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THE DESPICABLE LAURIE HIGGINS

IN EARLY AUGUST, 2010 I WAS SURFING THE WEB AND HAPPENED UPON THE WEBSITE OF HEMANT MEHTA (AKA: THE FRIENDLY ATHEIST). MEHTA HAD POSTED A PRESS RELEASE FROM LAURIE HIGGINS, A DIRECTOR AT THE ILLINOIS FAMILY INSTITUTE. THE PRESS RELEASE WAS A COLLECTION OF HATEFUL STATEMENTS DIRECTED AT VARIOUS GROUPS, MAINLY HOMOSEXUALS, WHO DID NOT SHARE LAURIE'S BELIEFS AND LIFESTYLE.

I RESPONDED TO THIS PRESS RELEASE BY EMAILING LAURIE AT THE ILLINOIS FAMILY INSTITUTE. AN EMAIL EXCHANGE FOLLOWED WHICH HAS BEEN DOCUMENTED, AND IS AVAILABLE AT:

"THESKEPTICARENA.COM/ARCHIVES" (SHOW #115).

AS A COURTESY, I CC'D MEHTA. MEHTA'S RESPONSE TO ME MADE IT CLEAR THAT HE DID NOT APPRECIATE WHAT I SAID IN MY EMAIL TO LAURIE SO I NO LONGER INCLUDED HIM WHEN REPLYING TO LAURIE'S EMAILS.

FOR THOSE OF YOU UNFAMILIAR WITH THIS LITTLE BUNDLE OF CHRISTIAN HATE, LAURIE HIGGINS, THE EMAIL EXCHANGE REVEALS A WOMAN DEDICATED TO SPREADING CHRISTIAN DISCRIMINATION AND HATRED, DIRECTED AT ALL THOSE WHO DO NOT SHARE HER CHRISTIAN FUNDAMENTALIST BELIEFS AND LIFESTYLE. HER CURRENT PROJECT IS THE DENIAL OF RIGHTS TO GAY PEOPLE BASED ON ANCIENT "HOLY" SCRIPTURES WRITTEN BY JEWISH GOAT HERDERS.

2 WEEKS LATER, AFTER MY INITIAL EMAIL EXCHANGE WITH LAURIE, I WENT TO MEHTA'S SITE TO SEE WHAT WAS NEW AND FOUND A VIDEO OF A SPEECH HE GAVE AT THE SECULAR STUDENT ALLIANCE CONFERENCE. YOU CAN SEE THE 20-MINUTE SPEECH BY GOING TO:

"HTTP://FRIENDLYATHEIST.COM" AND LOCATING THE SECULAR STUDENT ALLIANCE CONFERENCE VIDEO POSTED ON 8/23/10.

HIS SPEECH MIRRORED THE SENTIMENT EXPRESSED BY PHIL PLAIT AT TAM 8 CALLED, "DON'T BE A DICK." THEIR MESSAGE TO FELLOW ATHEISTS IS - "PLAY NICE."

DURING HIS SPEECH MEHTA TOLD HIS AUDIENCE ABOUT HIS LONG-RUNNING BATTLE WITH LAURIE HIGGINS. MEHTA EXPLAINED TO THE AUDIENCE THAT HIS TROUBLES BEGAN LAST SUMMER (2009) WHEN HE RESPONDED TO A PRESS RELEASE ISSUED BY LAURIE IN WHICH SHE ATTACKED GAY PEOPLE AND OTHERS WHO DID NOT SHARE HER LIFESTYLE BELIEFS. MEHTA RESPONDED SIMPLY BY POSTING HIS VIEWS OF HER PRESS RELEASE ON HIS PERSONAL WEBSITE.

HOW DID THIS CHRISTIAN WOMAN RESPOND TO MEHTA EXPRESSING HIS PERSONAL VIEWS ON HIS OWN WEBSITE?

WELL ... ACCORDING TO MEHTA (A HIGH SCHOOL MATH TEACHER) SHE SENT EMAILS TO:

* HIS PRINCIPAL
* THE CHAIR OF THE MATH DEPARTMENT
* EVERY SCHOOL ADMINISTRATOR AT HIS SCHOOL, AND
* THE ENTIRE SCHOOL BOARD!

THAT DISTRIBUTION LIST MIGHT GIVE YOU THE IMPRESSION THAT SHE DIDN'T WANT TO LEAVE ANYBODY OUT, BUT GUESS WHO SHE DIDN'T SEND THE EMAIL TO? THAT'S RIGHT, MEHTA HIMSELF. MEHTA ONLY FOUND OUT ABOUT IT WHEN ONE SCHOOL BOARD MEMBER RESPONDED TO LAURIE AND CC'D MEHTA.

AND GET THIS - IN HER EMAIL LAURIE ACCUSED HIM OF VINDICTIVENESS!

HERE IS WHAT THE BOARD MEMBER WROTE TO LAURIE:

1. HE TOLD LAURIE THAT IT WAS HER EMAIL THAT WAS A PERFECT EXAMPLE OF VINDICTIVENESS; AND NOT A PARTICULARLY GOOD ROLE MODEL FOR FAMILIES TO FOLLOW.
2. IF HER ACTIONS AFFECTED MEHTA'S EMPLOYMENT, LAURIE COULD BE PUTTING THE ILLINOIS FAMILY INSTITUTE IN DANGER OF COSTLY LITIGATION.
3. BY NOT INCLUDING MEHTA IN THE DISTRIBUTION LIST IT WAS OBVIOUSLY A CHEAP SHOT BEHIND HIS BACK.

I WISH MORE SCHOOL BOARD MEMBERS HAD THE COURAGE TO STAND UP FOR THEIR TEACHERS WHEN THEY ARE RIGHT - LIKE THIS ONE DID.

LAURIE TRIED TO SAVE FACE BY CLAIMING THAT SHE WAS NOT TRYING TO GET HIM FIRED!

FOR THOSE OF YOU GULLIBLE ENOUGH TO BELIEVE THAT, GO BACK UP AND READ HER DISTRIBUTION LIST AGAIN. I SERIOUSLY DOUBT THAT SHE WAS RECOMMENDING MEHTA FOR PROMOTION.

SHE THEN TRIED TO JUSTIFY HER VINDICTIVE ACTIONS BY CLAIMING THAT SHE WAS ONLY ACTING IN THE BEST INTERESTS OF THE CHILDREN BECAUSE SHE BELIEVED THAT PARENTS SHOULD KNOW ABOUT THESE KINDS OF TEACHERS SO THAT THEY COULD REMOVE THEIR CHILDREN FROM HIS CLASSROOM (BUT SHE WASN'T TRYING TO GET HIM FIRED).

THIS BARRAGE OF HATE MAIL FAILED TO SPAWN THE MASS EXODUS OF STUDENTS FROM HIS CLASSES OR ANY ADMINISTRATIVE ACTION AGAINST MEHTA AS LAURIE HAD HOPED, SO THIS WONDERFUL CHRISTIAN WOMAN THEN INITIATED A FLURRY OF PRESS RELEASES (INCLUDING 3 IN ONE WEEK) ATTACKING MEHTA.

AFTAH (AMERICANS FOR TRUTH ABOUT HOMOSEXUALITY) APPARENTLY COPIED ONE OF HER RELEASES, AND ADDED TO IT THAT MEHTA MIGHT BE TEACHING "MORE THAN NUMBERS AND EQUATIONS" IN HIS CLASSROOM; IMPLYING THAT HE WAS TRYING TO CONVERT CHRISTIANS TO ATHEISM IN HIS MATH CLASSES. WHAT EVIDENCE WAS OFFERED FOR THAT ACCUSATION? NONE.

MEHTA WAS REALLY FRUSTRATED THAT LAURIE KEPT USING HIS SCHOOL CONNECTION FOR HER PRESS RELEASES INSTEAD OF HIS PERSONAL WEBSITE - BUT OF COURSE, SHE WASN'T TRYING TO GET HIM FIRED (IF THERE ARE ANY OF YOU OUT THERE WHO STILL BELIEVE THAT, I'VE GOT A BRIDGE FOR SELL. IT COULDN'T BE ANY MORE OBVIOUS).

THIS WHOLE EPISODE KIND OF MAKES ME WONDER WHICH BIBLE LAURIE IS USING. IT IS HARD FOR ME TO IMAGINE JESUS BANGING AWAY ON A KEYBOARD, SENDING OUT EMAILS TO TRY TO RUIN SOMEONE'S LIFE BECAUSE THEY DARED TO EXPRESS A CONTRARY OPINION ON THEIR OWN PERSONAL WEBSITE.

THINK ABOUT THE AMOUNT OF TIME THIS CHRISTIAN WOMAN DEVOTED TO TRYING TO DESTROY THE CAREER OF THIS MAN WHILE SHE WAS SUPPOSED TO BE WORKING FOR THE INSTITUTE. IT'S CLEAR THAT HER ANGER WAS MORE IMPORTANT TO LAURIE THAN ANY POSSIBLE LITIGATION THAT THE FAMILY INSTITUTE MIGHT BE SUBJECTED TO AS A RESULT OF HER VENDETTA.

I CAN'T EVEN IMAGINE HOW MUCH EFFORT AND INSTITUTE TIME LAURIE POURED INTO TRYING TO INVESTIGATE ME. SHE PROBABLY HIRED DETECTIVES (WITH INSTITUTE FUNDS) TO TRY TO DISCOVER WHERE I LIVED, WORKED, AND WHO I KNEW. MY EMAILS WERE FAR MORE AGGRESSIVE THAN MEHTA'S ARTICLES, SO IF SHE TRIED TO GET HIM FIRED, SHE PROBABLY HAD "BURNING AT THE STAKE" IN STORE FOR ME.

WITH ALL THESE LITTLE WARS SHE HAS GOING ON, IT'S A WONDER LAURIE FINDS TIME TO DO ANY WORK AT ALL AT THE INSTITUTE. I GUESS SHE HAS LOTS OF FREE TIME ON HER HANDS WHILE AT WORK - OR AT LEAST SHE WOULD HAVE, IF LAURIE QUIXOTE DIDN'T FILL HER LIFE WITH ALL KINDS OF ENEMIES. JESUS WOULD BE SO PROUD. I'M SURE THAT WHEN JESUS GAVE THE SERMON ON THE MOUNT TO CONSTRUCT THE CHRISTIAN PROTOTYPE, HE HAD LAURIE HIGGINS IN MIND.

IF YOU WATCH THE VIDEO OF MEHTA'S SPEECH YOU WILL HEAR HIM DESCRIBE HOW LAURIE HARRASSED HIM AND TRIED TO RUIN HIS CAREER ONE SUMMER; AND THEN THE FOLLOWING SUMMER ATTEMPTED TO REPEAT THE ABUSE ALL OVER AGAIN OVER ANOTHER POST HE MADE.

MEHTA THEN SAYS THAT HE AND LAURIE AGREED TO MEET FOR COFFEE TO DISCUSS THEIR DIFFERENCES. WHEN THEY MET, LAURIE COMPLAINED TO MEHTA ABOUT RECEIVING A NASTY EMAIL FROM ONE OF HIS "FOLLOWERS." LAURIE WAS REFERRING TO ME, NEO, THOUGH I DON'T THINK THAT OCCASIONALLY VISITING A WEBSITE NECESARILY QUALIFIES ONE AS A "FOLLOWER." I OCCASIONALLY, AND ACCIDENTALLY, FIND MYSELF ON THE SITE "BUSTY BABES FROM BROOKLYN" ABOUT, OH MAYBE ... ONCE A WEEK; BUT I DON'T CONSIDER MYSELF A FOLLOWER.

ANYWAY, MEHTA TOLD LAURIE HE HAD NOTHING TO DO WITH MY EMAIL - WHICH WAS TRUE. I WAS MERELY SOMEONE WHO READ SOMETHING OFFENSIVE ON A WEBSITE AND DECIDED TO TAKE INDEPENDENT ACTION.

AFTER HIS MEETING WITH LAURIE, HERE ARE SOME COMMENTS THAT MEHTA MAKES IN HIS SPEECH TO THE SECULAR ALLIANCE:

* "I DON'T THINK SHE'LL BE BOTHERING ME AT SCHOOL ANYMORE."
* "I DON'T THINK SHE IS GOING TO GO AFTER ME."
* "THIS IS GOOD."

MEHTA WAS OBVIOUSLY VERY RELIEVED THAT LAURIE WAS NO LONGER GOING TO BE THREATENING HIS CAREER. THIS IS A VARIATION OF "STOCKHOLM SYNDROME" WHERE VICTIMS BOND WITH THEIR ABUSERS.

PERHAPS MEHTA DID THE RIGHT THING. AFTER ALL, THIS REPRESENTATIVE OF CHRIST WAS TIGHTENING THE SCREWS AND ABOUT TO LIGHT THE MATCH. LAURIE FORCED THIS GOOD, DEDICATED MAN TO HIS KNEES AND INTO SUBMISSION BY PLAYING ON HIS FEARS OF LOSING HIS JOB.

BUT SHE DOES NOT HAVE THAT POWER WITH THOSE OF US WHO ARE NOT VULNERABLE TO HER THREATS.

LAURIE TOO, MUST HAVE BEEN RELIEVED BY THEIR MEETING, BECAUSE I DOUBT SHE EVER HAD TO WORK THAT HARD BEFORE FOR A CUP OF COFFEE.

SOMEHOW, I JUST CAN'T PICTURE PROFESSOR P.Z. MYERS MEETING LAURIE FOR ANYTHING. MY GUESS IS, MYERS WOULD CHEW HER UP AND SPIT OUT HER BONES.

I WILL BE AS CONSIDERATE TO RELIGIOUS BELIEVERS AS THEY ARE TO ME. BUT THE EVIL ONES, LIKE LAURIE HIGGINS ARE MY SWORN ENEMIES. I WILL CONTINUE TO PRODUCE PODCASTS AND PUBLISH BOOKS TO COMBAT THE SPREAD OF RELIGIOUS HATRED THAT HAS ENSLAVED HUMANS FOR THOUSANDS OF YEARS.

NO GOD IN ANY RELIGION WOULD ALLOW LAURIE INTO HEAVEN BECAUSE THEN IT WOULD NO LONGER BE HEAVEN - IT WOULD BE HELL. HAVING CHRISTIANS REPRESENTED BY THE DESPICABLE AND VILE LAURIE HIGGINS IS LIKE HAVING THE SOCIETY FOR THE PREVENTION OF CRUELTY TO ANIMALS REPRESENTED ... BY MICHAEL VICK.

AND NO LAURIE, WE WON'T BE HAVING COFFEE ... AT LEAST NOT IN THIS LIFETIME.

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THE SCIENCE SEGMENT

SECOND GENESIS ON EARTH?

ALL LIFE ON EARTH - FROM MICROBES TO ELEPHANTS AND US - IS BASED ON A SINGLE GENETIC MODEL THAT REQUIRES THE ELEMENT PHOSPHORUS AS ONE OF ITS SIX ESSENTIAL COMPONENTS.

BUT NOW RESEARCHERS HAVE UNCOVERED A BACTERIUM THAT HAS FIVE OF THOSE ESSENTIAL ELEMENTS BUT HAS, IN EFFECT, REPLACED PHOSPHORUS WITH ITS LOOK-ALIKE BUT TOXIC COUSIN ARSENIC.

NEWS OF THE DISCOVERY CAUSED A SCIENTIFIC COMMOTION, INCLUDING CALLS TO NASA FROM THE WHITE HOUSE AND CONGRESS ASKING WHETHER A SECOND LINE OF EARTHLY LIFE HAS BEEN FOUND.

A NASA PRESS CONFERENCE THURSDAY AND AN ACCOMPANYING ARTICLE IN THE JOURNAL SCIENCE, GAVE THE ANSWER: NO, THE DISCOVERY DOES NOT PROVE THE EXISTENCE OF A "SECOND GENESIS" ON EARTH. BUT THE DISCOVERY VERY MUCH OPENS THE DOOR TO THAT POSSIBILITY AND TO THE RELATED EXISTENCE OF A THEORIZED "SHADOW BIOSPHERE" ON EARTH - LIFE EVOLVED FROM A DIFFERENT COMMON ANCESTOR THAN ALL THAT WE'VE KNOWN SO FAR.

FELISA WOLFE-SIMON, THE YOUNG BIOCHEMIST WHO LED THE EFFORT AFTER BEING SELECTED AS A NASA ASTROBIOLOGY RESEARCH FELLOW AND AS A MEMBER OF THE NATIONAL ASTROBIOLOGY INSTITUTE TEAM AT ARIZONA STATE UNIVERSITY SAID,

"OUR FINDINGS ARE A REMINDER THAT LIFE-AS-WE-KNOW-IT COULD BE MUCH MORE FLEXIBLE THAN WE GENERALLY ASSUME OR CAN IMAGINE. IF SOMETHING HERE ON EARTH CAN DO SOMETHING SO UNEXPECTED - THAT BREAKS THE UNITY OF BIOCHEMISTRY - WHAT ELSE CAN LIFE DO THAT WE HAVEN'T SEEN YET?"

THE RESEARCH, FUNDED THROUGH NASA AND CONDUCTED WITH SAMPLES FROM CALIFORNIA'S MONO LAKE, FOUND THAT SOME OF THE BACTERIA NOT ONLY USED ARSENIC TO LIVE, BUT HAD ARSENIC EMBEDDED INTO THEIR DNA, RNA AND OTHER BASIC UNDERPINNINGS.

MARY VOYTEK, SENIOR SCIENTIST FOR NASA'S PROGRAM IN ASTROBIOLOGY, THE ARM OF THE AGENCY INVOLVED SPECIFICALLY IN THE SEARCH FOR LIFE BEYOND EARTH AND FOR HOW LIFE BEGAN HERE, SAID,

"THIS IS DIFFERENT FROM ANYTHING WE'VE SEEN BEFORE, THESE BUGS HAVEN'T JUST REPLACED ONE USEFUL ELEMENT WITH ANOTHER, THEY HAVE THE ARSENIC IN THE BASIC BUILDING BLOCKS OF THEIR MAKEUP. WE DON'T KNOW IF THE ARSENIC REPLACED PHOSPHORUS OR IF IT WAS THERE FROM THE VERY BEGINNING - IN WHICH CASE IT WOULD STRONGLY SUGGEST THE EXISTENCE OF A SHADOW BIOSPHERE."

THEORETICAL PHYSICIST AND COSMOLOGIST PAUL DAVIES, DIRECTOR OF THE BEYOND CENTER AT ARIZONA STATE AND A PROLIFIC WRITER, IS A CO-AUTHOR ON THE PAPER. HE HAD BEEN THINKING ABOUT THE IDEA FOR A DECADE AND HAD WRITTEN A PAPER IN 2005. SO HAD CAROL CLELAND, A PHILOSOPHER AND ASTROBIOLOGIST AT THE UNIVERSITY OF COLORADO AT BOULDER. BOTH ASKED WHY NOBODY WAS LOOKING FOR LIFE WITH DIFFERENT ORIGINS ON EARTH, AND CLELAND COINED THE PHRASE "SHADOW BIOSPHERE."

AT A BEYOND CENTER CONFERENCE FOUR YEARS AGO, WOLFE-SIMON, THEN IN HER LATE 20'S, PROPOSED A WAY TO SEARCH FOR A POSSIBLE SHADOW BIOSPHERE, AND IT INVOLVED MONO LAKE AND ITS ARSENIC.

DAVIES SAID, "WE WERE KICKING VAGUE IDEAS AROUND, BUT SHE HAD A VERY SPECIFIC PROPOSAL AND THEN WENT OUT AND EXECUTED IT. IT DEFIES LOGIC TO THINK SHE FOUND THE ONLY EXAMPLE OF THIS KIND OF UNUSUAL LIFE. QUITE CLEARLY, THIS IS THE TIP OF A HUGE ICEBERG."

ALL LIFE AS WE KNOW IT CONTAINS SIX ESSENTIAL ELEMENTS - CARBON, HYDROGEN, OXYGEN, NITROGEN, SULFUR AND PHOSPHORUS - THAT HAVE QUALITIES THAT MAKE THEM SEEMINGLY IDEAL FOR THEIR TASKS. A FORM OF PHOSPHORUS, FOR INSTANCE, IS NEAR PERFECT FOR BUILDING THE FRAMEWORK FOR THE DNA MOLECULE, AND ANOTHER FORM IS CRUCIAL TO THE TRANSFER OF ENERGY WITHIN CELLS.

THESE FORMS OF PHOSPHORUS ARE WELL SUITED FOR THEIR JOB BECAUSE THEY ARE ESPECIALLY STABLE IN THE PRESENCE OF WATER. ARSENIC IS NOT, AND THAT FACT IS ONE THAT RAISES CONCERNS FOR SOME RESEARCHERS FAMILIAR WITH THE MONO LAKE BUGS.

CHEMIST STEVEN BENNER OF THE FOUNDATION FOR APPLIED MOLECULAR EVOLUTION IN FLORIDA HAS BEEN INVOLVED IN "SHADOW BIOSPHERE" RESEARCH FOR SEVERAL YEARS, AND WILL SPEAK AT THE NASA UNVEILING OF WOLFE-SIMON'S WORK. HE SAYS THAT THE MONO LAKE RESULTS ARE INTRIGUING, AND STATED, "I DO NOT SEE ANY SIMPLE EXPLANATION FOR THE REPORTED RESULTS THAT IS BROADLY CONSISTENT WITH OTHER INFORMATION WELL KNOWN TO CHEMISTRY." BUT HE SAYS THEY ARE NOT YET PROVEN; AND A PRIMARY REASON WHY, IS THAT ARSENIC COMPOUNDS BREAK DOWN QUICKLY IN WATER WHILE PHOSPHORUS COMPOUNDS DO NOT.

HIS CONCLUSION: "IT REMAINS TO BE ESTABLISHED THAT THIS BACTERIUM USES ARSENATE AS A REPLACEMENT FOR PHOSPHATE IN ITS DNA OR IN ANY OTHER BIOMOLECULE."

NONETHELESS, THE PAPER AND ITS RESULTS HAVE CREATED AN EXCITEMENT REMINISCENT OF THE 1995 ANNOUNCEMENT AT NASA HEADQUARTERS OF THE DISCOVERY OF APPARENT SIGNS OF ANCIENT LIFE IN A METEORITE FROM MARS FOUND IN ANTARCTICA. THAT FINDING WAS CENTRAL TO ESTABLISHING THE FIELD OF ASTROBIOLOGY, BUT WAS ALSO BROADLY CHALLENGED AND A SCIENTIFIC CONSENSUS DETERMINED THAT THE CASE FOR SIGNS OF LIFE IN THE METEORITE HAD NOT BEEN PROVEN.

THE MONO LAKE DISCOVERY HIGHLIGHTS ONE OF THE CENTRAL CHALLENGES OF ASTROBIOLOGY - KNOWING WHAT TO LOOK FOR IN TERMS OF EXTRATERRESTRIAL LIFE. WHILE IT REMAINS UNCERTAIN WHETHER THE LAKE'S MICROBES REPRESENT ANOTHER LINE OF LIFE, THEY SHOW THAT ORGANISMS CAN HAVE A CHEMICAL ARCHITECTURE DIFFERENT FROM WHAT IS CURRENTLY UNDERSTOOD TO BE POSSIBLE.

ARIEL ANBAR, AN ASU PROFESSOR AND BIOGEOCHEMIST SAID, "FELISA'S STUDY TEACHES US THAT WE OUGHT TO THINK HARDER ABOUT WHICH ELEMENTS TO FOLLOW. ONE OF THE GUIDING PRINCIPLES IN THE SEARCH FOR LIFE ON OTHER PLANETS, AND OF OUR ASTROBIOLOGY PROGRAM, IS THAT WE SHOULD 'FOLLOW THE ELEMENTS.' "

MONO LAKE WAS SELECTED AS A WORK SITE BY WOLFE-SIMON BECAUSE IT IS HIGHLY UNUSUAL AND HAD BEEN WELL STUDIED BY OTHER SCIENTISTS TRYING TO ANSWER DIFFERENT QUESTIONS.

THE LAKE RECEIVES RUN-OFF FROM THE SIERRA NEVADA MOUNTAINS, WHICH HAVE RELATIVELY HIGH CONCENTRATIONS OF ARSENIC. WHEN THE WATER ARRIVES AT MONO LAKE, IT HAS NOWHERE TO GO BECAUSE THERE ARE NO RIVERS CARRYING WATER FURTHER DOWNSTREAM. THAT MEANS THE ARSENIC, AND OTHER ELEMENTS AND COMPOUNDS, CAN CONCENTRATE TO UNUSALLY HIGH LEVELS. ARSENIC IS PRESENT IN MONO LAKE AT A CONCENTRATION 700 TIMES GREATER THAN WHAT THE EPA CONSIDERS SAFE.

WOLFE-SIMON WAS INVITED TO USE THE MENLO PARK, CALIF., LAB OF THE U.S. GEOLOGICAL SURVEY AND WAS AIDED IN HER WORK BY SENIOR RESEARCH SCIENTIST RON OREMLAND, WHO HAS STUDIED ARSENIC IN MONO LAKE FOR DECADES. THE INITIAL WORK WAS QUITE SIMPLE: SHE TOOK MUD FROM THE BRINY AS WELL AS TOXIC LAKE INTO THE LAB AND BEGAN GROWING BACTERIA IN PETRI DISHES. SHE GRADUALLY REPLACED PHOSPHATE SALT WITH ARSENIC UNTIL THE SURVIVING BACTERIA COULD GROW WITHOUT NEEDING THE PHOSPHATES AT ALL.

THE BUGS, AN OTHERWISE COMMON BACTERIA IN THE HALOMONADACEAE FAMILY, THRIVED WITHOUT PHOSPHATES AND WITH LOTS OF ARSENIC. SHE THEN DETERMINED THAT THE ARSENIC WAS EMBEDDED IN THE CORE GENETIC AND ENERGY TRANSFER SYSTEMS OF THE BACTERIA - THAT IT APPEARED TO HAVE REPLACED (OR PRECEEDED) THE PHOSPHORUS.

AS SHE EXPLAINED, REPLACING PHOSPHORUS WITH ARSENIC MAY SEEM SUICIDAL, BUT THE TWO ARE VERY SIMILAR IN THEIR MAKEUP. ARSENIC IS CONSIDERED TOXIC BECAUSE MOST LIVING THINGS TAKE IT IN AND TREAT IT LIKE PHOSPHORUS, ONLY TO BE DESTROYED BY THE SMALL DIFFERENCES.

SHE SAID THAT WHILE SMALL AMOUNTS OF THE PHOSPHORUS REMAINED IN THE ARSENIC-BASED BUGS, SHE WAS ABLE TO DETERMINE THAT IT WAS DEFINITELY NOT ENOUGH TO SUPPLY THE PRESUMED PHOSPHORUS NEEDS OF THE CELL. THAT WAS BEING DONE WITH THE ARSENIC.

WOLFE-SIMON SAID, "SOMETIMES I'M ASKED WHY SOMETHING LIKE THIS HAS NEVER BEEN FOUND BEFORE, AND THE ANSWER IS THAT NOBODY HAS RUN THE EXPERIMENT BEFORE. THERE WAS NOTHING REALLY COMPLICATED ABOUT IT - I ASKED A SIMPLE QUESTION THAT WAS TESTABLE AND GOT AN ANSWER."

WOLFE-SIMON SAID SHE HOPES TO FURTHER TEST HER FINDINGS IN NORTHERN ARGENTINA, WHERE, SHE'S BEEN TOLD, SOME MICROBES CAN NOT ONLY TOLERATE ARSENIC, BUT ABSOLUTELY NEED ARSENIC TO SURVIVE.

(MY COMMENT: THIS ARTICLE HAS BEEN THRASHED BY REPUTABLE BIOLOGISTS OVER THE POORLY CONDUCTED SCIENCE THAT WAS USED TO IMPLY THE SENSATIONAL CONCLUSION. THE AUTHORS ARE GOING TO NEED TO DO A LOT MORE WORK BEFORE THEY CAN PROVE THE CLAIMS MADE IN THIS STORY).

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FAMOUS QUOTES

THOMAS JEFFERSON

"RELIGIONS ARE ALL ALIKE - FOUNDED UPON FABLES AND MYTHOLOGIES."

"IGNORANCE IS PREFERABLE TO ERROR;

AND HE IS LESS REMOTE FROM THE TRUTH WHO BELIEVES NOTHING,

THAN HE WHO BELIEVES WHAT IS WRONG."

"A SOCIETY THAT WILL TRADE A LITTLE LIBERTY FOR A LITTLE ORDER

WILL LOSE BOTH, AND DESERVE NEITHER."