



Exhibit A
Michael Sendivogius

MICHAEL SENDIVOGIUS, ROSICRUCIAN, and FATHER OF STUDIES OF OXYGEN

By
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Comparatively few people have heard the name Michael Sendivogius; yet, his contributions into the field of Oxygen, were of immense importance and the relevancy of his studies continue to this very day. He was born on the 2nd of February 1566 at either Skorsko or Lukawica, Poland; and died at Cravar, Silesia, in June 1636. His parents, Jacob Sedzimir and Catherine Pielsz Rogowska were both of noble families and had a small estate near Nowy Sacz, in the Cracow district of Poland. It is reported that young Michael traveled to and studied at (or at least visited) universities at Moscow, Russia; Sweden; England; Spain; Portugal; Italy where he studied the rare works of Paracelsus in The Vatican Library; Greece {where he was instructed by a patriarch of the Greek Orthodox Church}; and Constantinople (now in modern-day Turkey). At this same time he was studying philosophy, medicine, rhetoric, Geometry, astronomy, mechanics, theology, and other subjects at the Universities of Cambridge, Frankfurt, Rostock, Wittenberg, Leipzig (in 1590), back to the University of Vienna (1591), and the University in Altdorf in 1594-95 and also Ingolstadt (both in Germany) and in Prague (in today's Czech Republic). It is notable that one of his fellow students while at Altdorf was Michael Maier, another confirmed Rosicrucian. For that time-period, Sendivogius was an exceptionally well-traveled man.

Michael met up with the Polish head of heraldry, Bartłomiej Paprocki, who convinced him to change his surname to a more nobler-sounding name of Sedziwoj (sometimes spelled Sedziwoj). The Latin equivalent was Sendivogius, and Michael began to sign his name with a flourish as "Michael Sendivogius Liberbaro de Skorsko et Lukawica." He was a



friend of Rudolf II of Prague, who considered him a trusted and beloved friend. Gradually, Rudolf II became his benefactor. In a fairly short time, Sendivogius rose from being a courier to a King's secretary, to a confidant, to eventually, an imperial privy councilor. As an imperial official, he visited even more universities, such as the University of Altdorf, where his name appears in the year 1595.

Sendivogius married a wealthy widow Veronika Stieber and had four children. Sendivogius was devastated when his wife and two of their four children died during an epidemic. He felt he had been abandoned by Rudolf II of Prague; so Sendivogius returned to Poland. While there, he helped establish iron and brass foundries in Krzepice, Poland. Then, he helped establish lead foundries in Silesia. For his long years of under-paid (or even unpaid) services, Sendivogius was granted small estates in Moravia (in today's modern Czech Republic).

The study of alchemy reached its apogee in the 17th Century in Prague {now in the Czech Republic}. The miners and refiners were aware that lead ore often contains some silver ore; and that silver ore usually contains some gold. This suggested to the early alchemists that metals gradually changed into another over time. Because gold was resistant to tarnish and corrosion, that suggested to them that gold was the summit or ending-point of this evolutionary process.

Michael Sendivogius and other early alchemists saw that two elements 'mercury' and 'sulfur' as the hinge by which they felt opened the door to alchemical conversion. For instance, too much of the fluid mercury was present in tin and lead. Too much sulfur was present in hard metals such as iron and copper. Gold, seemed to them, to be the perfect admixture. Hence, turning one metal into another required adjusting the mixture very carefully with precise mixtures of mercury and sulfur. This evolution might take thousands of years for the ore beneath the earth to evolve or transform. Alchemists wanted to speed-up the process by tossing molten metal onto what they called the Philosopher's Stone. Having a cloistered sense of protecting their coveted formula, early alchemists often wrote each other in riddles, rhymes, and codes which required a cipher to translate. They were either paranoid or extremely sensitive that their closely-guarded formula be kept secret. Yet, despite critics assertions: most alchemists regarded their discoveries to be, ultimately, of Divine origin. Nearly all had reverence toward Almighty God as the Creator and Preserver of all things. They simply felt they were unveiling a new discovery of describing an aspect of God's Creation. Furthermore, they intensely desired to keep their identity secret. They sought anonymity {or at least pseudonyms, such as the quasi-ANAGRAM Sendivogius used at times: Divi Leschi Genus Amo"} because The Church during that era was inclined to persecute what it believed to be any authors of heretical publications. In later centuries, alchemists gained a more respectable position in society's hierarchical ladder, since most were Medical Doctors, Scientists, Philosophers--- or all three wrapped inside a single person. Professor David C. Poole, a professor currently teaching at Kansas State University in Manhattan, Kansas states, "I do think that the alchemists have been given short shrift through the centuries and that some may have been gifted chemists."

Michael Sendivogius was such a man. Sendivogius tried to promote a so-called secret society of "Unknown Philosophers" of which he drew-up the Statutes. Even ordinary citizens couldn't help but see the resemblance of Sendivogius' Society with the Society of the Rose & Cross {Rosicrucians} which was founded by Fr. Christian Rosenkreutz. The



resemblance was remarkably uncanny. Most importantly--"Sendivogius was considered by contemporary and succeeding generations of alchemists to be the true possessor of the 'great mystery' and a member of the Rosicrucians. He was greatly admired and cited in seventeenth- and eighteenth century alchemical treatises." It is a known fact that Sir Isaac Newton collected some of Michael Sendivogius' published treatises. With regard to Oxygen studies: Michael Sendivogius was a pioneer in such studies although later generations of scientists and chemists rode on his coat-tails; and were given the proper recognition that Sendivogius was frequently denied.

John French worked in alchemy himself, and he published books on the subject himself in London circa the year 1651. John French spoke of Michael Sendivogius' belief in "many men of a good conscience" and he enumerated key points which I will only briefly summarize here:

*The most important elements of study {Medicine/Science/Philosophy} are "a Divine and celestial thing."

*Diligently read the sayings of the old philosophers. Compare them with others. Verify what has been expounded. "Where they have erred--- do beware," and keep studying until you find that "sweet harmony" of logic, truth, and Faith.

*Work Diligently.

I recently came across a bronze medal which depicts the likeness of Michael Sendivogius (the same image as at the Top of this presentation). While some 'symbols' are well known; others are somewhat obscure. Beginning on the left side of the medal, the symbol of a cross-atop-a-triangle is the symbol for 'phosphorus.' The symbol of the circle with a line dividing it in twain is the symbol for 'salt.' The diamond-shaped symbol {almost akin to a square tilted-on-its-end is the symbol for 'Antimony' or 'soap.' The most elusive medal for me to identify was the bottom left side symbol that looks like a Capital 'S' with two transverse-bars drawn through it. With the aid of Prof. Claire Fanger of Rice University, she correctly identified that as the symbol for "Precipitated Mercury."

Now, for the symbols to the right side of the medal ---from Top downward --- next to the "Z" of SEDZIWOJ's name is also another symbol for "Precipitated Mercury," The symbol which looks like a Triangle with a cross beneath it, is the symbol for "Sulfur." The last symbol which looks like a lazy Capital "Z" with a tiny slash crossing the lower bar is the symbol for "Tin."

On the bronze medal Michael Sendivogius has his name spelled as MICHAL SEDZIWOJ 1556-1636. {Interestingly, the bronze medal indicates his year of birth as 1556 contradicting most sources which cite the year of 1566. He is depicted as a wise, old bearded gentleman, wearing a rounded-crown cap, with its totally encircled, folded-upward brim.

The superficial aim of ancient alchemists was their hope to turn base metals into gold. I find it quite interesting that the symbol for 'gold' is literally a 'Point-within-a-Circle." And, that the symbol adopted for 'silver' is a "Crescent." The four (4) major Elements, Earth,



Air, Fire, and Water each have a Triangle... with various adjustments to correspond with each differentiating characteristic. {See EXHIBIT B, below}.

The noted Masonic scholar, Dr. Albert G. Mackey, M.D, noted that the Elements were a "doctrine of the old philosophers, sustained by the authority of Aristotle that there were four principles of matter -- fire, air, earth, and water -- which were called Elements." He noted that modern science has discovered many fallacies promoted by "Cabalists." However, Mackey acknowledged that more of the virtuous aspects of elemental-science were promulgated by the Rosicrucians into several Masonic Degrees. Various angels of the four elements described as **Andarel**, the angel of fire; **Casmaran**, of air; **Talliad**, of water; and **Furlac**, of earth, and the signs refer to the same elements."

Michael Sendivogius {or Sedziwoj} had his greatest achievement by promoting his belief that air {Oxygen} is the "hidden food of life." He noted that although 'invisible,' it had life-giving properties. He studied potassium nitrate as well as ammonium nitrate. His studies led other researchers into continuing his research into areas of air and combustion. Sendivogius traveled to most areas of Europe. He was even accused of being a spy; yet he seems to have been more a scholarly drifter and diplomat, rather than a secret double-agent. His studies into Oxygen seem relatively commonplace to us, as scholars now in the 21st Century. However, in the early 17th Century, Sendivogius was putting a written name to elements of Nature that were shrouded in mystery. Even the Element of "Water" although seen as rain, even back then, was not known except by a few scientists to consist of two parts Hydrogen and One part Oxygen. Symbolized by: H₂O .

Michael Sendivogius emphasized that oxygen is "vital air." Many subsequent scientists took Sendivogius theories and amplified them in new and diverse ways: In the year 1891, **the Scottish chemist Sir James Sewar** {who is better known as the inventor of today's modern "thermos-bottle"} **discovered that oxygen is magnetic**. He maintained this is caused by the spin of unpaired electrons in the outer electron orbit, and this makes it difficult to form new chemical bonds.

In the 20th Century discoveries were made were hyperbaric oxygen therapy and treatment chambers to pump force oxygen into the body at levels greater than normal atmospheric pressure. These HBOT procedures have been found successful speeding-up wound healing, treating gangrene, and victims of carbon-monoxide poisoning. A patient may for a period of time breathe-in 100% pure oxygen, and then have momentary breaks to breathe-in "room air" (21% oxygen) to reduce the risk of oxygen toxicity. Blood oxygenates in the lungs and oxygen clings to red blood-cells which is then carried via blood vessels to various tissues of the body, to thus enable various organs of the body to continue functioning. In a different contrast, studies have shown that the ratio of pure oxygen to normal air has to be delicately precise, especially with newborn infants.

Sendivogius' study of Oxygen is quite remarkable. Most scientists who study earth, animal, mineral, or vegetable-matter are looking at something they can see, touch, and even taste. Studying Oxygen's properties was considerably more difficult. Critics scoffed that such findings were useless 'magic.' However, Sendivogius proved his critics to be wrong. As Masonic Rosicrucians, we can learn a great deal from the life and works of Michael Sendivogius. Oxygen is, in fact, what he defined it as: "the food of life."



Sources / Recommended Readings / Exhibits:

- Postal Letter from Claire Fanger, Religious Studies & Humanities, Rice University - MS 15, 6100 Main Street, Houston, Texas 77005 to Frater James A. Marples of Longview, Texas dated December 2, 2013. Prof. Sanger was most helpful in defining the most obscure Alchemical Symbols on the Sedziwoj medal.

- "Michael Sendivogius and Christian Rosenkreutz" by Rafal T. Prinke. Published in The Hermetic Journal, Year 1990. Pages 7298.

- "LETTERS OF MICHAEL SENDIVOGIUS TO THE ROICRUCIAN SOCIETY." Found in an old manuscript. Translated by Ebenezer Sibly, M.D., year 1791. This work was published in French in "traitez du Cosmopolite noevellement decouverts ou après avoir donne unde idee d'une Societe de Philosophes, Paris. Year 1691.

- "Water which does not wet hands. The alchemy of Michael Sendivogius". Institute for the History of Science. Polish Academy of Sciences at Warsaw. Published in London-Warsaw. Year 1994.

-Exhibit A. Bronze Medal depicting MICHAL SEDZIWOJ (Michael Sendivogius) 1556-1636.

-Exhibit B. Chart showing a few of the major Signs of the Alchemists and their Significance.

-The Scientific Revolution, The Scientific Community by Robert A. Hatch, University of Florida. Compiled by Richard S. Westfall.

- "Oxygen Toxicity" by Ola Didrik Saugstad. Manual of Neonatal Respiratory Care, Chapter 6.

- "A new light of alchemie taken out of the fontaine of nature, and manuall experience: to which is added a treatise of svlphvr. Written by Michael Sandivogis". First Published in Prague, Year 1604. This English translation is the first of any work of Sedziwoj (Sendivogius) translated by John French, M.D.

-Secondary translation of "The New Chemical Light" (Novum Lumen Chymicum) This version published 1608 with Translation into English by Jerry Jukas. (Note: some scholars dispute the original authorship).

-Mackey's Encyclopedia of Freemasonry by Dr. Albert G. Mackey, M.D., 33° and a K.T.

- "The Complete Dictionary of Scientific Biography". Vol. 12, page 306, Gale Virtual Reference Library. Courtesy of an e-mail transmission from Rachel Crane, {Sciences



Librarian at Ablah Library at Wichita State University, Wichita, Kansas } to Frater James A. Marples, dated 16 January 2014.

-JAMA or Journal of the American Medical Association: "Alchemist Sendivogius and Sigismund III Vasa. By the JAMA Section Editor James C. Harris, M.D.

-"Oxygen's double-edged sword: balancing muscle O2 supply and use during exercise" by David C. Poole, Professor of Kinesiology, Anatomy and Physiology, Kansas State University, Manhattan, Kansas. Prof Poole via e-mail transmission to Frater James A. Marples dated January 29, 2014, kindly gave Frater Marples permission to cite his work.

-"Jina czastka, nove kratochwile" by Georgius Carolides a Calsperga. Prague. Year 1598.

-"Historie de la philosophie hermetique." Published at The Hague. Year 1598.

-(Author's Note): The author Frater James A. Marples would like to thank Aleksandra Warchol, who did a thesis in Cracow, Poland, pertaining to the city as a center of alchemy and other arts, for her information given Frater Marples on 10 December 2013 and subsequent electronic transmissions in January 2014.

-(Author's Note): Michael Sendivogius also wrote another book, never published," called "Harmonia."

- "Research of medical gases in Poland" by Robert P. Ostrowski and Emanuela B. Pucko. 2013, 3-17.

- Indiana University at Bloomington: "Symbol Guide: The Chymistry of Isaac Newton"

webpage: <http://webapp1.dlib.indiana.edu/newton/reference/symbols.do>

About the Author:

Frater James A. Marples, VIII^o is a Perpetual Life Member of Mulvane Masonic Lodge #201 A.F. & A.M. in Mulvane, Kansas. He is a Life Member of The International Peace Gardens Lodge of Freemasons (Canada-USA) and also an Honorary Member of Golden Rule Masonic Lodge #562 in Willard, Ohio; as well as an Honorary Member of Nelson Masonic Lodge #77, in Nelson, Nebraska, which has recently consolidated with the Superior Masonic Lodge at Superior, Nebraska.

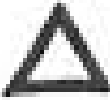




















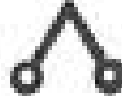
Companion and Sir Knight Jim is a Life Member of the Wichita York Rite Bodies (Wichita Chapter #33 R.A.M.; Wichita Council #12 R.& S.M.; and Mt. Olivet Commandery #12 K.T.). He is also a Life Member of the Lincoln Nebraska Scottish Rite Bodies; The Robert-the-Bruce Association (California); The George Washington Masonic Stamp Club; Masonic Order of the Gordian Knot (Indiana); Masonic Order of the Sword of Bunker Hill; Kentucky Chapter #134 of National Sojourners and Heroes of '76; North Texas York Rite College #118 of Sherman, Texas; and Nebraska College S.R.I.C.F.



He is a Regular Member of The Allied Masonic Degrees; Grand College of Rites; St. David Conclave of The Red Cross of Constantine; Shawnee County Kansas Square and Compass Club; and Holyrood Council #61 of Knight Masons (Nebraska).

EXHIBIT "B"

**SYMBOLS OF THE ALCHEMISTS AND
THEIR SIGNIFICATIONS.**

| | | | | | | |
|---|---|--|---|---|---|---|
| Fire. | Air. | Water. | Water. | Earth. | | |
|  |  |  |  |  | | |
| Lead. | Tin. | Iron. | Gold. | Copper. | Mercury. | Silver. |
|  |  |  |  |  |  |  |
| Antimony. | Arsenic. | Aqua Vitæ. | Borax. | To Purify. | | |
|  |  |  |  |  | | |
| Cinnabar. | Caput Mortuum. | An Oil. | Saltpeper. | Magnet. | | |
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