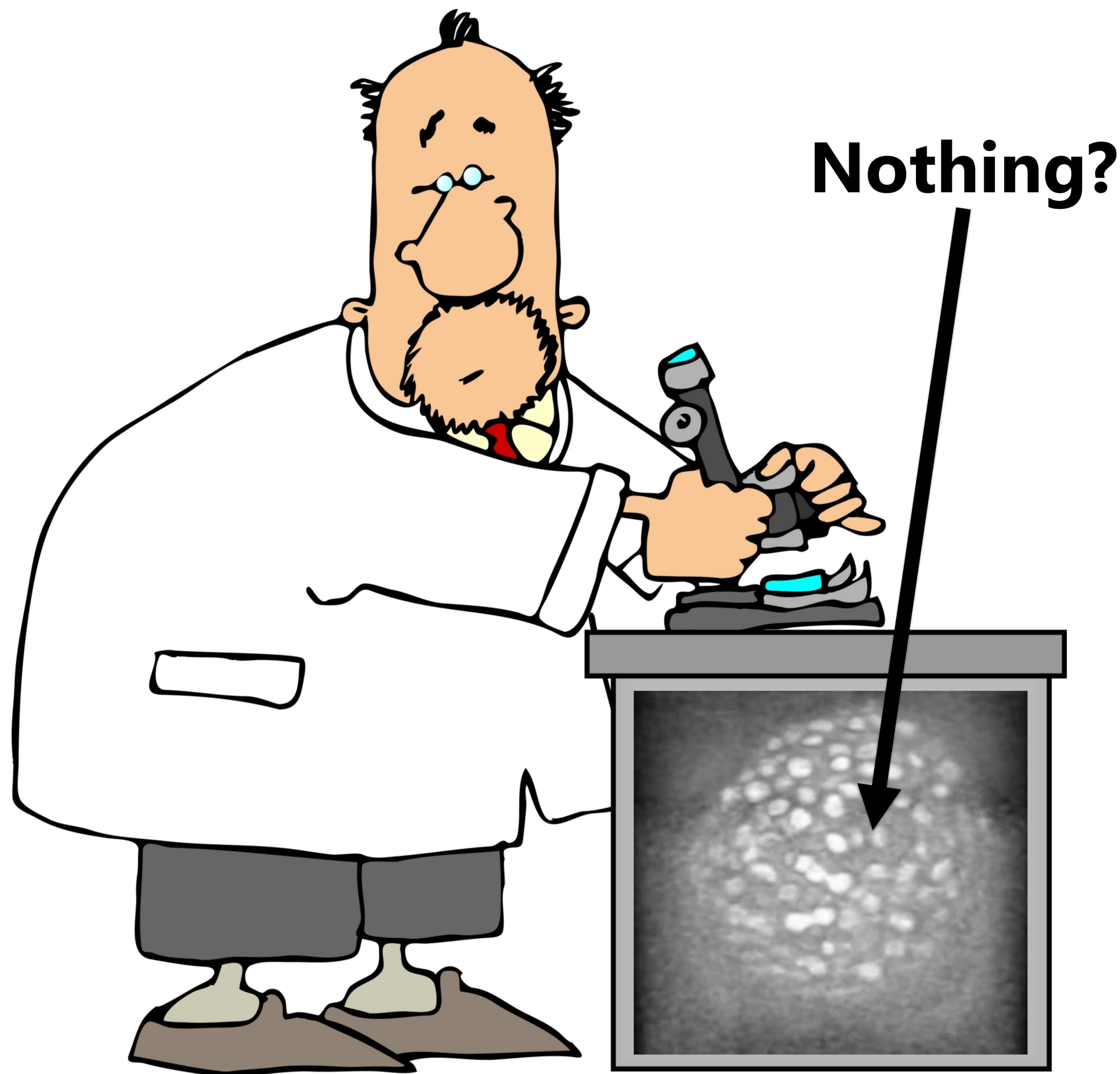


Big Data in Microscopy

What do you get from your big data sets?



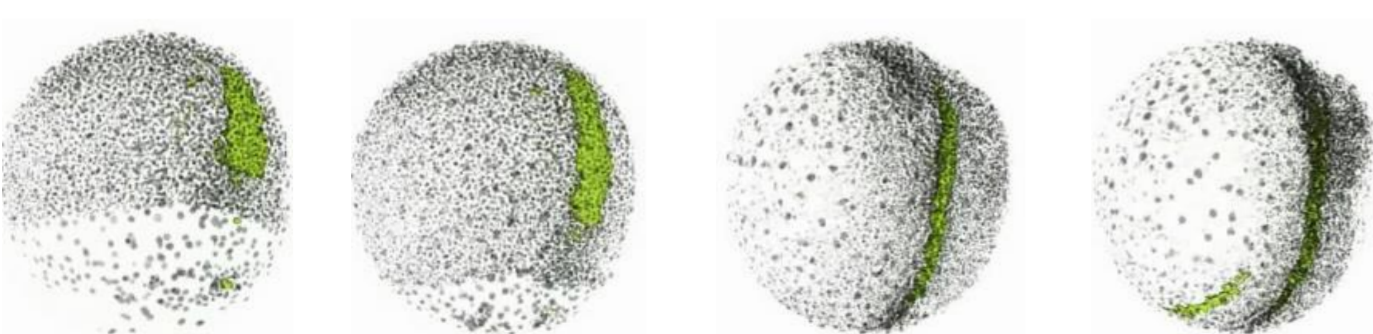
We give you the right answer about your **Big Data**:

- Conceptual design, implementation and realisation of analysis algorithms
- Visualisation
- Installation and use of the computer hardware
- Data management
- Consultation services and support in finding solutions for existing issues

Examples

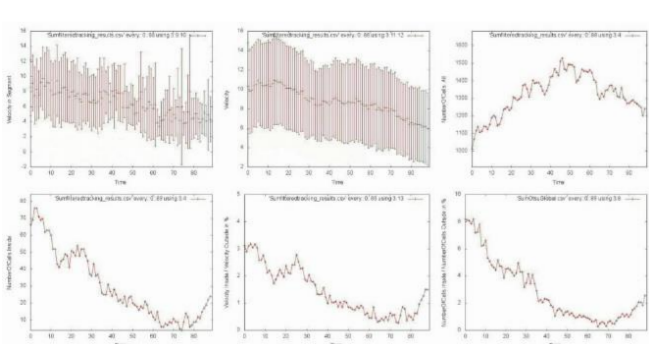
Example: Embryonic stages of Zebrafish

Image acquisition with SP5 (confocal microscope):



Images: Courtesy of Jens Otte, formerly ITG at KIT

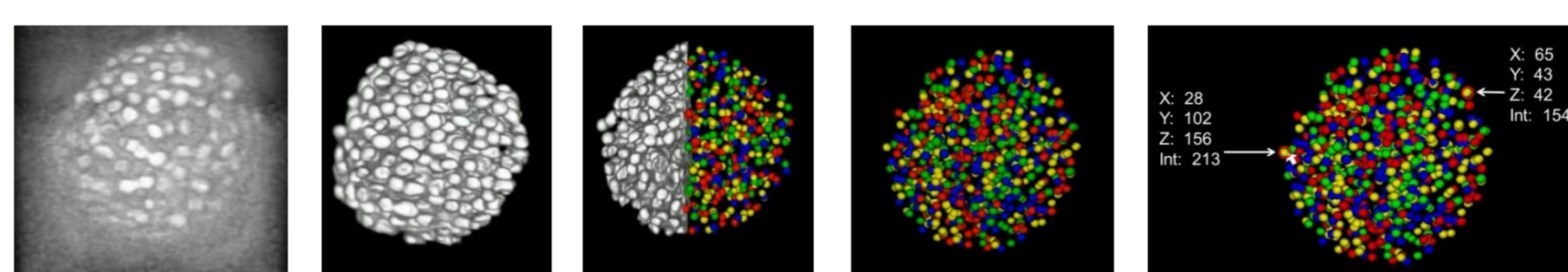
Time series embryonic development of a zebrafish. Green labeled cells later form the midbrain.



Statistics on cell size, cell number, ratio of cells in the midbrain compared to the rest. Possible use: measurement of effects of molecules/chemicals on embryonic phase.

Example: Spheroid Analysis

Image acquisition with mDSLIM (monolithic Digital Scanned Laser Light sheet fluorescence Microscope)



Original recording

Processing

Cell identification

Location, Volume determination, distances, roundness, ...

3D print
1bn. x greater than original



Images: Courtesy of Francesco Pampaloni, BMLS Frankfurt Group Prof. E.H.K Stelzer

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