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Melanin and connection to earth.

What is melanin: melanin is a pigment, our skin color, a molecule, a polymer, it what helps us see, hear, it converts the electromagnetic spectrum and gives us energy we need from the sun. I will be doing a presentation about melanin in interstellar space, I will be talking about melanin and insoluble organic matter, how similar they are, and how it helped the early life lived through the radiation during early earth. What I will be talking about is melanin and its connections to the Earth and how it helped start life and gave life its necessary building block for life. I can not prove this to you; however I can give you information that you can absorb and create your own general theories about melanin and space. I all have melanin, and there is no doubt about it, we all have melanin in our skin, melanin however how did our parents get it, and how did our parents parents get it, and how did our parents parents get it, and how did our parents parents parents get it. Well melanin is created by amino acids, specifically tyrosine, and tyrosinase. Chondrites which is a stony meteorite that is a piece of rock from the mother asteroid holding Insoluble organic matter, and melanin needs organic matter to be created, chondrites and in carbonaceous meteorites we can speculate that the asteroids and meteorites help bring the resources to create the melanin and many other things I will also talk about fungi, and an organism that many do not know about. This research to me is fundamental, we want to help people know that melanin is very powerful and that it is not just a pigment, which some people think it is, melanin is very important to our system, so I hope that this paper helps you realize that your skin is something bigger than you think it is, it is melanin can be the building block to Earth itself, and many people will think I am delusional and saying melanin is in this, melanin is in that, when that is not the case, I am trying to open your mind and show the mystery to what space contains, and show you the theories and claims that space gives us the resources we need and get, I will also be making my own claim and having my own theory about space and how it might contain melanin in stardust, asteroids, chondrites, and meteorites. In the thesis I will be talking about melanin and its connections it has to Earth and how it help Earth get its resources and its melanin in organisms, animals, and even humans.

There is a possibility that melanin helps start Earth and help evolution, and I start from space and go down to Earth. However first we will talk about rocks, yes rocks. We have been taught that rocks do not live, and for a long time I believe that too, however, what about asteroids, comets, and chondrites? According to Ekaterina Dadachova in her article review from by Marco d'Ischia et al “ Insoluble organic matter in chondrites: Archetypal melanin-like PAH-based multifunctionality at the origin of life?” in her review of this article she is talking about Insoluble organic matter, chondrites, comets, and Melanin, I found from her research, that compounds composing the Insoluble Organic Matter which is found in carbonaceous chondrites and melanins, the versatile dark pigments which are present in all life forms on Earth. From a physical point of view melanin is distinguished from other polycyclic aromatic hydrocarbons (A polycyclic aromatic hydrocarbon is a class of organic compounds that is composed of multiple aromatic rings) by being a stable free radical which has paramagnetic properties as a result of possessing an unpaired electron, chemically, Melanin can be synthesized from a broad range of structurally diverse precursors. Studies in which cold and desiccation tolerant organisms were exposed to simulated Mars surface conditions while being embedded in regolith(a region of loose unconsolidated rock and dust that sits atop a layer of bedrock) like rock have been carried out and revealed high levels of survival of melanized organisms, including melanized fungi *Wangiella dermatitidis*. Melanized fungi survived much better than compared to its albino mutant. Melanin can absorb electromagnetic radiation such as UV, gamma rays, visible, and more. Consistent with this, there is a high incidence of melanized fungi in such extreme environments as the rocky deserts of Antarctica and the damaged nuclear reactor in Chernobyl, in Ukraine. It has also been demonstrated that melanized fungi can survive cosmic radiation while exposed on the surface of the International Space Station. Thus, the presence of Melanin and Insoluble organic matter could have probably protected biological molecules and vulnerable earliest life forms on Earth from high fluxes of electromagnetic radiation. This also reinforces the theory of panspermia, which means organisms were transported from planet to planet. This also means that Insoluble organic matter could have and maybe not come alone on that rock from space.

According to Paulo Henrique Rampelotto and his article “Extremophiles and Extreme Environments” Some life forms at the beginning of earth which is a bacteria, particularly the extremophiles, and organisms that can live in harsh environments, which have high levels of radiation, very high temperatures, and even high Ph levels. The extremophiles were able to survive the high amounts of radiation because of their tough bodies. However I hypothesize that phymelanin which is melanin for bacteria, helped keep these extremophiles survive through these hash environments. I have learned about life and organisms and radiation is that they adapt to their environment like the black chernobyl frog, which turned black because of the radioactive environment it lived in and

had again function it was able to absorb this radiation and use it to help them live in this environment. So I speculate if the frog can do this, the extremophiles that came from the rocks in outer space already had this function and were able to live in the asteroids or meteorites, and even the comets. In early earth life, there was phyomelanin to survive the gaseous state of Earth.

In conclusion, I have gave you guys claims and information and some evidence that there is a high probability of Melanin existing in space, as you heard by my team, you see space is not just space, it is more than that, there is so much more to space then think, and we must not close our minds to that, we must not forget that our bodies are significant that we might not even be from planet earth, and yes I know that this is not about Melanin, however it shows that our bodies are made of more than just simple chemical compounds, like carbon, nitrogen, oxygen, and hydrogen, we could be made of many different things that we can now understand. This is the start of a journey that you can take with my team and I and help us to discover if Melanin is genuinely out there or not. This needs to be more solid information, this is research done by speculation of space and what it has. I want you also to appreciate your body, and the color it has, because many people do not like their skin, however you should love it, love it like it is your child because your skin helps you grow and helps you make you look beautiful the way you are. Therefore thank you for taking the time to read my part of this paper. I hope you enjoy reading the other parts of this paper because it does have a connection to what I am talking about, and you would find this very fascinating!

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