

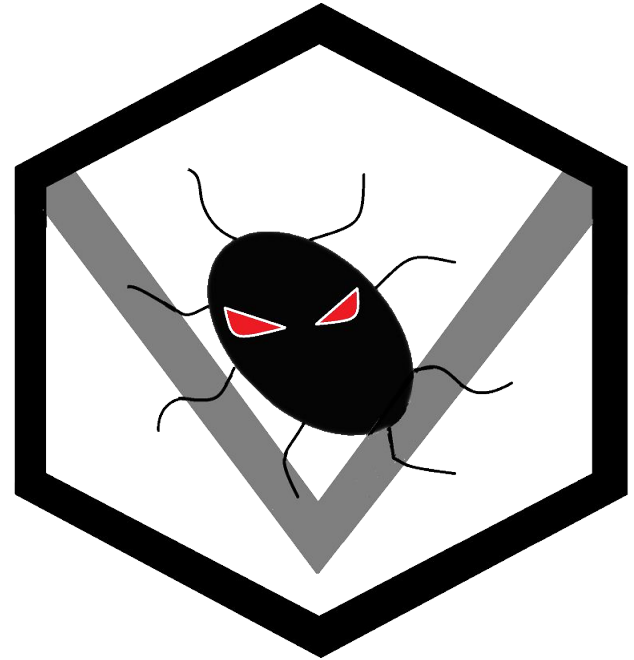
# PIMS2.0

## Collaborator Data Entry Point

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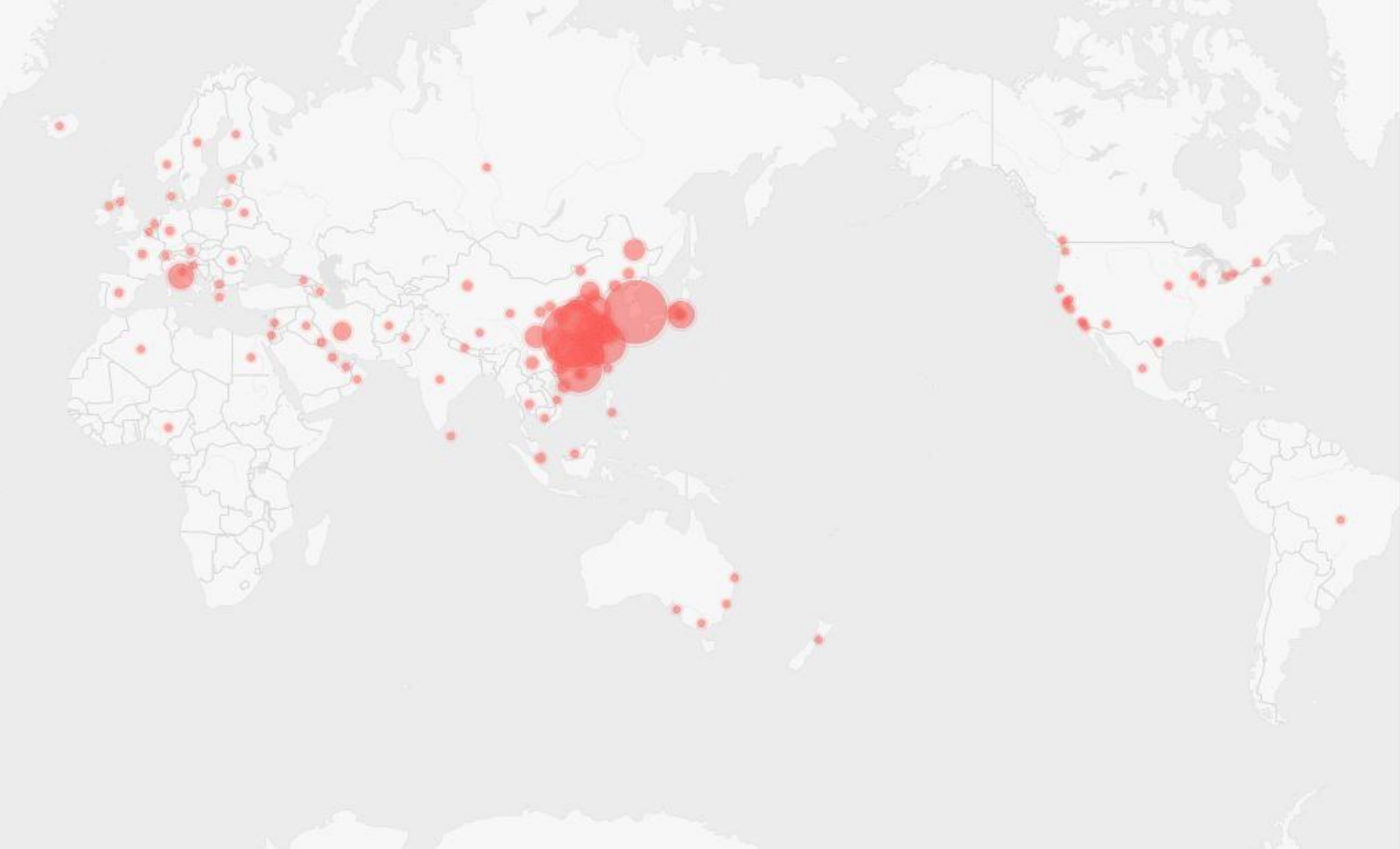
Sponsor - TGen North

Capstone Mentor - Scooter Nowak



# VIRALTECH

Jialei Chen, Carl Porter, Colton Spector, Weiheng Su





Confirmed cases

**83,867**

Confirmed deaths

**2,867**



62

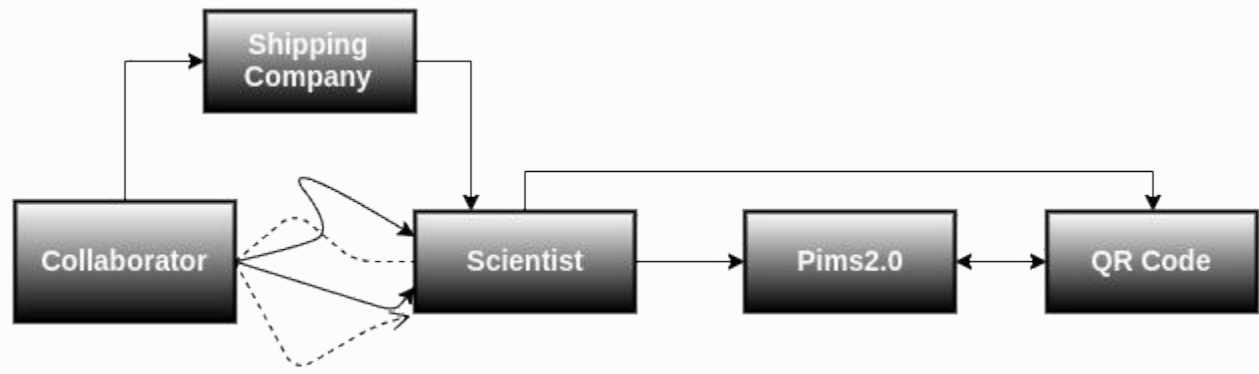


**Jonathon Todd**  
Associate Bioinformatician





# TGEN North Current Workflow





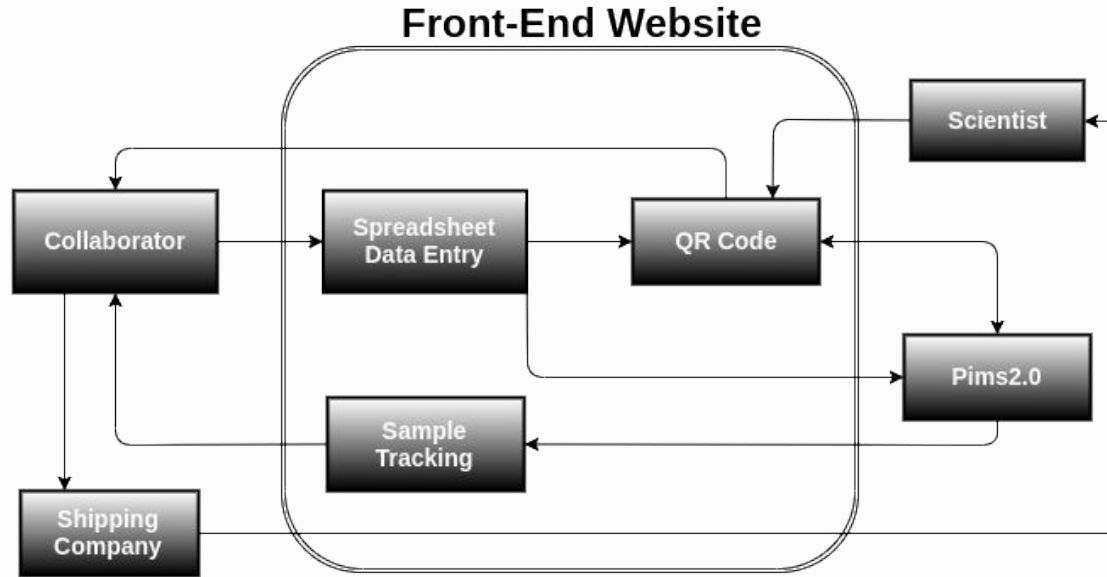
# Project Problem Statement

- Manual data entry done by scientists
- Non-standardized data collection
- Collaborators are unable to track the progress of their samples once they've sent them to TGEN



# Solution Overview

## ⚙️ Outline







# Key Features of the Solution

- Scientists do not manually input data
- Standardized data collection
- Collaborators are able to track the progress of their samples



# Key Requirements Overview

- Collaborator can enter data in a spreadsheet format
  - Spreadsheets are formatted for each project group
  - Spreadsheet data is checked for type and completeness before being inserted into the database
- Collaborator can track the progress of their packages
  - Collaborator can see the metadata after package submission
  - Collaborator can see and resolve any sample errors
- Collaborator can print QR codes for all of their samples

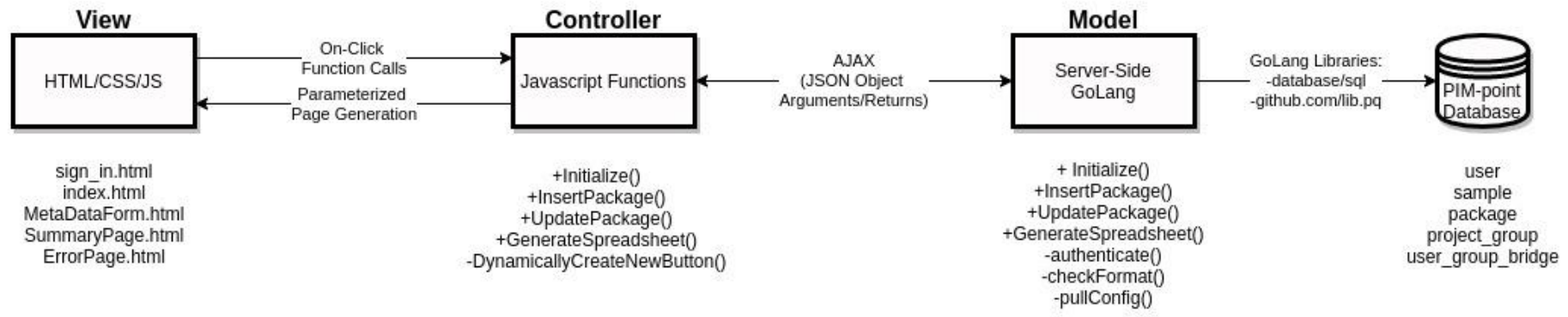


# System Components

- GoLang
- HTML/CSS/Javascript
- AJAX
- PostgreSQL
- JSON
- Google Authentication
- Handsontable



# System Architectural Overview





Create New Package

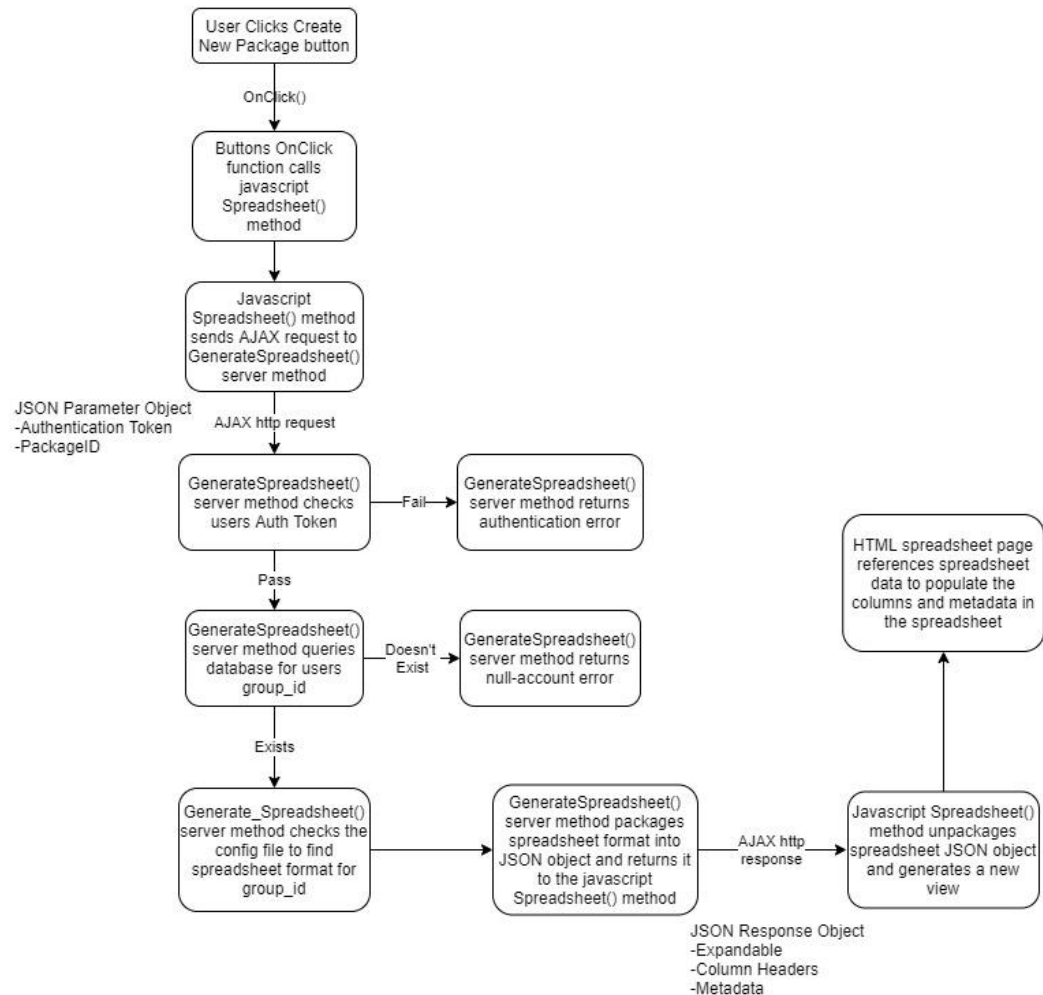
package 1 ✓

package 2 ⚠

package 3 ⚠

package 4 ⚠







# Metadata Form

- Create New Package
- package\_1 ✓
- package\_2 ⚠
- package\_3 ⚠
- package\_4 ⚠

	A	B	C	D	E	F	G	H	I	J	K	L
1												
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# Problems & Challenges



## Main obstacles

- Our project requires access to TGen North's database
  - **Solution:** TGen North provided us with a Docker container of the database
- Docker doesn't support Windows Home Edition
  - **Solution:** Implemented "Default\_Mode" for our server code



## Upcoming Challenges

- QR code requirements at TGen North have shifted
  - **Current Plan:** Incorporate empty QR code methods in the interim





## Risks

Risk	Severity	Likelihood	Amelioration Plan
SQL Injection Attack	High	Low	database/sql formatted strings
Unauthorized Access	High	Low	Every public server method checks Auth Token before accessing database

# ViralTech Schedule

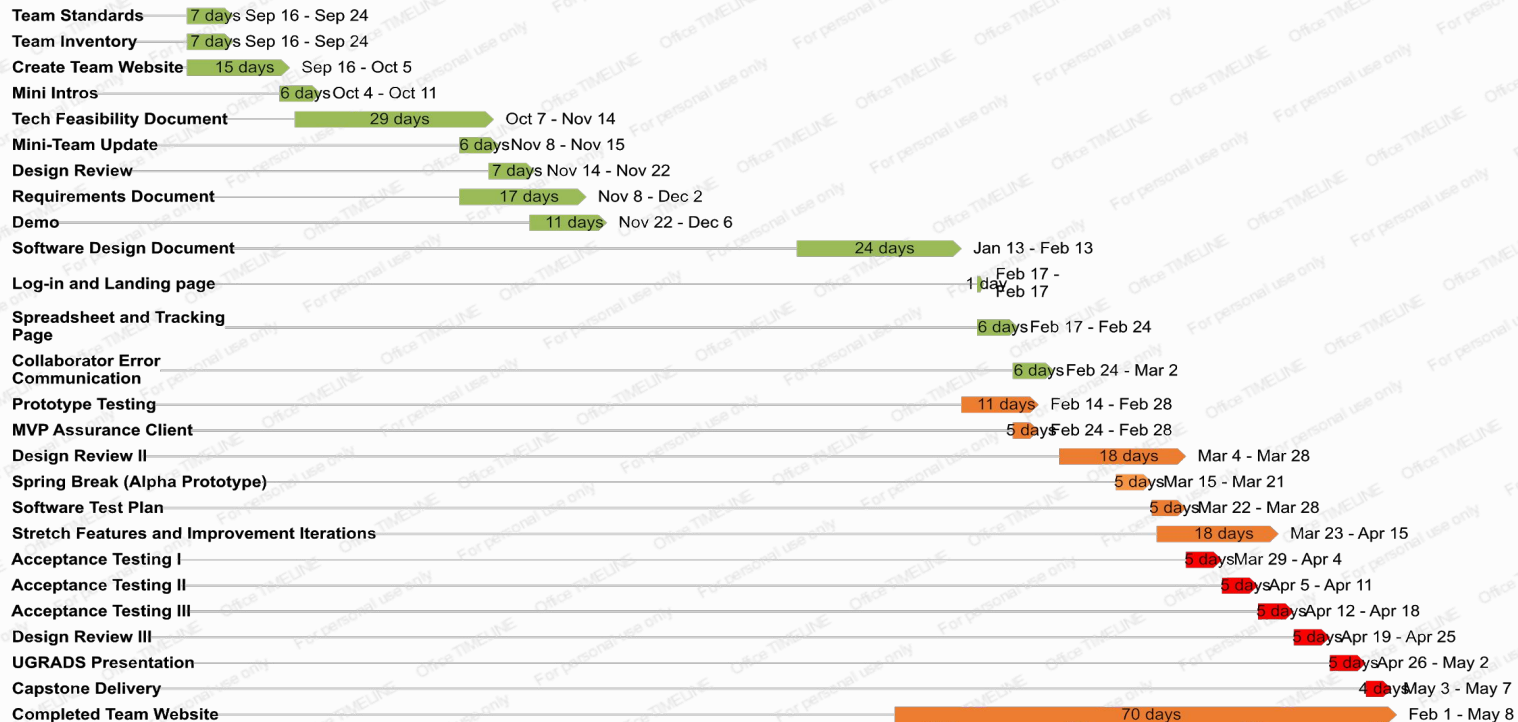


**Project Start**  
Sep 16

**Project Close**  
May 8

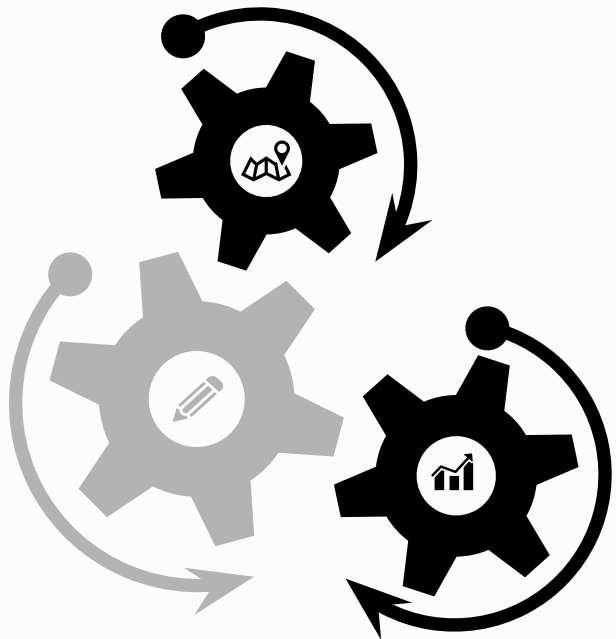
2019 Sep Oct Nov Dec 2020 Feb Mar Apr May 2020

Today





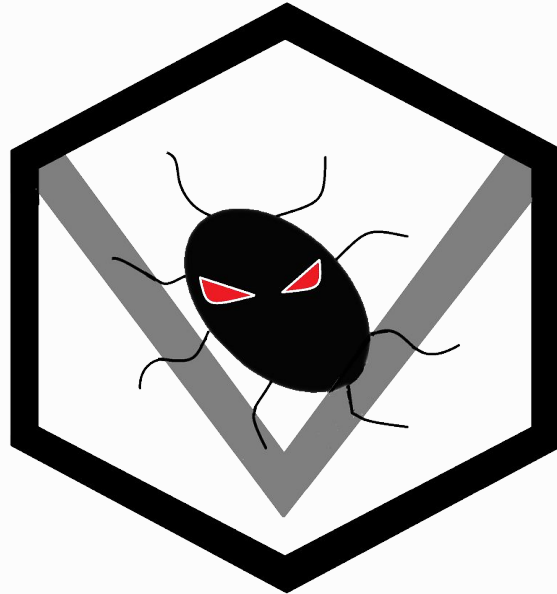
# Conclusion



- Our Sponsor is TGen North
- TGen's Problem
- Our Solution
- Our Design



# Questions?



**VIRALTECH**