



Data Security in Life Sciences

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Current Problem

Data Scientists are increasingly involved in **e-science** which requires collaborating on **huge amounts of data**.

Concerns about **control** over this data and **documentation** of changes affect research workflow and **inhibit collaboration**.

Moreover, due to governmental and organizational regulations, there are many **restrictions** in data sharing.



Project Goal

We want to...

1. Help life scientists in the process of collaboration & sharing data.
2. Develop software that allows for **secure** and **efficient** sharing of data in this context



Related Work

- ❑ Current collaboration software and mechanisms are complex and difficult to use
 - Different researchers use different naming/data management schema to fit their specific needs and research questions (Akmon et al 2011)
 - Metadata is rarely enough to explain the context of shared data (Birnholtz and Bietz 2003)
 - Poorly designed file sharing systems can have accuracy rates as low as 25% (Maxion et al 2005)
- ❑ Attribute-Based Access Control Systems, while new, may provide the necessary framework to solve for inefficiency (Fatima et al 2016)



Project Timeline

1. Study related work
2. Interview researchers in the life sciences on their data sharing needs
3. Analyze the data from interviews
4. Present findings