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Untargeted metabolomics identifies numerous solutes that accumulate when the kidneys fail

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Solutes normally cleared by the kidneys accumulate and cause illness when the kidneys fail. Untargeted metabolomics provides an ideal mean to expand our knowledge of these "uremic" solutes.The current study employed the Q Exactive to profile solutes that accumulate in kidney failure patients maintained onhemodialysis. The discovery phase revealed 400 uremic components in negative ESI mode and 175 uremic components in positive ESI mode. Chemical identification using MS/MS scans from Q Exactive has revealed novel uremic solutes including N-glutamylhexenoic andN-glutamylheptenoic acid and is proceeding.

Biography

Pavel Aronov graduated from Novosibirsk State University with degree in Environmental Chemistry. He obtained his Ph.D. from UC Davis developing his expertise in mass spectrometry and metabolomics. He was a staff scientist at Stanford University Mass Spectrometry Laboratory and currently works for Thermo Fisher Scientific.

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