

## Scientific program of MTB 2018 meeting

### September 10th (Monday)

15:00-20:00	Reception and registration	
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### September 11th (Tuesday)

09:00-09:10	Y. Fukumori/T. Matsunaga	Opening remark
09:10-09:35	D. Schüler	The multipart magnetoskeleton of <i>Magnetospirillum gryphiswaldense</i>
09:35-09:53	M. Dziuba	Transcriptional organization of magnetosome operons in <i>Magnetospirillum gryphiswaldense</i> : a new look
09:53-10:11	M. Schüler	Genome-wide identification of essential and auxiliary genes for magnetosome biosynthesis in <i>Magnetospirillum gryphiswaldense</i>
10:11-10:29	R.P. Awal	Functional expression of foreign magnetosome genes in the <i>Alphaproteobacterium Magnetospirillum gryphiswaldense</i>
10:29-10:50	Coffee break	
10:50-11:15	Y. Fukumori	Structure and function of molecular machinery for magnetotaxis
11:15-11:33	A. Taoka	Measuring magnetosomal pH in living magnetotactic bacterial cell
11:33-11:51	E. Günther	The <i>in vivo</i> mechanics of the magnetosome chain by FLIM-FRET and STED microscopy
11:51-12:09	T. Prozorov	Magnetotactic bacteria as a platform for liquid phase electron microscopy live cell imaging
12:09-12:27	N. Karen-Khadmy	The dual role of MamB in magnetosome membrane assembly and magnetite biomineralization
12:27-14:30	Lunch	
14:30-14:55	A. Komeili	The past, present, and future of genetic analysis in magnetotactic bacteria
14:55-15:13	C. Grant	An iron-accumulating organelle—the ferrosome—is formed via a small operon in diverse bacteria and archaea
15:13-15:31	J. Wan	Size determination of magnetosome membrane by a protease-mediated switch
15:31-15:49	Q. Sun	Interaction of essential magnetosome genes in mammalian cells
15:49-16:07	M. Tanaka	Enhanced tubulation of liposome containing cardiolipin by MamY protein from <i>Magnetospirillum magneticum</i> AMB-1
16:07-16:25	D.S. Grouzdev	Increased knowledge of magnetotactic bacteria diversity through the analysis of metagenomic data
16:25-16:43	M. Uzun	Novel approaches of magnetotactic bacteria investigation revealed new taxonomic groups
16:43-17:01	C.L. Monteil	Retracing the evolutionary history of magnetotaxis
17:01-18:30	Poster session 1	
19:00-21:00	Dinner 1	

September 12th (Wednesday)		
08:45-09:10	R. Zarivach	Structural studies of magnetosome-associated proteins
09:10-09:28	A. Pohl	Magnetite-binding proteins from <i>Deltaproteobacteria</i> : A new route towards anisotropic magnetite nanoparticles?
09:28-09:46	M. Amor	Single-cell determination of iron content in magnetotactic bacteria
09:46-10:04	R. Uebe	Analysis of the iron uptake in <i>Magnetospirillum gryphiswaldense</i>
10:04-10:22	J. Werckmann	Detection of low amounts of iron in the outer membrane of magnetotactic bacteria
10:22-10:45	Coffee break	
10:45-11:10	A. Arakaki	Reconstruction of magnetosome formation ability in non-magnetic mutant of <i>Magnetospirillum magneticum</i> AMB-1
11:10-11:28	T. Yoshino	Bioengineering of magnetic nanoparticles produced by <i>Magnetospirillum magneticum</i> AMB-1 for extensive applications
11:28-11:46	A. Fernandez-Castane	Study of physiological responses to changing environmental conditions of <i>Magnetospirillum gryphiswaldense</i> MSR-1 in flask and bioreactor cultures
11:46-12:04	E. Duprat	Magnetotactic coccus from ferruginous Lake Pavin: a new model for intracellular sequestration of phosphorus
12:04-14:30	Lunch	
14:30-14:55	D. Faivre	A cooperative flagellar movement explains <i>Magnetococcus marinus</i> swimming speed and movement
14:55-15:13	S. Klumpp	Modelling magnetotactic bacteria
15:13-15:31	A. Codutti	Influence of magnetic fields on chemotaxis in magnetotactic bacteria
15:31-15:49	L. Abelmann	Magnetic response of <i>Magnetospirillum gryphiswaldense</i> observed inside a microfluidic channel
15:49-16:07	M.L. Fdez-Gubieda	On the magnetosomes chain configuration
16:07-16:25	M. Charilaou	Quantitative magnetic analysis of magnetotactic bacteria by means of ferromagnetic resonance spectroscopy
16:25-16:43	A.R. Muxworthy	Numerical calculations of the effect of magnetic interactions on magnetotaxis efficiency
16:43-17:01	A. Garcia-Prieto	Magnetic study of Co-doped magnetosome chains
17:01-18:30	Poster session 2	
19:00-21:00	Dinner 2	

September 13th (Thursday)		
08:45-09:10	J. Kirschvink	Scaling up the Kalmijn-Blakemore pulse remagnetization experiment from magnetotactic bacteria to the human head
09:10-09:28	V. Busigny	Iron isotope perspectives for magnetotactic bacteria identification in the geological record
09:28-09:46	R.J. Harrison	Micromagnetic simulation of magnetofossils with realistic size and shape distributions: Linking rock magnetism with microscopic observations and implications for magnetofossil identification
09:46-10:04	A.P. Roberts	Widespread occurrence of magnetofossils in the geological record and implications for living environments of magnetotactic bacteria
10:04-10:22	P. Liu	Pylogenetic and morphological identification of magnetotactic cocci using coupled FISH-SEM method
10:22-10:45	Coffee break	
10:45-11:03	K. He	Spatio-temporal distribution of magnetotactic bacteria in freshwater sediments
11:03-11:21	K. Suthindhiran	Diversity of uncultured <i>Magnetospirillum</i> sp. from the sedimentary basin of southern India
11:21-11:39	J. Liu	Seasonal changes in abundance of two multicellular magnetotactic prokaryotes in sediment layers of Lake Yuehu
11:39-11:57	X. Qian	Description of the first <i>Nitrospira</i> phylum magnetotactic bacteria isolated from ocean
11:57-12:15	P. Leão	Diversity of magnetotactic bacteria in a coastal lagoon complex in Rio de Janeiro state, Brazil
12:15-12:30	Group photo	
12:30-14:30	Lunch	
14:30-14:55	D. Kisailus	Biological synthesis and structural developments in ultrahard teeth of chiton
14:55-15:13	J. Li	Phylogenetic and biomineralogical study of uncultured magnetotactic bacteria at single-cell level
15:13-15:31	W. Lin	Genomic insights into the origin and evolution of magnetotactic bacteria
15:31-15:49	W. Zhang	Matagenomic analysis of magnetotactic bacteria from saline lake in Inner Mongolia
15:49-16:07	Y. Konishi	Microbial biomineralization and the catalytic activity of platinum group metal nanoparticles obtained with metal-reducing microorganism
16:07-16:30	Break	
16:30-16:48	S. Staniland	Magnetosomes for the masses: scaling-up magnetic nanoparticle formation with biomimetic additives, inspired by MTB
16:48-17:06	J. Wang	Mms6 protein from <i>M. magneticum</i> AMB-1 and magnetite biomimetic synthesis
17:06-17:24	J. Tian	Engineered magnetosome, a green synthetic and cheap composite nanomaterial can be used as a nano-sized immunomagnetic beads
17:24-17:42	D. Trubitsyn	Functionalization of bacterial magnetic nano-particles for specific binding to human cells
17:42-18:00	M. Muthana	Breast cancer immunotherapy using magnetised oncolytic virus
18:00-18:25	R.B. Frankel	Business meeting
18:25-18:30	Y. Fukumori	Closing
19:00-21:00	Banquet	
September 13th (Thursday)		
08:30-17:00	Excursion	