Salicinium: Induced Apoptosis and Phagocytosis of Circulating Tumor Cells and Cancer Stem Cells

by Robert A. Eslinger, DO, HMD

Here at Reno Integrative Medical Center, since starting to use Salicinium in our protocol two years ago, we have seen a dramatic improvement in the outcome of our treatments. Salicinium, a natural plant extract, is a complexed glycome (sugar) molecule that enters into a metabolic reaction, shutting down the ability of the cancer cell to hide from the immune system. An active immune system can then recognize the cancer cell as abnormal and destroy it without harming any normal cells.

In 1931, German physician and scientist Otto Warburg received the Nobel Prize for proving that all cancer cells primarily use a very primitive method of producing energy from sugar.[1] It is called anaerobic metabolism or anaerobic glycolysis, which is very slightly different than aerobic (oxygen/respirative) glycolysis. It's actually a form of fermentation. It takes place in the liquid part of the cell called the cytoplasm without the use of oxygen. This process is 18 times less efficient at producing a given amount of energy from a given amount of sugar than normal aerobic metabolism using oxygen.

As an analogy: all glycolysis in all energy-producing cells is exactly the same – up to a point. Picture a manufacturing plant (the cytosol) in which parts are taken in at one end and many assembled goods exit the other end. Once going through the plant, the assembled parts make a right-hand turn into another plant called a "finishing" plant (the mitochondria). Everything is always wonderful for both the day and night shift until the supply of parts (nutrition and oxygen) goes awry. In this case we'll say it is the oxygen supply.

Oxygen is what keeps the door of the finishing plant open for business. Without oxygen, the door will automatically close and all those assembled parts made by the cytosol have nowhere to go. If allowed to pile up, the permanently operating cytosol plant would just explode and be destroyed. So very quickly the cytosol plant obligatorily makes the decision to rebox the products and send them out the door to the left to the recyclers (liver) for another day.

While the finishing plant is down, a lot of junk and debris are created by the still running cytosol (acids and enzymes). This begins to affect the next door manufacturing plants also, and slowly the neighborhood deteriorates. After a given amount of time (unknown), the workers in the finishing plant lose their jobs and the business is lost forever and cannot be replaced. Picture this happening time after time as the surrounding plants (cells) succumb to the blight until a complaint goes out to the controlling government (the immune system), which shows up without the right tools to help the businesses get back in operation.

So what does the government do, not having the right tools? "Well let's build a wall (tumor) around this ugly blight until we can bring in help from the outside." However, not realizing that help may not arrive until too late or maybe never at all, the workers in the manufacturing plant (cytosol) keep covering the whole mess up with a big tarp (alpha-N-acetylgalactosaminidase, or Nagalase) to keep the government (immune system) from seeing it and shutting the whole thing down.

Cancer forms for only one reason: a lack of sufficient oxygen to a certain subset of the 210 different types of cells known to make up the human body. This is known as hypoxia. There may be a thousand things that cause hypoxia, but there is no cancer cell that does not commence and live by hypoxia. To survive and keep producing energy, these cells must switch over to anaerobic glycolysis alone as the source of their energy. At exactly the same time as fermentation starts, the now sickened, dysfunctioning cells must also start protecting themselves from the immune system. This is also exactly what our normal white muscle cells do when overworked and the oxygen level falls below a level necessary for respiration. They do this by producing the protective enzyme called Nagalase.

Nagalase has the ability to completely shut down the localized immune macrophage and natural killer cells, whose job is to destroy any cell that has been harmed or is not functioning normally. It effectively "cloaks" the cancer cells from detection by the immune system. This is the reason that someone can have a strong, functioning immune system and still be growing a tumor. Cancer cells live in a very acidic environment. The acidic environment does not create the cancer; it's the other way around. The process for this is NAD+, a coenzyme (nicotinamide adenine dinucleotide) in the cell, through an oxidation/reduction reaction attaches itself to hydrogen and becomes NADH+H+. This then by way of

fermentation becomes pyruvate and then on to lactate. The hydrogen then passes out through the cell membrane by way of lactate and into the milieu of the surrounding environment. This process takes hydrogen atoms from inside the cells to the outside and is repeated over and over. A lack of hydrogen is alkaline and an overabundance is acidic.

Utilizing the glycolytic pathway, the malignant cell senses Salicinium passing by in the bloodstream and invites it in by utilizing the GLUT4 receptor. Upon entering the cell, another enzyme known as the debranching enzyme, which is called beta-glucosidase in a fermenting cell and also the placental trophoblast cell, splits the sugar from the complex molecule. The nonglycome part of the molecule, when released, attaches to the NAD+ and disrupts the oxidation/reduction process that creates the NADH+H+. This causes the cell to cease production of Nagalase.[2]

Upon stopping the production of Nagalase, the macrophage and natural killer cells can resume their function that was "turned off" by the Nagalase. Once again they recognize the now-sick, unprotected, dysfunctional cells and dispose of them as they would any other cells at the end of their life cycle. Salicinium has simply removed the cloak, allowing the body's own natural immune response to work as it should. Since Salicinium is a complexed sugar, it is harmless to any normal cell in the body because a normal cell cannot assimilate a complex glycome due to having no GLUT4 receptors; and because Salicinium is a complexed molecule as discussed before and not a "free" glucose, it has no impact on the patient's blood sugar, making it beneficial for use in diabetics. Finger-stick glucose testing will quickly prove this important point.

The Salicinium molecule can go any place in the body that blood or other fluids go, including through barriers placed by the body for protection such as the blood–brain barrier. A daily dose of 3 grams, whether given IV or orally, allows the molecule to build up within the tissues, eventually saturating the patient. It is for this reason that circulating tumor cells (CTCs) and circulating stem cells (CSCs) can be reduced in as little as 5 days and control can be gained in as little as 3 weeks of IV and oral treatment.

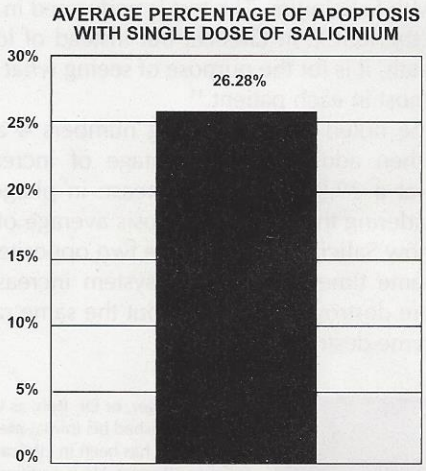
Salicinium is a prospective adjunct to orthodox chemotherapy, as neither interferes with the function of the other. However, by using Salicinium, the dosage of the chemotherapy can be reduced to a fraction (10%–15%) of a full dose. This is especially true when chemotherapy drugs are administered in the setting of IPT (insulin potentiated therapy). This combined type of therapy is dictated by the seriousness and stage of the malignancy.

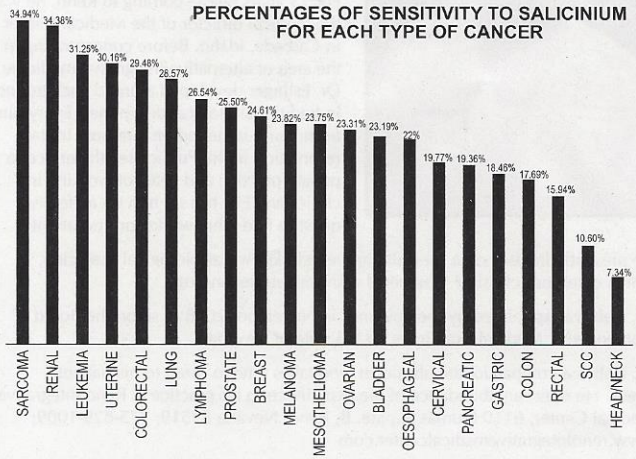
Salicinium has a half-life of approximately 24 hours and is administered by intravenous (IV) infusion 5 days per week for 3 consecutive weeks to start the therapy. Orasal is the encapsulated form and is started orally at the same time as the IV protocol. It has never had a known side effect other than those functions allowed or caused by the immune system, such as chills, localized fever in the area of the tumor, or swelling of the tumor being filled with lymphatic fluids to carry away the necrotizing tissue. Most of the time and in a short amount of time, many patients will find enough relief from pain to lower their intake of pain meds.

Testing for effectiveness of Salicinium has been performed by RGCC (Research Genetic Cancer Centre) in Greece. Its testing platform is known as ex vivo. *Ex vivo* (Latin: "out of living") means that which takes place outside an organism. In science, ex vivo refers to experiments or measurements done in or on tissues, in this case CTCs and CSCs in an artificial environment outside the organism with the minimum alteration of natural conditions.

RGCC uses powerful sorters and flow cytometers as well as negative–selection based interrogation to separate and harvest the CTCs and CSCs from a single blood sample. It then expands the population of these cells in cell culture while managing to keep intact both the genotype and phenotype of the cells.

The expanded cell population is then tested for sensitivity/resistance against 50 natural substances and 43 chemotherapeutic agents. The purpose of the test is to single out the best possible treatment options for each individual patient, and it is of note that the results found in this form of testing prove far more efficacious in vivo.[9] According to Larry Weisenthal, MD, PhD, patients treated with drugs active in these assays have on average a 7-fold greater chance of benefiting from treatment with drugs showing good results in the assays compared with treatment with drugs showing poor results in the assays.[10] Results of this testing using Salicinium can be found below. ➤





Salicinium

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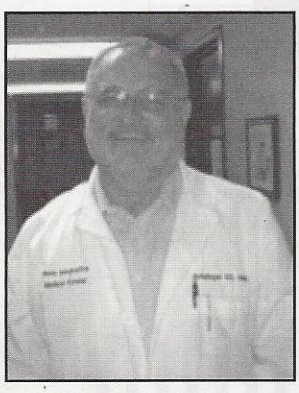
It must be noted that RGCC's method of performing sensitivity testing with Salicinium uses only the equivalent of *one daily IV dose* to measure the amount of apoptosis. While it may at first glance appear that Salicinium has only a 26.28 % efficiency in stopping the metastasizing cells, one must realize this is per a single dose, while the Salicinium protocol calls for 15 IV doses plus the oral program at the same time and continuing on the oral protocol for some time thereafter.

Day after day the cancer cells are taking in the molecule, and day after day apoptosis and autophagy are reducing the total number of cancer cells until over time they can no longer be measured. It is for this reason that the oral protocol must be followed until *all* cancer cells are gone. At this point a person will have a normal Nagalase level just as a normal healthy person without cancer or other anaerobic disease. His immune system testing would appear normal, as there is nothing more for it to react to, his tumor markers will have returned to normal, and his scans would appear clear. It would now be appropriate to begin changing his underlying issues such as heavy metal toxicity, nutrient mineral deficiency, and more to help insure less chance of recurrence in the future.

A different study was performed by Biofocus Laboratory in Germany comparing natural killer (NK) cell activity before and after dosing with Salicinium. The test is performed in much the same way as the RGCC in Greece, but instead of looking for cancer cell death, it is for the purpose of seeing *what enhances* NK cells the most in each patient.[11]

It should be noted that by leaving numbers 4 and 5 out as controls, then adding the percentage of increases, you would arrive at a 29.9% average increase in phagocyte cell activity. Considering the RGCC apoptosis average of 26.28%, you can see how Salicinium does these two opposite activities both at the same time, the immune system increases as the cancer cells are destroyed, both at about the same rate due to Nagalase enzyme destruction.



Robert Eslinger, or Dr. Bob, as we fondly call him, finished his formal medical training in 1978. He has been in clinical practice for over 30 years. He is certified in family practice, osteopathic manipulation, and homeopathy.

For 13 years before coming to Reno, he was the medical director of the Medical Center in Cascade, Idaho. Before concentrating in the area of alternative/integrative medicine, Dr. Eslinger developed a broad background in traditional medical disciplines. Everything from being stationed on a remote Indian reservation in the Public Health Service to private practice and years of working in clinics and ERs has set him on a lifelong quest to find what works for his patients.

He presently focuses on a specialty in the field known as biological medicine, which combines classical treatments with modern technology.

Dr. Bob was appointed by the governor in November 2008 to sit on the Board of Homeopathic Medical Examiners for the state of Nevada.

Dr. Bob is a compassionate physician who takes time to listen to his patients' needs. He offers an abundance of life experience to his practice at Reno Integrative Medical Center, 6110 Plumas St., Ste. B, Reno, Nevada 89519; 775-829-1009; www.renointegrativemsdicalcenter.com

We have been more than pleased with this new adjunct to our treatment program. It is exciting to see our patients improve and prosper in health. In the last year, our patient load has increased dramatically and it's exciting to see our results backed up by the new 967 patient RGCC report. At a recent Cancer Conference in Reno, where I spoke on Salicinium, I had the opportunity to talk with several other physicians who were just as excited to see the same kind of recoveries in stage III and IV patients as we are. Salicinium is showing itself to be a great step forward in the search for a new, nontoxic, effective therapeutic in the ongoing fight to defeat cancer.

Notes

1. Warburg O, Posener K, Negelein E. Ueber den Stoffwechsel der Tumoren. *Biochem Z.* 1924;152:319–344. Reprinted in English in Warburg O. On Metabolism of Tumors. London: Constable; 1930.
2. Korbelik M, VR Naraparaju, N Yamamoto. The value of serum alpha-Nacetylgalactosaminidase measurement tor the assessment of tumour response to radio- and-photodynamic therapy. *Br J Cancer.* 1998;77:1009–1014.
3. Reddi AL et al. Serum alpha-N-acetylgalactosaminidase is associated with diagnosis/prognosis of patients with squamous cell carcinoma of the uterine cervix. *Cancer Lett.* 2000;158:61–64.
4. Yamamoto N, Urade M. Pathogenic significance of alpha-N-acetylgalactosaminidase activity found in the hemagglutinin of influenza virus. *Microbes Infect.* 2005;7:674–681
5. Yamamoto N. Pathogenic Significance of alpha-N-acetylgalactosaminidase activity found in the envelope glycoprotein gp160 of human immunodeficiency virus Type I. *AIDS Res Hum Retroviruses.* 2006;22:262–271.
6. Yamamoto N, Suyama H, Yamamoto N. Immunotherapy for prostate cancer with Gc protein derived macrophage activating factor (GcMAF). *Transl Oncol.* 2008;1:65–72.
7. Yamamoto N et al. Therapeutic efficacy of vitamin D3-binding protein macrophage activating factor for prostate, breast and colon cancers. *Cancer Res Proc.* 1997;38:31.
8. Yamamoto et al. Deglycosylation of serum vitamin D3-binding protein leads to immunosuppression in cancer patients. *Cancer Res.* 1996;56:2827–2831.
9. TU-Profile Plus. See www.rgcc-genlab.com/?tests.
10. Weisenthal L. Frequently asked questions [Web page]. Human Tumor Assay Journal. weisenthal.us/Home.html.
11. Molecular oncology: directory of services [online brochure]. Biofocus Labs. www.biofocus.de/PDF/Onkologie/BF_111_Brochure_M-Oncology.pdf.

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Immune-Stimulative Effect of Salicinium on Immune Cells from Cancer Patients
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Methods:
Immune cells were obtained from blood samples of cancer patients. The capability of these immune cells to kill tumor cells in vitro was determined by using a cellular NK-test (Neri et al., Clin Diagn Lab Immunol. 2001 November; 8(6): 1131–1135). The basal killing activity was compared to the killing activity after treatment of the immune cells with Salicinium and the mistletoe extract Lektinol.

Results:

Patient #	Tumor Type	Basal Killing Activity (% lysis)	Additional Killing Activity (%) After Treatment with Salicinium	Additional Killing Activity (%) After Treatment with Lektinol
1	Cervical	7	28	11
2	Stomach	17	17	15
3	Breast	14	31	8
4	No tumor	34	6	28
5	No tumor	37	3	10
6	Breast	13	41	36
7	Breast	9	21	18
8	Prostate	31	32	46
9	Breast	9	39	15