Background

- Competitive nature of sports that causes or seemingly forces some athletes to cross the line and take drugs.
- Doping cases reported from the Summer Olympics of 1968 to 2008: of 21,849 athletes tested, 106 athletes (0.48%) did not pass the test.
- Athlete Biological Passport is a powerful tool to support the fight against doping in sports which began Dec. 1, 2009.

Goals

- Learn the process of the ABP (Athlete Biological Passport) individual electronic document and how it represents an athlete’s data that can identify if an athlete was doped.
- Identify positives and weaknesses of this program.
- Provide research on situation with using dope in professional sport, build visual charts, and analyze data.
- Build visual chart on doping effects on the human body.

Fundamental Questions/Challenges

- How bad is the doping situation in sports today? Is this something that we need to be concerned with, or is it one accident in a million?
- Can ABP save sports from doping use, and if so, why is ABP a better doping control system than existed before?
- Future of ABP is Genetic Profiles of Expression.

Research Plan

- Study doping cases in professional sport.
- Study fundamental principles of Athlete Biological Passport.
- Do research on the potential ways to avoid ABP and its security.
- Research doping control future among athletes.
- Study how drugs affect human body.
- Visualize situation on doping use in professional sport.

Research Results

1. Of the 106 US athletes who did not pass doping control, only 8 did not admit that they use drugs.
2. Cocaine and EPO were the most popular drugs used by athletes.
3. Of 21,849 athletes tested, only 106 athletes did not pass test.

Related Work/Interaction with Other Projects

- Illegal doping drugs and their effects on the body
- Doping control individuals and security
- Genes expression analysis
- Researching genetic expression in drugs of use
- Analyzing genetic expression for drugs of use
- Genetic profiles analysis for drugs of use
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