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# Trace Metals and Infectious Diseases

**Edited by: Jerome O. Nriagu, Eric P. Skaar**

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# List of Acronyms

ABC	ATP-binding cassette
ADP	adenosine diphosphate
AI	adequate intake
ATP	adenosine triphosphate
BFR	bacterioferritin
bXRF	benchtop XRF
cGMP	cyclic guanosine monophosphate
CHA	carbonated hydroxyapatite
CQ	chloroquine
CsoR	Cu-sensitive operon repressor
CT	computed tomography
CTP	choline phosphate cytidylyltransferase
CTZ	clotrimazole
DcytB	duodenal cytochrome B
DMT1	divalent metal transporter 1
Dps	DNA-binding protein from starved cells
DRI	dietary reference intake
EAR	estimated average requirement
EDX	energy-dispersive X-ray spectroscopy
EELS	electron energy loss spectrometry
Efb	extracellular fibrinogen-binding
EFTEM	energy filtering transmission electron microscopy
Ent	enterobactin
EPMA	electron probe micro analysis
ES-MS	electrospray mass spectrometry
EXAFS	extended X-ray absorption fine structure
FQ	ferroquine
FRET	fluorescence resonance energy transfer
GM-CSF	granulocyte macrophage colony stimulating factor
GTP	guanosine-5'-triphosphate
HAMP	hepcidin-encoding gene
HIF-1	hypoxia inducible factor-1
HmbR	heme/hemoglobin receptor
HO-1	heme oxygenase-1
iAsV	inorganic arsenate
iAsIII	inorganic arsenite
ICP-MS	inductively coupled plasma mass spectrometry
IMAC	immobilized metal ion affinity chromatography
IFN	interferon
IL	interleukin
iNOS	inducible nitric oxide synthase
IRE	iron-responsive element
IRP	iron regulatory protein
KO	knockout
KTZ	ketoconazole

LA-ICP-MS	laser ablation inductively coupled plasma mass spectrometry
LC	liquid chromatography
LC-ESI-MS	liquid chromatography–electrospray ionization–mass spectrometry
Lcn2	lipocalin 2
Lf	lactoferrin
LIBS	laser-induced breakdown spectroscopy
LOD	limits of detection
LPS	lipopolysaccharide
MALDI-MS	matrix-assisted laser desorption ionization mass spectrometry
MctB	mycobacterial Cu transport protein B
MFP	membrane fusion protein
MIRAGE	metal isotope native radioautography in gel electrophoresis
MRI	magnetic resonance imaging
MRP	multidrug resistance protein
MS	mass spectrometry
MS <sup>2</sup>	tandem mass spectroscopy
NAD	nicotine adenine dinucleotide
NanoSIMS	nano secondary ion mass spectrometry
NEAT	near iron transporter
(N)EXAFS-STXM	near edge X-ray absorption fine structure scanning transmission X-ray microscopy
NGAL	neutrophil gelatinase-associated lipocalin
NHANES	National Health and Nutrition Examination Survey
NK cell	natural killer cell
NMR	nuclear magnetic resonance
NOS	nitric oxide synthases
NRAMP	natural resistance-associated macrophage protein
NTD	neglected tropic disease
OMF	outer membrane factor
PALM	photoactivated localization microscopy
PDTC	pyridine-2,6-bis(thiocarboxylic acid)
PET	positron emission tomography
PLGA	polylactic-co-glycolic acid
RDA	recommended dietary allowance
RDI	recommended daily intake or reference daily intake
RicR	regulated-in Cu repressor
RND	resistance-nodulation-cell division
RPLC	reverse phase liquid chromatography
Sbi	staphylococcal immunoglobulin G-binding protein
SDS-PAGE	sodium dodecyl sulfate–polyacrylamide gel electrophoresis
SEC	size exclusion chromatography
SEM-EDX	scanning electron microscopy energy dispersive X-ray analysis
SIMS	secondary ion mass spectrometry
S- $\mu$ XRF	synchrotron micro X-ray fluorescence
SOD	superoxide dismutase
SNP	single nucleotide polymorphism
SpA	protein A

SPECT	single photon emission computed tomography
SPION	superparamagnetic iron oxide nanoparticles
SR-XRF	synchrotron radiation X-ray fluorescence
STED	stimulated emission depletion (laser fluorescence microscopy)
STIM	scanning transmission ion microscopy
STORM	stochastic optical reconstruction microscopy
STXM	scanning transmission X-ray microscopy
2D-PAGE	two-dimensional polyacrylamide gel electrophoresis
TCA	tricarboxylic acid
TEM	transmission electron microscopy
Tf	transferrin
TfR	transferring receptor
Th	thymus helper
TLR-4	Toll-like receptor 4
TNF	tumor necrosis factor
ToF	time-of-flight
TTP	tri-tolyl phosphate
UIL	upper intake level
UPEC	uropathogenic <i>E. coli</i>
XRF	X-ray fluorescence
XRM	X-ray fluorescence microprobe
Ybt	yersiniabactin



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