

# Overview of Valection

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## Contents

<b>1</b>	<b>Overview</b>	<b>2</b>
1.1	Description	2
1.2	Synopsis	2
1.2.1	Formatting the infile	2
1.3	Functions	2
1.4	Usage	2
1.5	Acknowledgements	3
1.6	Copyright	3

# 1 Overview

## 1.1 Description

Valection contains a variety of algorithms for choosing verification candidates from competing tools or parameterizations, to fairly assess their performance against each other.

This software requires the valection package (<http://labs.oicr.on.ca/boutros-lab/software/valection>).

## 1.2 Synopsis

There are six selection methods available through six functions. They all take the following arguments:

- **budget**: an integer specifying how many candidates to select
- **infile**: a path to a file which contains the calls from all callers
- **outfile**: a path to a filename where the calls should be outputted
- **seed** (optional): an integer to seed the random number generator with (used to randomize sampling)

### 1.2.1 Formatting the infile

The infile should be formatted with a tab separating the caller and call on each line:

```
caller1 name\t call this caller made  
caller2 name\t call this caller made
```

e.g.

```
magnifying glass   chr1 576834  
magnifying glass   chr1 6878924  
eye dropper        chr1 496267  
eye dropper        chr1 6878924
```

Note that the call can contain a tab, but the caller may not.

## 1.3 Functions

The functions are named as follows:

- `run.directed.sampling`
- `run.random.sampling`
- `run.equal.per.caller`
- `run.equal.per.overlap`
- `run.increasing.with.overlap`
- `run.decreasing.with.overlap`

## 1.4 Usage

```
> require('valection');  
> # run the sampling to select 10 candidates  
> run.equal.per.caller(  
+   budget = 10,  
+   infile = "/home/me/calls.valec",  
+   outfile = "/home/me/selections.txt",  
+   seed = 50  
+ );
```

## 1.5 Acknowledgements

- Paul Boutros, PhD, PI - Boutros Lab
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## 1.6 Copyright

This software is copyright (c) 2015 by the Ontario Institute for Cancer Research.