

'Root cause of AIDS' now identified, 2 studies claim

BY MONTE MORIN
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Scientists say they have discovered a key process by which the AIDS virus kills key immune cells: It triggers a preprogrammed self-destruct sequence within the cell that is intended to alert fellow immune cells of a crisis.

In papers published in the journals *Science* and *Nature*, researchers at the Gladstone Institutes and University of California at San Francisco wrote they had not only discovered this little-understood process, but also identified an existing drug that may halt it.

"Our studies have investigated and identified the root cause of AIDS," said Gilad Doitsh, a co-author of both studies and a virologist at Gladstone, a San Francisco research facility.

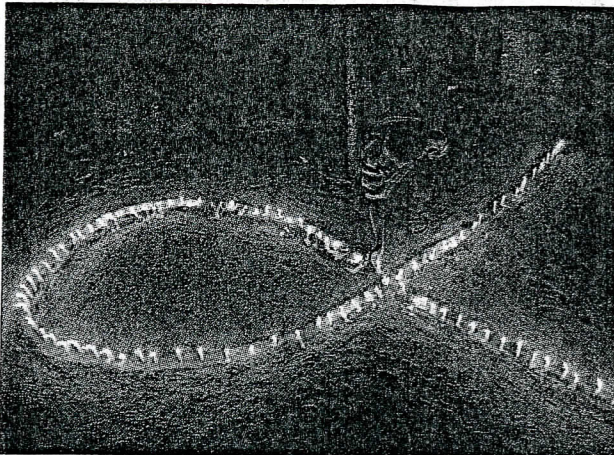
"Despite some 30 years of HIV research, this key HIV/AIDS process has remained pretty much a black box," he said in a statement.

Both studies focus on the body's CD4 T-cells, white blood cells that help defend against infection.

These cells are also the primary target of the human immunodeficiency virus, or HIV, which injects its own genetic material into the immune cell, causing it to reproduce the virus many times over.

Yet there are many immune cells in which the viral reproduction process fails, and the host never becomes a reproduction factory for the virus. These cells are sometimes called "bystander" cells, and it has long puzzled scientists as to why they died, eventually leaving the body with so few immune cells that it can no longer defend against even minor illnesses.

Dr. Warner Greene, the senior author of both studies, and Gladstone's director of virology and immunology research, wrote that after studying HIV-infected ton-



DIPTENDU DUTTA/GETTY-AFP PHOTO

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— Gilad Doitsh, virologist, co-author of research papers

sil and spleen tissues, he and his colleagues determined the bystander cells were dying from pyroptosis, a form of cellular suicide.

Pyroptosis, which in Greek means to go down in flames, is one of a number of preprogrammed self-destruction processes that cells are equipped with.

In pyroptosis, a cell begins to swell and then bursts, releasing inflammatory compounds. Those compounds then attract other immune cells, which seek to fight the infection.

In the case of HIV, however, the arrival of new immune cells provides further targets for the virus, and the cycle continues.

Greene and his colleagues wrote the cell initiates pyroptosis in response to the accumulation of viral genetic material within the cell. Although the material is unable to create new viral particles, the cell recognizes the material as a threat and essentially sacrifices itself in attempt to summon other immune cells.

"The cycle of abortive

infection, inflammatory death and recruitment of new cells likely explains how this innate host response is undermined and, in fact, centrally contributes to HIV pathogenesis," authors wrote.

Through experimentation, researchers determined that the dangerous genetic material was detected by interferon-gamma-inducible protein 16 (IFI16), which in turn activated the cell's trigger for pyroptosis, an enzyme called caspase-1.

Armed with that knowledge, the researchers tested different caspase-1-inhibiting compounds on infected tissue and found some were as effective in preventing the depletion of CD4 T-cells as viral inhibiting drugs.

Researchers are planning a clinical trial to determine whether one of the anti-inflammatory drugs tested can help stop the progression of disease in HIV-infected people.

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Certificate of Religious Marriage of God

Two people are here to be joined in holy matrimony to become one in the eyes of God. This man, _____ and This woman, _____ are married on this day of

_____.

_____, you are bound, as man, to rule wisely in this marriage of God. _____, you are bound, as woman, to obey your husband and be subjected to his Rule as head of your joined bodies and souls. You both shall bequeath all your worldly goods to each other at life's ending.

By the Power of God vested in me, _____, I now pronounce you man and wife. What God has joined together, let no man put asunder.

Notary:

7 He that overcometh shall inherit all things; and I will be his God, and he shall be my son.

8^RBut the fearful, and unbelieving, and the abominable, and murderers, and whoremongers, and sorcerers, and idolaters, and all liars, shall have their part in the lake which burneth with fire and brimstone: which is the second death. Gal. 5:19 • 20:14

9 And there came unto me one of the seven angels which had the seven vials full of the seven last plagues, and talked with me, saying, Come hither, I will shew thee the bride, the Lamb's wife. bowl

10 And he carried me away^R in the spirit to a great and high mountain, and shewed me that great city, the holy Jerusalem, descending out of heaven from God, 1:10

11 Having the glory of God: and her light was like unto a stone most precious, even like a jasper stone, clear as crystal;

12 And had a wall great and high, and had^R twelve gates, and at the gates twelve angels, and names written thereon, which are the names of the twelve tribes of the children of Israel: Ezek. 48:31-34

13 On the east three gates; on the north three gates; on the south three gates; and on the west three gates.

14 And the wall of the city had twelve foundations, and^R in them the names of the twelve apostles of the Lamb. Gal. 2:9

15 And he that talked with me

^Rhad a golden reed to measure the city, and the gates thereof, and the wall thereof. Zech. 2:1

16 And the city lieth foursquare, and the length is as large as the breadth: and he measured the city with the reed, twelve thousand furlongs. The length and the breadth and the height of it are equal. 1500 mi.

17 And he measured the wall thereof, an hundred and forty and four cubits, according to the measure of a man, that is, of the angel. 72 yards

18 And the building of the wall of it was of jasper: and the city was pure gold, like unto clear glass. pure

19^RAnd the foundations of the wall of the city were garnished with all manner of precious stones. The first foundation was jasper; the second, sapphire; the third, a chalcedony; the fourth, an emerald; Is. 54:11

20 The fifth, sardonyx; the sixth, sardius; the seventh, chrysolite; the eighth, beryl; the ninth, a topaz; the tenth, a chrysoprasus; the eleventh, a jacinth; the twelfth, an amethyst.

21 And the twelve gates were twelve pearls: every several gate was of one pearl: and the street of the city was pure gold, as it were transparent glass. 22:2 • clear

22 And I saw no temple therein: for the Lord God Almighty and the Lamb are the temple of it.

23^RAnd the city had no need of the sun, neither of the moon, to

shine in it: for did^T lighten it, the light thereof

24^RAnd the gates which are saved from the light of it: and no earth do bring honour into it.

25^RAnd the gates shall be shut at all times, and no man shall be able to enter into it.

26 And they shall be the people of the Lamb, which shall be the first fruits of the earth, and shall be holy, and shall have the Lamb for their Lord.

27 And there shall be no temple in it: for the Lord God Almighty and the Lamb are the temple of it. And they shall be the people of the Lamb, which shall be the first fruits of the earth, and shall be holy, and shall have the Lamb for their Lord.

CHAL

AND he shewed me a river of water of life, clear as crystal, proceeding from the throne of God and of the Lamb.

2 In the midst of the street of the city, and on either side of the river, there shall be the tree of life, which shall bear twelve fruits, and the leaves of the tree shall be for the healing of the nations.

3 And there shall be no curse upon them: for the throne of the Lord God Almighty and of the Lamb shall be there, and his servants shall be there, and the angels shall be there.

4 And they shall be the people of the Lamb, which shall be the first fruits of the earth, and shall be holy, and shall have the Lamb for their Lord.

5 And there shall be no temple in it: for the Lord God Almighty and the Lamb are the temple of it. And they shall be the people of the Lamb, which shall be the first fruits of the earth, and shall be holy, and shall have the Lamb for their Lord.

- that cover her body.
- 10 Then I'll strip her naked
in the sight of her lovers.^l
No one can rescue her.
- 11 I'll stop Israel's celebrations—
no more New Moon Festivals,
Sabbaths, or other feasts.
- 12 She said, "My lovers gave me
vineyards and fig trees
as payment^m for sex."

Now I, the LORD, will ruin
her vineyards and fig trees;
they will become clumps of weeds
eaten by wild animals.

- 13 I'll punish her for the days
she worshiped Baal
and burned incense to him.
I'll punish her for the times
she forgot about me
and wore jewelry and rings
to attract her lovers.
I, the LORD, have spoken!

The LORD Will Help Israel

- 14 Israel, I, the LORD,
will lure you into the desert
and speak gently to you.
- 15 I will return your vineyards,
and then Trouble Valleyⁿ
will become Hopeful Valley.
You will say "Yes" to me
as you did in your youth,
when leaving Egypt.

16 I promise that from that day on,
you will call me your husband instead
of your master.^o 17 I will no longer even
let you mention the names of those pagan
gods that you called "Master."
18 And I will agree to let you live in
peace—you will no longer be attacked
by wild animals and birds or by weap-

2.10 I'll strip . . . lovers: Or "I'll show her lovers how disgusting she is." ^m2.12 fig trees . . . payment: Hosea uses an unusual word for "fig tree," which is spelled something like the word for "payment." ⁿ2.15 Trouble Valley: Or "Achor Valley." The exact location of the valley is unknown, but in Hebrew "Achor" sounds like "Achan," who brought trouble on Israel by disobeying the Lord (see Joshua 7.24-26). ^o2.16 husband . . . master: In Hebrew the word "master" is the same as the name of the god Baal. But the LORD promises that his people will have a deep personal relationship with him (like a devoted wife and husband) rather than merely a legal tie (like a wife and her "master"). ^p2.19 bride price: It was the custom for the husband to pay his wife's parents a bride price. Instead of money, the LORD will give much better benefits to Israel. ^q2.23 Lo-Ruhamah: See the note at 1.6. ^r2.23 Lo-Amami: See the note at 1.9. ^s3.1 unfaithful woman: This may refer to Gomer, the woman Hosea married (see 1.3), or it may refer to another woman.

Alimony is a part of "Legal Lies" marriage that God has nothing to do with. It is prostitution. to get alimony. God detests any form of prostitution especially temple prostitution that wives do! Wives (Legal) are "Temple Prostitutes" under all marriage laws in American States!

ons of war. ¹⁹I will accept you as my wife forever, and instead of a bride price^p I will give you justice, fairness, love, kindness, ²⁰and faithfulness. Then you will truly know who I am.

²¹I will command the sky to send rain on the earth, ²²and it will produce grain, grapes, and olives in Jezreel Valley. ²³I will scatter the seeds and show mercy to Lo-Ruhamah.^q I will say to Lo-Amami,^r "You are my people," and they will answer, "You are our God."

God's Love Offers Hope

3 Once again the LORD spoke to me. And this time he said, "Hosea, fall in love with an unfaithful woman^s who has a lover. Do this to show that I love the people of Israel, even though they worship idols and enjoy the offering cakes made with fruit."

² So I paid fifteen pieces of silver and about ten bushels of grain for such a woman. ³ Then I said, "Now you are mine! You will have to remain faithful to me, though it will be a long time before we sleep together."

⁴ It will also be a long time before Israel has a king or before sacrifices are offered at the temple or before there is any way to get guidance from God. ⁵ But later, Israel will turn back to the LORD their God and to David their king. At that time they will come to the LORD with fear and trembling, and he will be good to them.

Israel Is Unfaithful

4 Israel, listen
as the LORD accuses
everyone in the land!

all things are lawful for me, but I will not be brought under the power of any.

10:23 • helpful

13^RMeats^T for the belly, and the belly for meats: but God shall destroy both it and them. Now the body *is* not for fornication, but for the Lord;^R and the Lord for the body.

Col. 2:22 • Foods • Eph. 5:23

14 And God hath both raised up the Lord, and will also raise up us by^R his own power.

Eph. 1:19

15^TKnow ye not that your bodies are the members of Christ? shall I then take the members of Christ, and make *them* the members of an ^Tharlot? God forbid.

Realize • prostitute

16 What? know ye not that he which is joined to an harlot is one body? for^R two, saith he, shall be one flesh.

Gen. 2:24

17^RBut he that is joined unto the Lord is one spirit.

Eph. 4:4

18^TFlee fornication. Every sin that a man doeth is without the body; but he that committeth fornication sinneth^R against his own body.

Avoid • Rom. 1:24

19 What?^R know ye not that your body is the temple of the Holy Ghost *which is* in you, which ye have of God,^R and ye are not your own?

2 Cor. 6:16 • Rom. 14:7

20 For^R ye are bought with a price: therefore glorify God in your body, and in your spirit, which are God's.

1 Pet. 1:18; 2 Pet. 2:1

CHAPTER 7

NOW concerning the things whereof ye wrote unto me:

It is good for a man not to^T touch a woman.

live in marriage with

2 Nevertheless, *to avoid^R* fornication, let every man have his own wife, and let every woman have her own husband.

6:13

3 Let the husband^T render unto the wife^T due benevolence: and likewise also the wife unto the husband.

give • her due

4 The wife^T hath not power of her own body, but the husband: and likewise also the husband hath not power^T of his own body, but the wife.

is not master • over

5^TDefraud ye not one the other, except *it be* with consent for a time, that ye may give yourselves to fasting and prayer; and come together again, that Satan tempt you not for your^T incontinency.

Deprive • lack of self-control

6 But I speak this by permission, *and* not of commandment.

7 For^R I would that all men were even as I myself. But every man hath his^T proper gift of God, one after this manner, and another after that.

Acts 26:29 • own gift from

8 I say therefore to the unmarried and widows, It is good for them if they abide even as I.

9 But if they cannot^T contain, let them marry: for it is better to marry than to burn.

control

10 And unto the married I command, *yet* not I, but the Lord, Let^R not the wife depart from *her* husband:

Mal. 2:14; Mat. 5:32

11 But and if she depart, let her remain unmarried, or be reconciled to *her* husband: and let