch since the Feast Day of Saint Albert the Great. Our team includes Tomi K. Sawyer (President & Chief Torchbearer), Jeffrey M. Geniesse (Director, Illuminating Media), James Brown (Director, Virtuous Science), Fr Neil J. Roy (Chaplain & Director, Inspiring Faith), Fr Richard Cannon (Chaplain & Director, Seeking Wisdom), Don Orrico (Director, Gifts for Life), Colin M. Gifford (Director, Life Art), Thomas K. Sawyer (Editor, Torchbearer Publications), Jonathon R. Sawyer (Manager, Torchbearer Initiatives), and Danielle Molinari (Manager, Torchbearer Network)

We are currently engaging expert scholars to join our team as SAGI Advisors for science (e.g., chemistry, biology, physics) and its affiliation to both technology and medicine as well as theology, philosophy, bioethics, and education.

SAGI SCHOLARS ADVISORY BOARD & CHRONICLE — WORDS OF WISDOM

SAGI will establish a network of expert scholars across disciplines to share words of wisdom embracing knowledge, reverence, and truth. Illuminating Life, Virtuous Science, Inspiring Faith, Seeking Wisdom, SAGI Torchbearers, Theocentric Education, and Endeavor Together will be key thematic issues and special features of our SAGI Chronicle,

SAGI TORCHBEARERS WORLDWIDE — UNIFYING ALL TO ENDEAVOR TOGETHER

We invite SAGI Torchbearers to participate in our initiative entitled “*Endeavor Together*” and share in our seeking of virtuous science, inspiring faith, and encouraging words of wisdom. May such unifying good work be illuminating to the majesty of life for the glory of God.

SAGI THEOCENTRIC EDUCATION — GLORY TO THE INIMITABLE DESIGNER OF LIFE

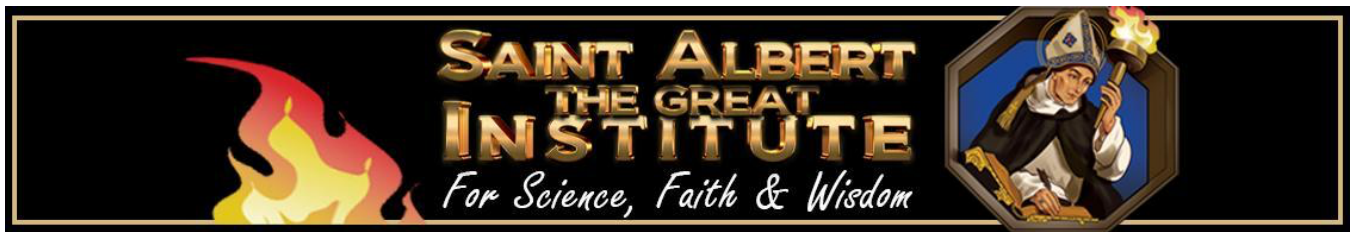
SAGI will cultivate relationships with existing and emerging organizations that share an inspiration for a theocentric education that strengthens learning with a deeper understanding of virtuous science and inspiring faith. This SAGI initiative is entitled “*Inimitable Designer of Life*”.

SPECIAL ACKNOWLEDGEMENTS

The SAGI leadership wishes to thank Lackey Design for taking command of SAGI's website technology per their expertise in software development and implementation.

We appreciate several organizations that will be linked to our SAGI website in the future as part of our *Endeavor Together* and *Inimitable Designer of Life* initiatives to unify all who engage in good work for the glory of God. We thank Maestro Therapeutics for its support.

We are also very grateful for the prayers of support from the Monks of the Holy Protection Monastery, the Saint Benedict Center, the Saint John the Evangelist Parish, the Fraternal Society of Saint John the Apostle, and many other religious organizations and individuals.



Special Feature (SAGI Torchbearers)

SAGI: The Greatest Experiment

MY ODYSSEY TO KNOW THE INIMITABLE DESIGNER OF LIFE: TESTIMONY OF A SCHOLAR, SCIENTIST & SAGI TORCHBEARER

Tomi Sawyer, Ph.D.

SAGI Founding President & Chief Torchbearer

Words of Wisdom: As a child, I dreamed of being Superman. As a teenager, I strove to be an intellectual force like Spock from Star Trek. During these years, my faith in God was kindled. Studying the natural biological sciences provides a phenomenal opportunity to realize God as the Inimitable Designer of Life. In this article, I share a few thoughts on my odyssey and reflections upon virtuous science, inspiring faith, and seeking wisdom. May our Lord's words "You will know the Truth, and the Truth shall set you free." (John 8:32) encourage us to become scholars, scientists, and SAGI Torchbearers seeking knowledge, reverence, and truth.

YOUTHFUL DREAMS AND AMBITION TO BECOME A SCHOLAR

I grew up in a small town named Greenbush, in rural northern Minnesota after my parents sought a good place to live after World War II ended. My grandfather, Albert, invited them to reside with him on his 40-acre retirement farm. He had cattle, sheep, and chickens, and there were always plenty of daily chores. Fortunately, I had the opportunity to learn many things from my grandfather, as the day he passed away marked the beginning of new responsibilities for me as a young farm kid. Nevertheless, being outdoors and exploring what seemed like a vast wilderness around our home coupled well with a strong imagination to escape the daily routine.

During these early years my parents allowed me to buy comic books, and my all-time favorite was *Superman*. I was fascinated by this superhero. I often had dreams of flying and having his powers and fearlessness. I still remember those vivid dreams of flying, feeling the wind on my face as I cruised through the skies. Yet, my days of being like Superman would soon be surpassed by my first spiritual encounter with God, and this would become a profound recollection for me.

As a newbie teenager, I was mesmerized by the television series *Star Trek*, and I imagined being on the Starship Enterprise to "Boldly go where no man has gone before!" Spock was the super-scientific character who had profound knowledge with undaunted logic that was seemingly invincible. I wished to be like Spock, which meant taking my education to a new level. This was the start of my own trek to become a scholar. Chemistry, biology, and physics were especially intriguing to me during my high school years, and I further pursued these scientific disciplines throughout my undergraduate studies at Minnesota State University Moorhead and graduate studies at the University of Arizona, ultimately earning a doctorate degree. Although at times this was an exhausting scholarly marathon, it was a pivotal part of my odyssey.

FIRST ADVENTURE IN DRUG DISCOVERY AS A GRADUATE STUDENT

I was blessed to have an extraordinary experience in my graduate studies at the University of Arizona. Significant credit goes to being co-mentored by two very gifted academic scientists who were each on their paths to being world renowned for their contributions in chemistry and biology. They encouraged the collective research team to deeply think about the science being explored. This multidisciplinary collaboration focused on α -melanocyte stimulating hormone (α -MSH, a peptide involved with pigmentation) and was appropriately dubbed the " α -MSH Project." Our work evolved in remarkable ways, including a breakthrough medicine for those afflicted with erythropoietic protoporphyria (EPP). In retrospect, the chemical synthesis of peptides was emerging quickly from 1970-1980, and it was an exciting time in both academia and industry (biotech and pharma) to create peptide drugs for many different therapeutic indications. In my first series of α -MSH analogs, NDP-MSH¹ was designed, synthesized, tested, and became a worldwide research tool, as well as an FDA approved drug, for the treatment of EPP and other skin pigmentary diseases. In fact, a documentary² entitled "*Out of the Shadows*" was shown by *NBC Dateline* in June 2015 to bring attention to children suffering with EPP and to educate the audience about NDP-MSH (aka Afamelanotide or Scenesse[®] by Clinuvel)³. In a second series of α -MSH analogs, cyclic-MSH⁴ was designed, synthesized, tested, and propelled our University of Arizona team into worldwide fame by successfully transforming a linear peptide (α -MSH) into a cyclic peptide (cyclic-MSH) with strong physiological activity (a super agonist). This discovery provided a conceptual framework to show how a peptide interacts with its cellular receptors (for α -MSH it was the melanocortin-1 receptor [MC1R]). Amazingly, forty years later, the first high-resolution 3D structures^{5,6} of α -MSH, afamelanotide, and Setmelanotide (an analog of the original cyclic-MSH) would confirm our conceptualizations of the 3-D binding of α -MSH and cyclic MSH super agonist to the MC1R. I have recently reflected upon this story in a special tribute⁷ to Professor Victor Hruby and both past and current MSH Project Team members. I now see this first chapter of my odyssey as a gift from God. I was guided to a scholarly oasis where I did face many obstacles, but ultimately shared with my colleagues a great triumph in science.

MORE ADVENTURES IN DRUG DISCOVERY AS A PHARMA & BIOTECH SCIENTIST

In late 1981, I took my first steps as a professional, industry scientist to join the fledgling Biotechnology Division of the Upjohn Company (Kalamazoo, Michigan). There also, my life became more balanced with marriage and fatherhood (of two sons). I converted to Catholicism and contemplated on the spirituality of being a drug discovery scientist. I was engaged in several major R&D campaigns including the first *Science* publication⁸ of a synthetic HIV protease inhibitor (U-81749) that was also announced by Tom Brokaw (*NBC Nightly News*) in 1990 as a major drug for the treatment of HIV. This was a first among many reports on HIV protease inhibitors from both pharma and biotech companies worldwide in what evolved into a race to the clinic and development of FDA-approved HIV drugs.

In mid 1991, I accepted my first management position at Parke-Davis Pharmaceutical Research (Ann Arbor, Michigan) and a concurrent appointment as an adjunct professor of medicinal chemistry at the University of Michigan. I had a talented team of computational and synthetic chemists who discovered novel, peptidomimetics^{9,10} as breakthrough inhibitors of HIV protease and Src homology-2 domains (an emerging class of intracellular targets involved in signal transduction). It was during this time that my wife, sons, and my father (who was 79 years old at the time) were able to listen to me speak as a Parke-Davis Distinguished Lecturer by the invitation of Pedro Cuatrecasas, President of the Pharmaceutical Research Division. It was a very special honor to share this with both my family and scientist friends.

In late 1997, I accepted a position of Director of Drug Discovery, at Ariad Pharma (a biotech that was acquired by Takeda Pharma a few years ago). I was initially hesitant to move from large pharma to a biotech that was <1% the size, however I quickly learned that I joined a team of highly skilled, motivated, and scholarly individuals wanting to succeed in drug discovery. Among them, we had outstanding synthetic chemists, computational chemists, structural biologists, and pharmacologists. We achieved a series of drug discovery breakthroughs¹¹⁻¹⁴ on key intracellular targets, including Src kinase for osteoporosis and Bcr-Abl kinase for chronic myelogenous leukemia (CML). In the latter case, the first inhibitor of all-clinical-mutant versions of Bcr-Abl kinase, AP24543 (ponatinib, Iclusig®) was discovered and was FDA-approved for CML therapy. Our work also evolved synthetic chemistry for specific phosphorus moieties as key design features for two FDA-approved drugs, Ridaforolimus (EluNIR® Ridaforolimu Eluting Coronary Stent System) and Brigatinib (Alunbrig®). In retrospect, Ariad Pharma was my most successful adventure in drug discovery in terms of novel design, chemistry, and producing three FDA-approved, marketed drugs. During my time at Ariad Pharma, I was promoted (Vice-President and then Senior Vice-President of Drug Discovery) by management, as were my colleagues, in recognition for our accomplishments.

In late 2007, I accepted a position as Chief Scientific Officer at a start-up biotech, Aileron Therapeutics, as one of the first employees. This was a unique experience for me in terms of building a team from scratch, establishing research operations, brainstorming science and technology platforms, and engaging corporate and business development along with the rest of the leadership team. Most of this experience was fun and exciting as we created a first-time R&D platform to advance a new scaffold of macrocyclic, α -helical peptides for several therapeutic targets, especially intracellular transcription factor for cancer pathogenesis. Of these, the design of novel modulators of oncogene p53 was our greatest achievement and this included both a key preclinical lead molecule (ATSP-7041)¹⁵ and a clinical candidate, Sulanemadlin (ALRN-6924),¹⁶ which was the first-in-class for this macrocyclic peptide modality. Amazingly, the timing for the early days of Aileron Therapeutics was besieged by the economic doom and gloom of the so-called Great Recession (the most severe financial crisis since the Great Depression) of 2007-2008 in America. However, Aileron Therapeutics provided one of the very first big wins for biotech in 2010 as the result of a \$1.1B deal with Roche Pharma to leverage its technology platform for key therapeutic targets, including the p53 project. This collaboration benefitted from the expertise of the Roche scientists who were world leaders in p53 targeted drug discovery. As ALRN-6924 advanced to become a clinical candidate, a decision was made in 2013 to focus on drug development and an initial public offering (IPO). Indeed, in 2017 Aileron was listed on the NASDAQ (ticker symbol "ALRN").

In mid 2014, I began my last drug discovery campaign experience within my "classic" pharma/biotech career by accepting an offer from Merck as a Distinguished Scientist and a 5-year mission to rebuild its peptide drug discovery platforms and pipeline. Although this seemed a daunting task, I was quite enthusiastic to do it. I established the Merck Peptide Drug Hunter Network of more than 100 multidisciplinary scientists as well as many internal and external working relationships. Two key collaborations were with PeptiDream (Japan) and A*STAR (Singapore), and they greatly supported Merck's intracellularly targeted peptide drug discovery. This work included a basic science and technology effort on p53 to exploit the milestone accomplishments of Aileron Therapeutics to advance a deeper-dive into the design, chemistry, biology, cell permeability, and metabolic stability of macrocyclic α -helical peptides. Overall, this was my most successful adventure in drug discovery as a pharma scientist, and it also included many top tier scientific publications.¹⁷⁻²²

On my last day at Merck, which was also my 65th birthday, I reflected upon my career in drug discovery as well as "retirement" plans with my Merck friends. In retrospect, it was intriguing that my first professional scientist job offer was from Merck (1981), and thirty-three years later (2014) I would join the Merck global R&D scientific team. My future goals included: (i) for my family, to establish a scientific consulting/advisory business "Maestro Therapeutics"; (ii) for my friends, to establish a global peptide drug hunter network "Peptide Drug Hunting Consortium"; and (iii) for my faith, to establish the "Saint Albert the Great Institute (SAGI) for Science, Faith & Wisdom". These were inspirational goals for me to launch a new 5-year mission to be a multidisciplinary entrepreneur via Maestro Therapeutics, and then to pursue launching the Peptide Drug Hunting Consortium and the Saint Albert the Great Institute for Science, Faith & Wisdom.

PURSUIT OF VIRTUOUS SCIENCE AS A MULTIDISCIPLINARY ENTREPRENEUR

This year will mark the 5th anniversary since I founded Maestro Therapeutics. Its inaugural mission was empowering drug discovery to support the cause for early- and mid-staged biotechs relative to their drug discovery platforms and R&D pipelines to advance compelling peptide therapeutic modalities into the clinic. Overall, Maestro Therapeutics has contributed by both scientific R&D consulting and advocating financial investment (venture capital) or R&D partnering (pharma) for many biotechs in its business portfolio. Over the last two years, Maestro Therapeutics has engaged my two sons who have each recently achieved their Ph.D. degrees in chemistry/biochemistry and cellular/molecular biology. Together, we are multidisciplinary entrepreneurs who are supporting the development of peptide therapeutic modalities that may ultimately become breakthrough medicines for those who suffer with life-threatening and/or debilitating disease. Recently, and with many outstanding entrepreneurs from academia, biotech, pharma, investors, contract R&D organizations and service providers, I've launched the Peptide Drug Hunting Consortium. It is with hope of exploiting our collective talents that we may fortify the science/business interface of peptide drug discovery and future breakthrough medicines.

One point I wish to share is that from a chemistry and biology perspective, molecules may be designed and synthesized for a specific target (e.g., receptor, enzyme) to modulate its function, but they often have unexpected negative effects (generally referred to as 'off-target' and 'toxic'). This is part of the challenge of drug discovery, and those molecules which have toxicity are generally eliminated from further development, albeit they are still important to guide the optimization of the class (or series) of molecules from which they may be chemically/structurally related. While drug discovery is challenging and typically requires a great deal of time and money, it is very rewarding to match a new medicine to an unmet need, especially for all those engaged in the multidisciplinary scientific effort.

These days, knowledge is abounding for those pursuing virtuous science, especially in technology and medicine. One must strive to be scholarly and be intellectually driven to review the scientific literature and understand the purpose, methods, and shared learnings from such work. Beyond this knowledge, one must strive for reverence and truth as it relates to the science of life. In fact, all scientific inquiry that permeates the biology of life should adopt principles of bioethics and seek virtue for the common good as well as embracing theological and philosophical discernment. Life is precious, and the pursuit of virtuous science is both propitious and daunting. Yet, many other things in the history of humanity have been very challenging, but the focus must remain on what is good for the glory of God. Indeed, this is yet a great intention for ardent prayers and genuine desire to do good work in all aspects of life.

TO KNOW THE INIMITABLE DESIGNER OF LIFE AS A SAGI TORCHBEARER

Contrary to those who may surmise that all scientists are indifferent to believing in God, this notion is neither realistic nor logical. Many scientists representing various disciplines throughout history lived as devout believers in God, including Saint Albert the Great.²³⁻³² Most importantly, there isn't any scientific evidence or experimental works that demonstrate the creation of life, even in its simplest living form, from inanimate materials. This remains true even considering that our current technologies include the most sophisticated chemical reagents and research laboratories, surpassing the volatile conditions of primordial Earth. I am not saying the creation of life is impossible, but rather that the creation of life is only possible by a Being of Inimitable attributes and qualities (e.g., infinite, omnipotent, immutable, omnipresent, perfect), a Designer of Life, namely God. In what sense is God inimitable? Only God can create organisms and sustain their life principles *ex nihilo* (out of nothing), whereas human beings can only make things (from pre-existing materials). "Inimitable Designer" refers, in glorifying acknowledgement, to God as the Greatest Scientist.

For scientists, I hope this is a humble testimony and revelation to reflect on God's power in the creation of life. Furthermore, this is an opportunity for all who share in faith to behold God the Creator with love and gratitude. Indubitably, I now appreciate more the intricacies of life from a scientific perspective and how extraordinarily complex life is. Specifically, I'm referring to how highly-orchestrated the engine of life is, especially considering the integration of all the underlying chemistry, biology, and physics. Not only are its constituents (e.g., nucleic acids, proteins, lipids, carbohydrates, water, and other organic and inorganic molecules) complex, but also the exquisite specificity of biological processes in spatial and temporal ways. Furthermore, we know that life exemplifies such properties in replication and development. Importantly, please know that my thoughts here are not a revelation from of my being a scientist; rather, being a scientist has affirmed my faith in the Inimitable Designer of Life, and the mystery of the Creation of Life.

My odyssey has been at the crossroads of being a scholar and scientist and is now leading me on a spiritual path as a SAGI Torchbearer. Seven words have resonated in my memory throughout the last six decades – faith, hope, love, mercy, truth, wisdom, and life. Likewise, our Lord's words, "you will know the Truth, and the Truth shall set you free" (John 8:32) have greatly impacted my trek in life and call to be a SAGI Torchbearer seeking knowledge, reverence, and truth. I hope that my testimony to know God as the Inimitable Designer of Life may be inspiring for those reading this article. Such will be a cornerstone of SAGI's initiative to support theocentric education. Lastly, may SAGI's motto of "Illuminating Life" be tantamount to a unifying force for our networking initiative (Endeavor Together) as well as our chronicle (SAGI: *The Greatest Experiment*) and website (<https://saintalbertthegreatinstitute.org>).

SPECIAL ACKNOWLEDGEMENTS

I wish to especially thank my family and SAGI friends for their support and encouragement to launch the Saint Albert the Great Institute for Science, Faith & Wisdom.

I wish to acknowledge my scientific mentors, colleagues, and friends that I have had the privilege to work with for more than 40 years from the time of my first day as a graduate student to the last day as a biotech and pharma scientist. These were truly great adventures in drug discovery, and I was blessed with having had such opportunities to endeavor together.

I look forward to a great adventure with all SAGI Torchbearers worldwide for "illuminating life" and to share in good works for virtuous science, inspiring faith, and seeking wisdom!

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Special Feature (Theocentric Education)

SAGI: The Greatest Experiment

He Leadeth Me

Anne Holewa*

*SAGI Torchbearer

Words of Wisdom: "Remember that nothing is small in the eyes of God. Do all that you do with love." These words of wisdom were written by St. Therese of Lisieux, a Carmelite nun, who was declared a Doctor of the Church by Pope John Paul II in 1997. In her everyday life, even the most mundane tasks in her cloister were performed with great humility and love. No matter where we live, what our mission in life is, or who is with us, we are called to live each and every day as holy servants of God. As St. Therese also stated, "Holiness consists simply in doing God's will, and being just what God wants us to be." As a wife, mother, and teacher, I strive to live her words of wisdom every day. During my years as a teacher, my desire was to give students, no matter their academic ability, the means of being successful in their learning; most importantly, I wanted them to know that they were as God made them to be...valuable and precious. Not a day goes by during which I do not think, remember, or reflect on the many students I was privileged to have throughout my thirty-five years of teaching. It was my delight to watch my St. Mary students as they learned, worked together as partners, laughed together, watched and sang to *Fiddler on the Roof*, read and watched the video of *To Kill a Mockingbird*, recited poetry, and, lastly, as they performed Shakespeare's *The Comedy of Errors*.

THE BEGINNING OF MY PASSION FOR TEACHING

I now know that God had plans for what would become my mission in life, plans that began to form while I was still very young. I did not, of course, understand the beginning steps toward His plans at that time, but He, in His wisdom and compassion, was laying the foundation for what I was gifted to later become. Despite all the trials and difficulties which I faced during my younger years, His grace and great love led me to the thirty-five years I would devote to my teaching career.

As the second oldest of ten siblings, I experienced and learned much about childcare from taking care of younger brothers and sisters, from their infancy and through their younger years. These years of caretaking laid the foundation for my God-given desire to work with children. My first, solid indication of my calling to teach came while I was in high school. A substitute teacher for catechism at my home parish was needed for a few weeks, and I believe it was my mother who volunteered me to help.

Working with kindergartners sparked a love and desire in me for teaching. I remember giving special attention to a boy who remained at a distance during my first class. During the next few weeks, I encouraged and helped him to engage and believe in the importance of

His presence in class. That first teaching experience is forever engraved on my heart. As I was told later by my mother, this shy, little boy told his mother that he liked being there even more than in his kindergarten class during the school week. This first experience, and those to come, of helping students to realize their value and worth would become my greatest joy.

EDUCATION INSPIRED BY FAITH AND LOVE

When I began college, it was with the intention of earning a degree in Education. I did not have to discern or discover what my career path would be; God placed me there, exactly where I was meant to be. Before earning my degree, I spent two years working as a teaching aide in a middle school, learning-disabled classroom. What I did not know at the time was that this experience would later be of great help to me as a full-time teacher. It inspired me to give students, no matter their academic ability, the means of being successful in their learning, and, most importantly, to show them that they were as God made them to be — valuable and precious.

In April 1982, I graduated with a degree as an English major, with a minor in Elementary Education. Over the next thirty-five years, I was first a public-school, substitute teacher. I was then blessed to be hired as a full-time Catholic, middle school teacher. Within a short time, I knew this was where God wanted me to be. During my nineteen-and-a-half years at St. Mary Catholic School, Christ was the center of everything. With God's grace, I grew and developed skills that would help instill in my students the means and desire to learn and grow, not only in academic abilities but also in study habits, organization and time-management skills, social interactions, and, most importantly, faith in God.

Over the course of those years, I made many adaptations to help students with individual learning needs be successful, while simultaneously helping them also accept who God made them to be. I held high expectations for all students, encouraging them to complete assignments, to develop and practice good study habits, and to treat each other with respect and compassion. Within a few short years, Language Arts became my passion. I wanted to foster within my students a love for reading and skills to become proficient writers. There have been many moments in which the inspiration of the Holy Spirit has enlightened me and led me; for instance, three years into teaching at St. Mary, I suddenly knew that my approach to writing needed to change.

It was especially important to me that my middle school students go onto high school, and later college, with the ability to write well. For this to be attained, my approach to Language Arts had to become more comprehensive. Rather than teaching grammar, spelling, vocabulary, sentence structure, composition, editing and rewrites, and literature in isolation, I developed a methodology that would integrate all of these things on a daily basis. Starting with sentence composition, we then moved onto note-taking methods, then paragraphs, short compositions, formal letters to their bishop, essays, formal book reports, quarterly history projects, quarterly vocabulary tests, and, eventually, to scientific research papers. Students practiced weekly and mastered grammar rules, the understanding of vocabulary in its various parts of speech and denotative and connotative meanings, and sentence structures with necessary punctuation in all their written work. To enhance the academic abilities of all my students, their daily practice was discussed and completed with partners or small groups. What a blessing it was to see and hear the humor, laughter, and creativity that abounded as students worked together and had fun with it all! After my beloved St. Mary Catholic School closed in 2004, I was blessed to teach Language Arts to middle school students for two years at another Catholic school. Instead of a class of fifteen students, I then led six Language Art classes of 120 students!

"ONCE A TEACHER, ALWAYS A TEACHER"

Three years after I retired in 2006 from full-time teaching, my role as a Language Arts teacher resumed. My brother and sister-in-law needed me to tutor my nephew in developing his writing skills. This began seven delightful years of working with Catholic, home-schooled students, using my same Language Arts approach. Over the course of those years, I helped students from early elementary throughout high school. During my last three years as a tutor, I traveled five days a week and worked with six different families.

When my husband and I moved to the Upper Peninsula of Michigan in 2017, I once again considered myself retired. Little did I know that Divine Providence had brought us to the Upper Peninsula that particular year. Here, too, God had plans for me; within just a few short months, I would learn that my teaching career would continue. Two of my nephews, who were struggling with high school, wanted to quit their studies. I spent the next three years tutoring and assisting them until their graduation in 2020.

"Once a teacher, always a teacher!" In small ways (thank you, St. Therese), I continue to use the gift of teaching given to me by God. Whether it is while substituting for catechism classes, or when grandchildren come to visit, or when friends want to learn new crafts, the teacher within me is there, ready to help. I sincerely believe that I would not be the person I am today without His presence in me. Yes, He leadeth me, and I am forever grateful for such a blessing.

A SPECIAL MESSAGE

To all my home-schooled students and their families: Working with you each week was, for me, the highlight and joy of countless days. I was greatly blessed by your kindness and warmth. We had much to cover each week, and you worked very diligently. I think of each of you often and look forward to the times we meet. May God love and bless all of you — always.



Special Feature (Theocentric Education)

SAGI: The Greatest Experiment

The Value of a Theocentric Education

Sister Jordan Thomas, O.P.*

*SAGI Torchbearer

Words of Wisdom: "Souls are perishing in the ever-shifting sands of the relative; it is the absolute they need. Nowhere will they find it but in the Gospel entrusted by Jesus Christ to His Church, which has preserved, taught, and expounded it. It has been exemplified in the lives of the best of her children" (Fr. Réginald Garrigou-Lagrange, O.P., Providence, Foreword, vii-viii). As Fr. Garrigou-Lagrange says, objective truth is desperately needed in society, for relativism has been gaining ground for centuries, manifesting itself most especially in what Pope Saint Pius X termed "the synthesis of all heresies": Modernism. Even a cursory glance at the state of affairs in the world will quickly inform one that relativism, among other things, is bringing about the dissolution of society. God's Love for man, however, is an objective truth, and His Love is exemplified especially in Christ's Life and Passion. Furthermore, as individual souls embrace the truth of Christ, darkness becomes increasingly displaced by light. However, "education" that is divorced from objective truth necessarily bears its consequences on the soul and then in the world. On the contrary, theocentric education places the soul in contact with timeless, universal truths, presented in the light of man's First Beginning and Last End.

A HOMESCHOOL ODYSSEY THAT WOULD CHANGE ME FOREVER

My classmates were saying goodbye to me as I stood in front of them for the last time, and my teacher asked me if my parents were sending me to a different school. I replied, "No, I am going to be homeschooled." This is the last thing I remember about my third grade in public school. The odyssey upon which my brother and I would be embarking at the behest of my parents would be one that would change me forever: my fifth-grade brother and I were soon-to-be students of a prominent Catholic homeschool program.

Not only did I suddenly feel more independent, but I also remember being grateful that religious studies became a normal part of my school day at home. Though I could not put it into words at my very young age, reflecting now upon my homeschool's theocentric curriculum, I recall that as I matured, I came to understand that such a curriculum directs every aspect of study to its Final End, which is God. In the words of God Himself, "I am Alpha and Omega, the First and the Last, the Beginning and the End" (Apoc. 22:13). Venerable Louis of Granada, O.P., in his famous work, *The Sinner's Guide*, says, "Now, what is man's last end, on the attainment of which depends his happiness? That it is God is undeniable; for since He is our first beginning, He must necessarily be our last end" (Chapter 28).

The riches of such a homeschool curriculum include one's increasing familiarity with Sacred Scripture as well as the timeless doctrinal and moral teachings of the Church; further, the focus of all the subjects in the curriculum is such that it is ultimately directed to one's better knowing, loving, and serving God. More specifically, the history I learned was much more than a simple collection of names and dates *sans* context; rather, it was an unbiased and meaningful relation of important events and how they all tied into salvation history and God's work in man. The literature was comprised of primary texts from the great writers, spanning centuries, which illustrate themes relevant to mankind's condition throughout the ages. The language component that I chose to study was Latin, which would eventually allow me access to many theological works that have not yet been translated. Other subject areas were equally meaningful and necessary for a well-rounded Catholic education.

A CATHOLIC AND RELIGIOUS LIFE IN THE DOMINICAN ORDER

Being immersed at a young age in such a comprehensive and theocentric education, which continued until my graduation from high school, played a significant part in forming a solid foundation for me as a Catholic; moreover, it was instrumental in leading me to pursue a life which is particularly theocentric—the religious life in the Dominican Order.

The Order of Preachers, also known as the Dominican Order, was founded by St. Dominic in the early thirteenth century to combat the heresy known as Albigensianism. St. Dominic worked to form a group of Friars Preachers devoted to prayer, study, and preaching to further bring light and truth into the world for the salvation of souls. The motto of the Dominican Order is *Veritas* (Truth). Such a motto expresses the devotion of Dominicans to the pursuit of truth in all things. One of the most famous Dominicans is St. Thomas Aquinas, who composed history's greatest theological synthesis, the extensive *Summa Theologiae*.

As a Dominican, I am grateful for having received in my early years a solid education upon which I continue to build, for what I received enriches my life of prayer and assists me in my theological studies. I am grateful to my parents for having made the decision to homeschool my brother and me because, in addition to our studies being very academically demanding, God, more importantly, was the center of our education.

A SPECIAL MESSAGE

Youth everywhere need guidance — not merely guidance in intellectual pursuits without a view to education's Final End, but, rather, one which forms the whole person: a guidance directed towards the Creator, to Whose beauty and majesty all creation testifies. When we begin to see that education is much more than mere academics, and additionally should be pursued for the greater glory of God, then we will also begin to see it for its true worth.

As we seek to develop the moral character and attitudes to navigate our scientific professions, the journey must start with prayer and right praise of God. This can seem counterintuitive—what does singing at Mass on Sunday have to do with a decision to work with human embryonic stem cells? Right praise of God puts “first things first” and recognizes that the highest value and duty we have is praising God. Time spent in praise, whether singing poorly as part of the congregation or painting the ceiling of the Sistine Chapel, is time spent not doing other things. It is a recognition that man does not live by bread alone, but by every word from God. Pursuing the elimination of human suffering and the extension of life are noble pursuits, but they are not the *summum bonum*, the highest value. Prayer and praise inform our decisions by recognizing that at all times, in all places, and in all circumstances, God is the highest value. This allows us to forego a promotion or delay progress on a life-saving treatment if it compromises higher values.

In addition to devoting time to prayer, we must devote time to understanding what it means to do virtuous science in our specific situation and consider it a pragmatic skill for daily life for which we must develop aptitude. We face complex questions for which there are no easy answers, and those of good conscience can often come to different, even opposite, conclusions. We need to solicit counsel from trusted colleagues who share our desire for virtue and spend time in study and discussion. SAGI seeks to provide some of this through the collegiality of its volunteers and to the community at large through the content on its website. The importance of imitating those with virtue is described by Plato in his *Republic*, in which Socrates (395c-d) states:

if [the young guardians of the Republic] imitate anything, they must imitate right from childhood what is appropriate for them—that is to say, people who are courageous, moderate, pious, free, and everything of that sort.

We are all in awe of God's creation and pursue science because of our love of the field and its potential to help us all lead happier, healthier lives. We are driven by our responsibilities to provide for our families and care for one another. We are motivated to sacrifice our time and energy to understand biology, chemistry, physics, and mathematics to achieve goals that benefit our families and communities. Although a contradiction of sorts, we do virtuous science when we spend less time on science and more time on prayer and forming our conscience to make the best decisions with God as the *summum bonum*. This is the path to true success: “Entrust your works to the Lord, and your plans will succeed.” (Prov. 16:3).