

## 2D TOCSY

- $^1\text{H}$  to  $^1\text{H}$  Correlation via Multiple J-Coupling Transfers
- A Diagonal Peak Connects to Many Other Members of the Spin System Through Horizontal or Vertical Line
- As With 1D Selective TOCSY, Peak Intensity Decreases with Number of Transfers
- Small J Couplings Act As “Bottleneck” in Transfer
- A COSY “Walk” Fails if Two Protons Have Nearly the Same Chemical Shift; TOCSY Can “Jump” Over That Ambiguity to the Next Protons in Spin System
- Diagonal and All Crosspeaks Are Positive and In-Phase