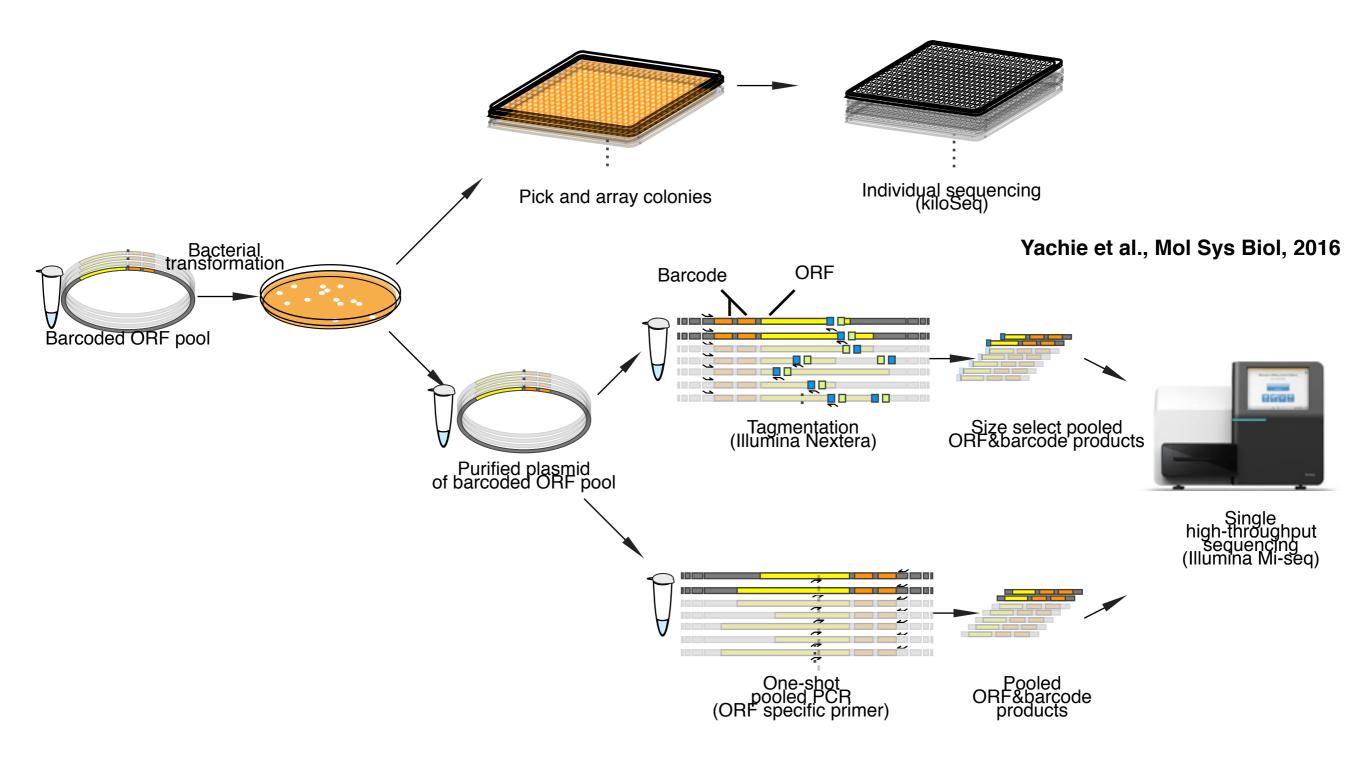
# Development of SPADE EMPCR primer pool construction program

**Daniel Evans Yamamoto** 

Introduction Algorithm >> Product

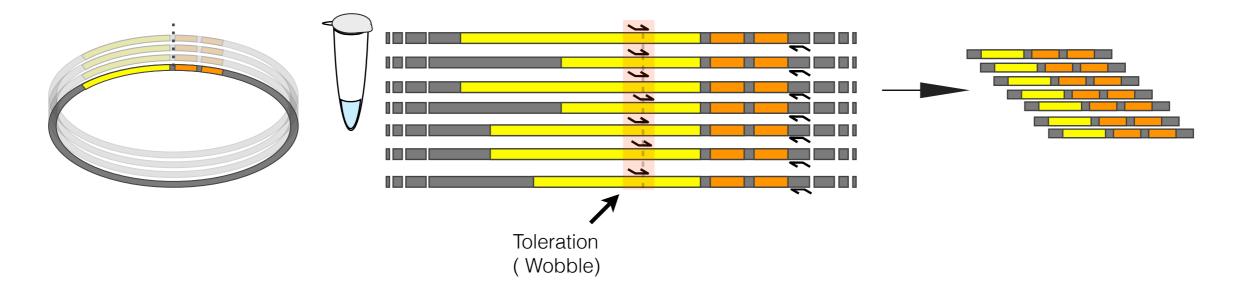
## **ORF/Barcode linking methodology**



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## **EMPCR** primer construction

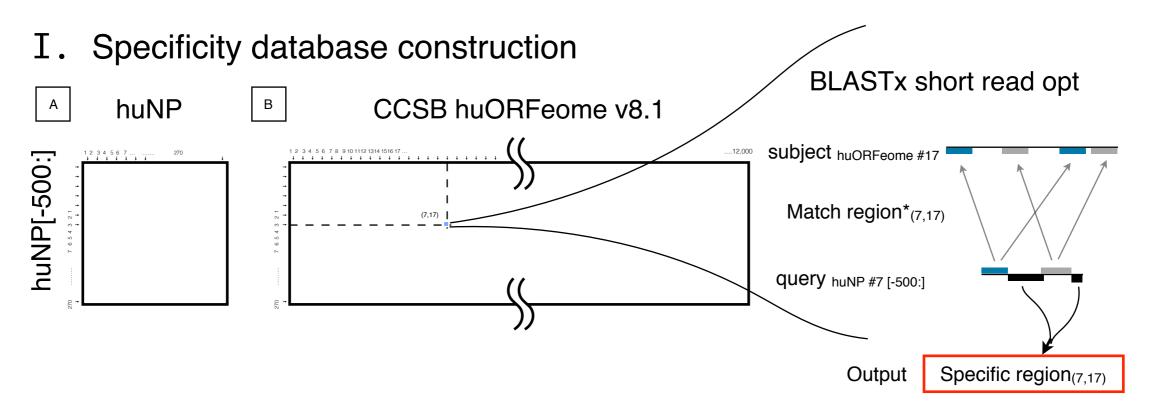
En Masse PCR barcoded plasmid pool for identification of barcode-ORF pairs



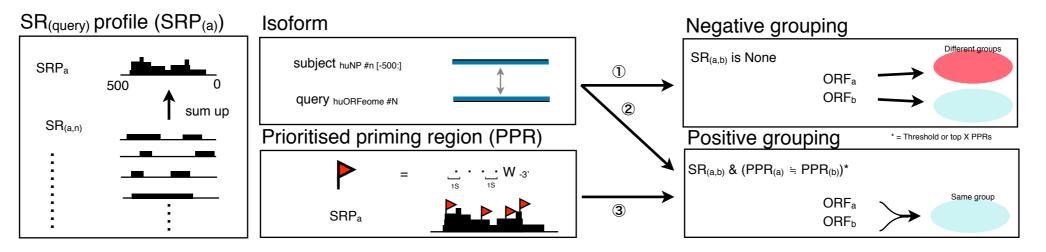
Automated primer pool construction with only multi fasta file input

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## **Strategy**



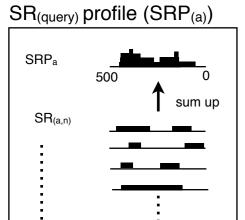
#### II. Profiling and subgrouping

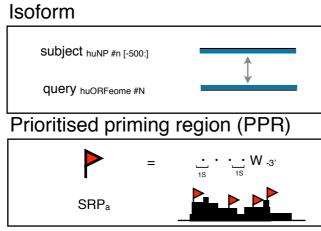


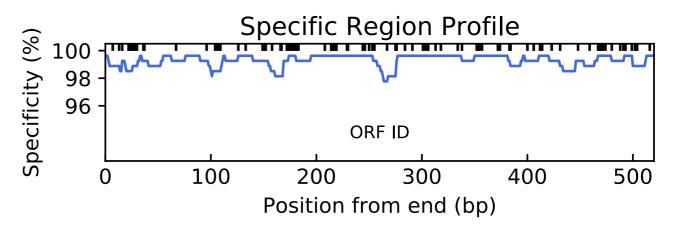
Introduction Algorithm Product

## Sequence profiling

#### II. Profiling and subgrouping







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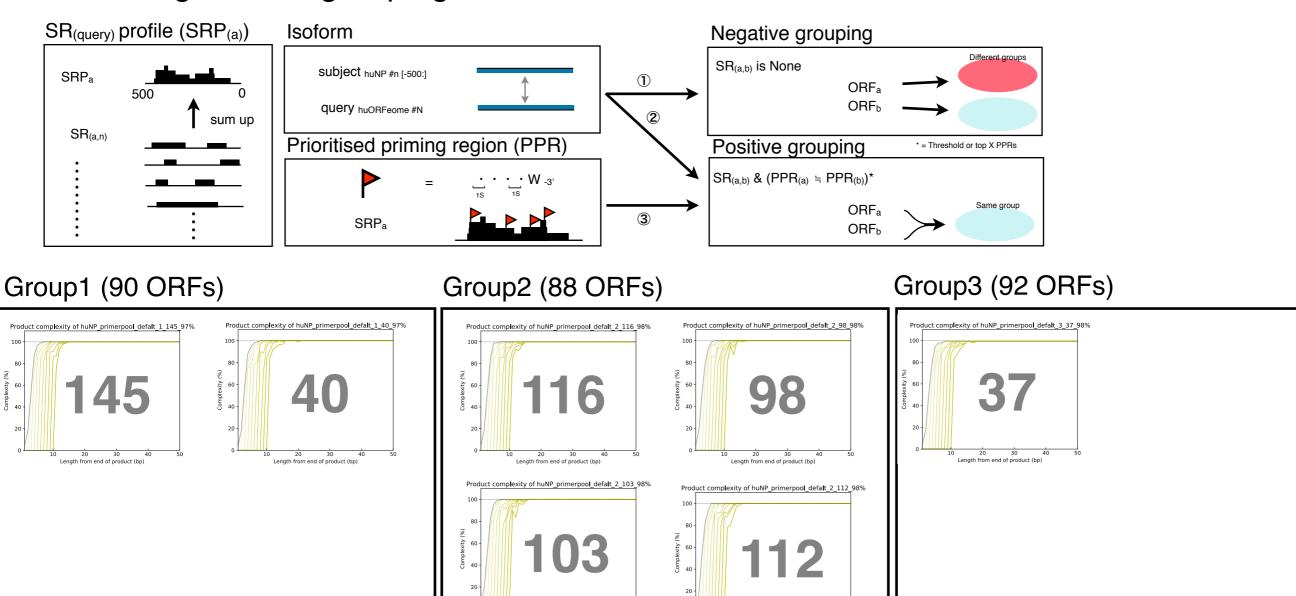
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## Grouping

#### II. Profiling and subgrouping





## Position from end of ORF

Introduction

**Algorithm** 

**Product** 

## **Output**

Highly specific groups

Primer of each candidate position in group

Specificity plot of estimated product with each candidate pool

#### **Future works**

Eliminate high primer dimer from pools

Test experimentally