

# Study: Amino acid helps in copper binding

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An amino acid has a huge role in the binding of copper, an essential metal for life, a study by U.S. university researchers showed.

Because copper is dangerous on its own and could damage cells, it must be "chaperoned," which is where the amino acid tryptophan comes in, said scientists from Northwestern University in Evanston, Ill., in the online version of *Nature Chemical Biology*.

Thomas O'Halloran and his team examined a copper-trafficking protein called CusF, finding that a tryptophan from the protein and its interaction with copper is critical for copper binding.

Tryptophan residues have been known to interact with positively charged ions, such as sodium or potassium, the researchers said. Their results revealed that proteins can use these to delicately help transport copper around cells.

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