

## Goofs for the film 'Outbreak' (1995)

### Factual errors:

- There are no (naturally occurring) Capuchin monkeys in Africa.
- There are no (naturally occurring) pine cones in redwood forests.
- In the beginning of the movie, as the camera passes through the various bio-threat labs, many doors are open to hallways and personnel not wearing masks, and one technician even removes her mask before leaving the lab.
- Blue suits used in level 4 laboratories have a special air supply. The sound this makes inside the suit is so loud that you cannot hear other people. The people at the starting scene of the movie communicate none the less during the first scenes in the level 4 laboratory. Yellow suits are pressurized (positive pressure, which means air can go out if torn, but never in) via a small motor inside it and a set of batteries, but the yellow suits show no sign of being inflated at all, and when helmets are moved no air rushes out. It means also that Casey tearing his suit shouldn't have ended with infection.
- Maj Salt flies the helicopter from the left seat. U.S. Army helicopters can be flown from either seat but can only be started from the right (pilot/command) seat as the engine starter controls are only accessible from the right side. Also, Maj Salt, being the pilot, would have sat in the right seat even though Col. Daniels outranked him.

### Incorrectly regarded as goofs:

- Hospital HVAC Systems are supposed to be designed to not recirculate air from room to room. The ideal design is so that patients who walk in with broken arms do not walk out with other maladies. However, many hospital HVAC systems are not correctly maintained, and others are not correctly designed - some/many have exam rooms that share air. So when the virus in the movie mutates and is air born, it could be spread by the HVAC System especially in a community hospital that isn't geared up for contagious diseases. In fact, the Lassa fever virus was spread exactly this way in a major US east coast medical center. One person, a tech working on a non-patient floor, contracted the virus even though extreme containment procedures were thought to be in place - the HVAC system was assumed to be the pathway.

### Errors made by characters (possibly deliberate errors by the filmmakers):

- When Keough is trying to interview Jimbo in the hospital ICU, he is clearly intubated. Intubated patients can not talk due to the fact that the intubation tube passes through their vocal cords.

### Revealing mistakes:

- In the scene where Col. Sam Daniels (Dustin Hoffman) enters a crewman's room aboard the Korean ship, the Korean flag is shown upside down.

### Reactions on Bionet Virology:

- On 14 Mar 1995, Deborah Wisti-Peterson wrote: "I saw outbreak and thought the movie was totally stupid. It made scientists look like a bunch of miracle-workers that can cure any evil virus-caused disease within days of its discovery, it made military officers look like a pack of megalomaniacal crazies, and it is so bloody inaccurate that i was simply astounded. One of many inaccuracies; screening for the virus in blood samples using a light microscope. another example; looking at an electron micrograph of the virus within mere hours of its being discovered. another example; "100% virulence and it kills within hours." hahahaha. Another inaccuracy; using the monkey serum to cure the all of the sick people within the town within \*hours\* of infusion. (like that monkey has that much serum! did you see how much serum was in the bag that was given to that sick doctor? that was a big serum donation for a monkey that was "the size of a housecat"...er, if the monkey survived the donation process, that is). another inaccuracy was the fact that the victims of the virus ("motaba") apparently recovered without any permanent damage to their internal

organs. if this virus can kill "within hours", then why were these people perfectly healthy after being on their death beds only hours previous to receiving the monkey's serum? And that soldier/helicopter pilot/scientist/electron microscopist was just a little bit unbelievable, don't you think? Dustin Hoffman was shallow and Morgan Freeman was stilted. I was really disappointed. I want my \$6.75 back!"  
(<http://www.bio.net/bionet/mm/virology/1995-March/001844.html>)

- On 12 Mar 1995, Patrick O'Neil wrote: "I saw the movie this last Friday and enjoyed it up until the last half-hour or so when ultra-Hollywood ran rampant. The virus in the movie is loosely based upon Ebola Zaire, it even starts in Zaire. From there it is tense and exciting but...allowing for constraints inherent in a two-hour movie, things developed WAY too fast. The worst part was the resolution which was oversimplistic and WAY, WAY, WAY too quick and easy.

I come at the movie from two perspectives: as a biologist and as a former military officer. As a biologist, the development of the virus into a very infectious airborne pathogen was too quick and the virilenc was too high (killing in hours rather than allowing it any real incubation time at all). The cure was just...STUPID! It also worked too fast (people on the very verge of death are up and about within hours of treatment). It will likely leave an ignorant general public far more ignorant - "Oh, all you need to cure HIV or any other virus is the natural host's blood serum."  
(<http://www.bio.net/bionet/mm/virology/1995-March/001822.html>)