

# New development on Qube 384

## Exciting new features

### Current clamp feature

- First 384-platform in the world to provide this
- Combine with voltage clamp in same sweep for added control of cell behavior and tighter data
- Must be run on single-hole QChip and Qube will warn if multi-hole has been used
- Current injection can go as low as less than 1 pA
- Internal leak correction
- Automatic clip detection to rescue cells

### Data migration by 'one-click' operation

- Move data from Qube internal data PC in a secure and easy way to make room for more experiments
- All interdependencies between projects and plate runs are taken care of for you

### Temperature control

- Temperature is thermostatically controlled at the measurement site
- Keep a steady temperature under all circumstances to ensure more stable data
- Heating or cooling to investigate temperature dependent effects

### New Customer Specific Block Templates available

- Two-liquid addition with ligand exposure time reduced from 32 seconds to 0.8 seconds.
- Split cell addition to mitigate poor seal quality in assays that exhibit less than optimal performance

### Dilution on the fly

- Mitigate the risk of compounds adhering to plastic compound plates by letting Qube dilute stock solutions just prior to addition to the QChip
- Available both with and without the stacker option on your Qube



## Resuspension of stock compounds before addition

- Ensure perfect mixing close to compound additions to prevent compound from precipitating and hence get more accurate data

## Automatic detection and warning about tip loading conditions for 384-robot

- Ensures high stability in robot operations

## Analyzer updates

- Current clamp analysis parameters
  - Spike frequency
  - Inter-Spike Interval
  - Spike Count in Cursor
  - Action Potential Amplitude
  - Overshoot Potential
  - After Hyperpol. Potential
  - Threshold Potential
  - Rest Membrane Potential
  - Depolarization Slope
  - Repolarization Slope
  - Action Potential Duration 90%
  - Action Potential Duration 50%
  - Action Potential Duration xx%
  - Spike analysis Messages
- Column plots
- Selection of SD or SEM on hill fits
- Fixed slope on group hill fits
- Z' factor calculated as the published equation
- Detection of extreme kinetics in ligand-gated experiments, meant for filtering out

