

## **Al Qaeda in the Islamic Maghreb (AQIM) and the Alleged Production of the Etiological Agent of Plague**

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On January 19, 2009, the British tabloid *Sun* published that at least 40 members of Al Qaeda in the Islamic Maghreb (AQIM) had died of plague in a training camp located in Tizi Ouzou, Algeria.<sup>1</sup> The origin of the *Sun*'s report seems to be a previous one published on January 6 in the online edition of the Algerian newspaper *Echorouk*, which mentioned that the affected AQIM camp was located in the mountainous region between Tizi Ouzou and Bejaia.<sup>2</sup> The *Sun* story stated that AQIM's leader Abdelmalek Droukdel was forced to shut down the camp and evacuate its occupants to Bejaia and Jijel. The tabloid speculated that this incident could be the result of an accident linked to the production of the etiological agent of plague, *Yersinia pestis*, in the training camp.<sup>3</sup> The information published by the British tabloid would have passed unnoticed among the intelligence and CBRN defense community were it not for some more information in an article by Eli Lake in the *Washington Times* of January 20.<sup>4</sup> A senior U.S. intelligence official consulted by Lake confirmed that "an experiment with unconventional weapons went awry" and led to the shutdown of the training camp. This source could not confirm whether the implicated agent was biological or chemical, or the number of AQIM members killed, but dismissed the implication of plague. But what is more, he added that an intercepted communication between AQIM and the Al Qaeda HQ in the Tribal Areas of the Pakistan–Afghanistan border suggested that an area was "sealed to prevent leakage of a biological or chemical substance."

### **Analysis**

Soon after the first newspapers reports were published, a message in ProMED-mail (a program for monitoring emerging diseases of the International Society for Infectious Diseases) dated January 20 by Dr. Saada Chougrani (Faculty of Medicine, University of Oran) informed that no health professionals, including the reference laboratory for plague of

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<sup>1</sup> Alex West, "Deadliest weapon so far... the plague," *Sun*, January 19, 2009.

<sup>2</sup> <http://www.echoroukonline.com/ara/national/31104.html> (accessed January 21, 2009).

<sup>3</sup> Alex West, "Al Qaeda's plague backfires," *Sun*, January 20, 2009.

<sup>4</sup> Eli Lake, "Al Qaeda bungles arms experiment," *Washington Times*, January 20, 2009.

the Institute Pasteur in Oran, had recorded any cases of plague.<sup>5</sup> Algerian authorities have not yet reported any incident or victims of biological or chemical warfare agents, and the Ministry of Health stated on February 2 that no cases of plague had been reported in Algeria since 2003 (countries are required to report human cases of plague to WHO under the International Health Regulations).<sup>6</sup> An AQIM statement dated January 20 also denied the *Echorouk* story, accusing the Algerian intelligence services of spreading this information to frighten individuals thinking of joining the terrorist organization.<sup>7</sup> If true, this psychological operation would also try to frighten those who are already militants to push them to defect and benefit from the provisions of the Charter for Peace and National Reconciliation. This type of PSYOP tactics may be effective to undermine the morale of militant terrorists, but may also have a negative effect in the general public if amplified by sensationalist press.

Even in case a plague outbreak had occurred in the AQIM camp, it could have been a natural outbreak. In fact, between June and July 2003 a bubonic plague outbreak affected at least 10 persons in the Oran region.<sup>8</sup> A later study done in the affected area from September 2004 to May 2005 found rodent fleas infected with *Y. pestis*, indicating the persistence of a zoonotic focus.<sup>9</sup> Affected people of the 2003 outbreak lived in places with unsanitary conditions, where contact with rodents was not rare, something that could be similar to the unsanitary conditions in AQIM training camps, which could be responsible for different diseases (for example, cases of terrorists who died of tuberculosis have been mentioned by Algerian security forces).<sup>10</sup> Actually, recent reports of AQIM actions have more to do with robbing to acquire supplies of food and medicines rather than with terrorist attacks.<sup>11</sup> Also, terrorists who have surrendered to Algerian authorities have described the poor and hard living conditions of their camps.<sup>12</sup>

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[http://www.promedmail.org/pls/otn/f?p=2400:1001:5350610230971261::NO::F2400\\_P1001\\_BACK\\_PAGE,F2400\\_P1001\\_PUB\\_MAIL\\_ID:1010,75717](http://www.promedmail.org/pls/otn/f?p=2400:1001:5350610230971261::NO::F2400_P1001_BACK_PAGE,F2400_P1001_PUB_MAIL_ID:1010,75717) (accessed January 21, 2009).

<sup>6</sup> WHO also confirmed the Algerian Ministry of Health information. [http://www.tsa-algerie.com/Le-ministere-de-la-Sante-et-l-OMS-dementent-l-existence-de-c\\_6037.html](http://www.tsa-algerie.com/Le-ministere-de-la-Sante-et-l-OMS-dementent-l-existence-de-c_6037.html) (accessed February 2, 2009).

<sup>7</sup> An English translation of the statement is available on the NEFA Foundation website: <http://www.nefafoundation.org/miscellaneous/FeaturedDocs/nefaaqim0109.pdf> (accessed 28 January, 2009).

<sup>8</sup> Eric Bertherat et al., “Plague reappearance in Algeria after 50 years, 2003,” *Emerging Infectious Diseases* 2007; 13 (10): 1459–1462.

<sup>9</sup> Idir Bitam et al., “Zoonotic, focus of plague, Algeria,” *Emerging Infectious Diseases* 2006; 12 (12): 1975–1977.

<sup>10</sup> [http://www.tsa-algerie.com/Affaire-de-la- peste-noire-dans-les-maquis-du-GSPC---un-haut-\\_6036.html](http://www.tsa-algerie.com/Affaire-de-la- peste-noire-dans-les-maquis-du-GSPC---un-haut-_6036.html) (accessed February 2, 2009).

<sup>11</sup> [http://www.echoroukonline.com/fra/s\\_curit/3414.html](http://www.echoroukonline.com/fra/s_curit/3414.html) (accessed January 25, 2009). However, since February 2009 there has been an escalation of terrorist attacks. See, for example, <http://www.echoroukonline.com/eng/algeria/5183.html> (accessed February 23, 2009).

<sup>12</sup> <http://www.ennaharonline.com/en/news/256.html> (accessed January 25, 2009).

As for the possibility of an accident in a laboratory trying to produce *Y. pestis* as a biological weapon, the first strange thing is the decision to build a “laboratory” in a training camp in the middle of the mountains where basic things like water supply are problems. In fact, the failed attempt of Al Qaeda to produce the etiological agent of anthrax in Afghanistan was made in a laboratory of a hospital in Kandahar and not in a training camp in the wilderness. The only fact that seems curious in this story is that among the few references to biological warfare agents in jihadists’ manuals available on the Internet, there are some excerpts of *Y. pestis* information transcribed from microbiology books.<sup>13</sup> Also, at least two scientific articles about this agent were found among the documents discovered in Al Qaeda installations in Afghanistan.<sup>14</sup> However, producing a biological warfare agent does not result just from the combination of a terrorist group’s intention with the following of a simple “recipe” for the production of the agent. Acquiring the requisite capabilities is something complex and requires adequate explicit and tacit knowledge.

Reports of the possible production of *Y. pestis* as a biological warfare agent by AQIM has fired reports in open sources about the possibility of using suicide terrorists who, instead of carrying explosives, would be infected by the pneumonic form of plague to spread it among the population.<sup>15</sup> Actually, some Islamic texts may be wrongly interpreted or used to justify suicide terrorism with this biological agent,<sup>16</sup> for example: “The Prophet said, ‘Plague is the cause of martyrdom of every Muslim (who dies because of it)’.”<sup>17</sup> Although in an scenario like this it would not be strange that the first plague cases could be misdiagnosed as other respiratory diseases in the differential diagnosis made by medical personnel (something similar to what happened in the initial phase of the 2001 anthrax letters attacks in the U.S.), it is not expected that this dissemination method using suicide terrorists would cause a large number of victims in places with good sanitary conditions. First, pneumonic plague requires

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<sup>13</sup> Sammy Salama and Edith Bursac, “Jihadist capabilities and the diffusion of knowledge,” in Gary Ackerman and Jeremy Tamsett (eds.), *Jihadists and weapons of mass destruction* (Boca Raton, Florida: CRC Press, 2009), p. 112. For a detailed study of electronic jihadist biological manuals, see Anne Stenersen and Brynjar Lia, *Al-Qaida’s online CBRN manuals: A real threat?* FFI-rapport 2007/02405, October 5, 2007.

<sup>14</sup> James B. Petro and David A. Relman, “Understanding threats to scientific openness,” *Science* 2003; 302 (5652): 1899; Milton Leitenberg, *Assessing the biological weapons and bioterrorism threat* (Carlisle, Pennsylvania: Strategic Studies Institute, 2005), pp. 29–30.

<sup>15</sup> See, for example, Robert Maginnis, “Al-Qaeda and the plague,” *Human Events*, January 23, 2009; Oliver Guitta, “Al-Qaida and the plague,” *Middle East Times*, January 27, 2009.

<sup>16</sup> Cheryl Loeb, “Jihadists and biological and toxin weapons,” in Ackerman and Tamsett (eds.), *Jihadists and weapons of mass destruction*, pp. 156–157.

<sup>17</sup> Translation of Sahih Bukhari’s Book 52, *Fighting for the cause of Allah (Jihad)*, by M. Muhsin Khan. This and other examples are quoted in Loeb, “Jihadists and biological and toxin weapons,” p. 157.

close contact to be transmitted from one person to another;<sup>18</sup> second, based on past plague outbreaks, it has been calculated that the average number of secondary cases per primary case is 1.3.<sup>19</sup> In fact, the 2003 natural outbreak in Algeria was controlled with a relatively low number of infected people. Of course, an intentional attack will differ from a natural outbreak and its consequences will depend on the number of suicide terrorists with pneumonic plague used, and on their capacity to transmit it in overcrowded places while the infection is contagious. Epidemiological surveillance services would be essential to give an early alarm when the first cases are diagnosed. This will help medical personnel to make a differential diagnosis, start the antibiotic treatment, and isolate the cases to prevent human-to-human transmission, which will mitigate the consequences of the biological attack.

### **Annex: Plague as a Biological Weapon**

Plague is the illness produced by the bacterium *Yersinia pestis* and is endemic in many countries in America, Africa, and Asia.<sup>20</sup> This bacterium is found mainly in rodents, that act as reservoirs, and is transmitted through the bites of infected fleas, which act as vectors. Humans can also be infected by *Y. pestis* through fleabites, producing bubonic plague (named because of the appearance of buboes, swollen lymph nodes). If infection is not treated with antibiotics, septicemia may develop (mortality higher than 50 per cent in untreated patients), or affect the lungs, producing the pneumonic form (mortality close to 100 per cent in untreated patients). Pneumonic plague can be transmitted from person to person through inhalation of airborne droplets, especially after coughing appears in the infected person. However, transmission is not easy and both persons have to be in close contact. Also, although the bacterium can survive at low temperatures for months or even years, it is killed after 15 minutes exposure at 55 °C.<sup>21</sup>

Because *Y. pestis* can infect humans by the respiratory route, several nations included it in their biological warfare programs during the Cold War (it had been used earlier by Japan's Unit 731 against China in World War II).<sup>22</sup> The U.S. program with this agent started in the

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<sup>18</sup> Jacob L. Kool, "Risk of person-to-person transmission of pneumonic plague," *Healthcare Epidemiology* 2005; 40 (8): 1166–1172.

<sup>19</sup> Raymond Gani and Steve Leach, "Epidemiologic determinants for modelling pneumonic plague outbreaks," *Emerging Infectious Diseases* 2004; 10 (4): 608–614.

<sup>20</sup> <http://www.who.int/topics/plague/en/> (accessed February 1, 2009).

<sup>21</sup> Serguei Popov, "Plague (*Yersinia pestis*)," in Richard F. Pilch and Raymond A. Zilinskas (eds.), *Encyclopedia of bioterrorism defense* (Hoboken, New Jersey: Wiley-Liss, 2005), p. 392.

<sup>22</sup> Milton Leitenberg, *The problem of biological weapons* (Stockholm: Swedish National Defence College, 2004), p. 52.

1950s but the whole biological weapons program ended in 1969, when a good final product to disseminate *Y. pestis* in an effective manner had not yet been obtained.<sup>23</sup> The Soviet program continued for at least 20 more years (violating the Biological Weapons Convention of 1972 that entered into force in 1975), and, based on some sources, could have produced a final product effective enough to charge munitions or be used in spraying tanks.<sup>24</sup> Even if *Y. pestis* was finally weaponized, produced, and stockpiled by the former Soviet Union, it was considered that because it was a contagious agent that could affect its own troops, it was a strategic weapon but with no tactical value.<sup>25</sup>

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<sup>23</sup> Leitenberg, *Assessing the biological weapons and bioterrorism threat*, p. 49.

<sup>24</sup> Popov, "Plague (*Yersinia pestis*)."

<sup>25</sup> Leitenberg, *The problem of biological weapons*, pp. 62–63.