

Poster Session

Schedule

Posters should be mounted, presented and removed according to the following schedule. Poster presenters are requested to be at the site of their posters at the designated times to discuss their presentation with participants. The poster sessions will not be chaired.

Mounting	September 3 (Tue), 9:00-14:00
Presentation	Odd Numbers: September 3 (Tue), 15:10-16:40 Even Numbers: September 5 (Thu), 14:15-15:45
Removal	September 6 (Fri), 9:00-11:00

Presenters are requested to remove their posters by themselves.
Posters that remain mounted after the designated removal time may be disposed of.

Poster Awards

The (Japanese) Society for Extremophiles and Thermophiles 2019 will honor several young researchers with Poster Awards. Candidates of this award are Students, Post Docs and other Non-faculty members. The laureates will be selected by a jury based on the quality and originality of the work and clarity of the poster presentation. The award ceremony will take place on September 6 (Fri), before the Closing ceremony.

Posters

- P1 Comprehensive Genome Profiling of a Novel Thermoacidophilic Methanotroph, *Methyacidiphilum* sp. strain Yel**
Chandini Murarilal Ratnadevi, Thomas Kruse, Nils-Kåre Birkeland
- P2 Distribution, Diversity, Abundance and Genetic Potential of Methanogenic Archaea of the order *Methanomassiliicoccales*, in Various Natural Ecosystems**
Marc Cozannet, Amandine Sanvoisin, Laurent Toffin, Karine Alain
- P3 The Subsurface Biosphere of the Five-decades Old Volcanic Island of Surtsey**
Pauline Bergsten, Pauline Vannier, Julie Frion, Alan Mougeolle, Stephen Knobloch, Alexandra M. Klonowski, Barbara I. Kleine, Viggó Þ. Marteinson
- P4 Minicells of an Extreme Thermophile, *Thermus thermophilus***
Ying Yang, Toshiyuki Moriya, Tairo Oshima
- P5 Experimental Evidence of Symbiotic Lifestyle of a Thermophilic ARMAN Related Archaeon ('*Candidatus* Micrarchaeota') on Various *Sulfolobales* species**
Hiroyuki D. Sakai, Naswandi Nur, Antonius Suwanto, Takashi Itoh, Moriya Ohkuma, Norio Kurosawa
- P6 VULCANO Revisited: Cultural and 16S rRNA Gene-based Microbial Diversity in the Hot Shallow Vents System of Vulcano Island**
Erauso Gaël, Armougom Fabrice, Gales Grégoire, Cayol Jean-Luc, Postec Anne, Price Roy, Chavagnac Valérie, Capasso Giorgio
- P7 Comparative Ecology and Taxonomic Diversity of Thermophilic Archaea and Bacteria in Yellowstone and Iceland Hot Springs**
Peter T. Podar, Allison Veach, Barnard Belisle, Louie Wurch, James Campbell, Snaedis H. Bjornsdottir, Mircea Podar
- P8 Thermostable Isomerase Processes for Biotechnology**
Juan M. Gonzalez, Nils-Kåre Birkeland, Peter Schönheit, Jennifer Littlechild, Antonio Garcia-Moyano, Elena Puerta-Fernández, Mikhail Isupov, Simone De Rose, Julia Tästensen, Tom Kuprat, Marius Ortjohann

- P9 Soil Thermophiles under Adverse Conditions. The Effect of Temperature Cycling on Cell Survival and Growth**
Jose A. Delgado, Enrique J. Gomez, Juan M. Gonzalez
- P10 Thriving under High Temperature. Thermophiles and the Stability of Small Biomolecules**
Juan M. Gonzalez
- P11 Isolation, Growth Profile, and Genome Sequence of *Parageobacillus thermoglucosidasius* Strain TG4, a Thermophilic, Hydrogenogenic, Carboxydrotrophic Bacterium, First Isolated from a Marine Sediment**
Shunsuke Okamoto, Masao Inoue, Ayumi Tanimura, Yusuke Ogami, Taiki Hino, Suguru Okunishi, Hiroto Maeda, Takashi Yoshida, Yoshihiko Sako
- P12 '*Hydrothermobacter littoralis*' Gen. Nov. Sp. Nov., A New Member of the *Deferribacteraceae* Family Isolated from the Hydrothermal System of Vulcano Island, Italy**
Grégoire Galès, Isabelle Canhiac, Amandine Ruiz, Anne Postec, Jean-Luc Cayol, Gaël Erauso
- P13 Japan Collection of Microorganisms Is Homes to a Diverse Groups of Thermophilic Archaea and Bacteria**
Takashi Itoh, Shigo Kato, Moriya Ohkuma
- P14 Withdrawn**
- P15 Spatial and Temporal Variation in the Structural and Functional Diversity of Thermophilic Bacteria in Hot springs of Uttarakhand, India**
Seema Rawat, Preeti Ranawat
- P16 Exploration and Phylogenetic Analysis for Thermophiles from Mongolian Cattle Dung, Argal**
Takanori Satoh, Kohei Okabe, Takuma Hayashi, Ryoma Mitani, Yuzuka Kimura, Ganbat Orgilbayar, Logii Narantsetseg, Janlav Munkhtsetseg, Makoto Ohashi
- P17 *Altibacter aquimarinus* sp. nov., a Marine Bacterium Isolated from Magma Seawater at Jeju Island**
Sung-Hyun Yang, Mi Jeong Park, Kae Kyoung Kwon, Hyun-Myung Oh
- P18 *Methanofervidicoccus autotrophicus* sp. nov., A Thermophilic Hydrogenotrophic Methanogen, Isolated from a Mid Cayman Rise Hydrothermal Vent**
Qiliang Lai, Liping Wang, Stéphane L'Haridon, Ken Takai, Mohamed Jebbar, Zongze Shao, Karine Alain
- P19 Microbial Diversity of Two Geothermal Springs in Georgia Revealed by Whole Genome Shotgun Sequencing**
Ekaterine Jaiani, Hovik Panosyan, Irene Xagorarakis, Nato Kotaria, Adam Kotorashvili, Natia Geliashvili, Marina Tediashvili, Nils-Kare Birkeland
- P20 Biodiversity and Characterization of Aerobically Cultured Bacteria from the Various Korean Hot Springs by Different Temperature**
YuJeong Yeom, Yong-Jik Lee, Seong-Bo Kim, Ga Eul Jeong, Dariimaa Ganbat, Joon Young Hur, Ji O Kim, Kee-Sun Shin, Sang-Jae Lee
- P21 Insights into the Variants of a Novel Fusellovirus**
Junxia Zhang, Xiaowei Zheng, Haina Wang, Hongchen Jiang, Hailiang Dong, Li Huang
- P22 Withdrawn**
- P23 A High Hydrostatic Pressure Sensor HhpR Acts as a Transcription Repressor in the Hyperthermophilic Archaea Thermococcales**
Qinghao Song, Xiaopan Ma, Xiang Xiao, Jun Xu

- P24 Iron Reducing Mechanisms in a Thermophilic Fermentative Bacteria *Anoxybacter fermentans* DY22613^T Isolated from East Pacific Rise Hydrothermal Sulfides**
Xiang Zeng, Xi Li, Donghua Qiu, Zongze Shao
- P25 Characterization of Acetyl-CoA Synthetases from *Thermus Thermophilus* HB27**
Keiichiro Takashima, Ayako Yoshida, Takeo Tomita, Tomohisa Kuzuyama, Makoto Nishiyama
- P26 Glutamate Dehydrogenase from *Thermus thermophilus* Is Allosterically Controlled by Leucine and AMP as the Complex with a Homolog of Adenine Phosphoribosyltransferase**
Takeo Tomita, Makoto Nishiyama
- P27 Insight into Hydrogenogenic Carbon Monoxide Metabolism in *Carboxydotherrmus pertinax* Revealed by Comparative Genomic Analysis, Growth Experiments and Whole Transcriptome Analysis**
Yuto Fukuyama, Kimiho Omae, Takashi Yoshida, Yoshihiko Sako
- P28 Regulatory Function of CoA Transferase from *Thermus thermophilus* HB27**
Ayako Yoshida, Hiroyuki Yamamoto, Takeo Tomita, Minoru Yoshida, Saori Kosono, Tomohisa Kuzuyama, Makoto Nishiyama
- P29 Enzyme Properties of Glycogen Operon in Thermoacidophilic Archaeon, *Sulfolobus acidocaldarius***
Areum Lee, Eunhye Jo, Yumi Choi, Cheon-Seok Park, Jaeho Cha
- P30 Identification of Genes Involved in Lipote Biosynthesis in the Hyperthermophilic Archaeon *Thermococcus kodakarensis***
Takaaki Sato, Shin-ichi Hachisuka, Tsuyoshi Fujiwara, Jian-qiang Jin, Haruyuki Atomi
- P31 Decoding the Metabolic Features of *Thermobifida fusca* Using KEGG Orthology and ¹³C Mapping**
Chandrakant Joshi, Anuma Singh, Shyam Kumar Masakapalli
- P32 Introduction of C₆-tricarboxylic Acids-converting Enzymes into Hyperthermophilic Archaeon *Thermococcus kodakarensis***
Ayaka Muramatsu, Izumi Orita, Tadayuki Imanaka, Toshiaki Fukui
- P33 Physiological Roles of *Thermococcus kodakarensis* Ubiquitin-like Proteins in the Biosynthesis of Sulfur-containing Biomolecules**
Ryota Hidese, Satsuki Sakakibara, Takayuki Ohira, Tsutomu Suzuki, Naoki Shigi, Shinsuke Fujiwara
- P34 Role of Type II Toxin-antitoxin Systems in Extreme Thermoacidophile Stress Response**
April Lewis, James Counts, Charlotte Cooper, Daniel Willard, Robert Kelly
- P35 The 49 Type II Toxin-Antitoxin Systems in *Thermococcus kodakarensis***
Rie Matsumi, Yoshizumi Ishino, John N. Reeve
- P36 Is D-glutamate Essential for the Rapid Growth of *Thermus thermophilus*?**
Toshiyuki Moriya, Tetsuya Miyamoto, Hiroshi Homma, Tairo Oshima
- P37 Bacterial Chalcone Isomerases: Identification of a Thermostable Variant for Use in Flavonoid Biotechnology**
Elena Puerta-Fernandez, Juan M. Gonzalez
- P38 Direct Electron Transfer between the *frhAGB*-Encoding Hydrogenase and Thioredoxin Reductase in a Non-Methanogenic Archaeon *Thermococcus onnurineus* NA1**
Hae-Chang Jung, Jae Kyu Lim, Sung Gyun Kang, Hyun Sook Lee
- P39 Identification of Keratinases from *Fervidobacterium islandicum* AW-1 Using Dynamic Gene Expression Profiling**
Jae Won La, Eunju Kang, Hyeon-Su Jin, Jae-Yoon Sung, Soo-Young Park, Ji-Young Lee, Won-Chan Kim, Dong-Woo Lee

- P40 Thermal Stability of Cytochrome c' from Thermophilic *Thermus thermophilus***
Sotaro Fujii, Yoshihiro Smabongi
- P41 Characterization of a Thermostable L-Fucose Isomerase from *Fervidobacterium islandicum* AW-1**
Dariimaa Ganbat, DoKyung Oh, Jae-Hong Park, Dong-Woo Lee, Seong-Bo Kim, DoKun Lee, Han-Seung Lee, Sang-Jae Lee
- P42 Probing the [4Fe-4S] Active Site of the Thermostable LeuCD Complex Involved in the Leu/IIe Biosynthesis of *Thermus thermophilus* HB8**
Toshio Iwasaki, Yoko Hayashi-Iwasaki, Tairo Oshima, Daijiro Ohmori, Akio Urushiyama, Kazuya Hasegawa, Takashi Kumasaka
- P43 Functional Expression and Metabolic Identification of 4- α -Glucanotransferase Annotated as α -Amylase from *Fervidobacterium islandicum* AW-1**
Jae-Hong Park, Min-Soek Jeong, Seung Yeon Yoo, Sang-Woo Park, Dong-Hoon Won, Ga Eul Jeong, Dong-Woo Lee, Sang-Jae Lee, Han-Seung Lee
- P44 Expression and Characterization of Glycosyl Hydrolase Family 5 (GH5) β -1,4-Glycanase not Active on Cellulose from *Fervidobacterium islandicum* AW-1**
Min-Soek Jeong, Jae-Hong Park, Seung Yeon Yoo, Hui-Bang Cho, Dong-Hoon Won, Do-Kun Lee, Yu-Jeong Yeom, Dong-Woo Lee, Sang-Jae Lee, Han-Seung Lee
- P45 Variation in Molecular Assembly of Peroxiredoxins from Hyperthermophilic Archaea**
Tsutomu Nakamura, Tomoki Himiyama, Koichi Uegaki
- P46 Heat Induced Activation of a Recombinant Alcohol Dehydrogenase from the Hyperthermophilic Archaeon *Sulfolobus tokodaii* Produced in *Escherichia coli***
Shuichiro Goda, Sho Takashima, Kosei Kajiyama, Yuka Nagano, Takuro Uchida, Hideaki Unno, Tomomitsu Hatakeyama
- P47 Purification and Functional Reconstitution of the Multi-subunit Type Na⁺/H⁺ Antiporter Mrp from Thermophilic *Anoxybacillus flavithermus* WK1**
Masato Morino, Masahiro Ito
- P48 Identification of Cell Surface Exposed and Membrane Proteins of the Thermophile, *Archaeoglobus fulgidus* Strain VC16**
Robert Gunsalus, Deborah R. Leon, Joseph A. Loo, Rachel R. Ogorzalek Loo
- P49 Structure and Dynamics of Hsp104 Disaggregase from Thermophilic Fungus, *Chaetomium thermophilum***
Kyosuke Shinohara, Yosuke Inoue, Yuya Hanazono, Kentaro Noi, Akihiro Kawamoto, Kyoka Shibata, Kazuki Takeda, Keiichi Noguchi, Keiichi Namba, Teru Ogura, Kunio Miki, Masafumi Yohda
- P50 Bio-Hythane Production by using Two-Stage Anaerobic Co-Digestion of Palm Oil Mill Effluent and *Ceratophyllum demersum***
Prawit Kongjan, Rattana Jariyaboon, Sompong O-Thong
- P51 Isolation of Thermophilic Cellulolytic Bacteria for Direct Ethanol Fermentation from Lignocellulosic Biomass**
Apinya Singkhala, Chaisit Niyasom, Nils Kåre Birkeland, Alissara Reungsang, Sompong O-Thong
- P52 Genetic Transformation of *Fervidobacterium islandicum* AW-1**
Soo-Young Park, Eunju Kang, Yong-Jik Lee, Dong-Woo Lee
- P53 Laser Heating: a Tool to Observe Living Hyperthermophilic Archaea in Culture**
Céline Molinaro, Ryan Catchpole, Patrick Forterre, Guillaume Baffou

- P54 An Exploitation and Characterization of Novel Putative Halocins, HY1377 and HB384**
Ga Eul Jeong, Hye Won Kim, DoKyung Oh, YuJeong Yeom, Dong-Woo Lee, Il Kwon Bae,
 Min-Seok Jeong, HuiBang Cho, Han-Seung Lee, Sang-Jae Lee
- P55 How to Keep the Pressure On – Continuous Anaerobic Culture of *Thermococcales* Using a Unique High Pressure / High Temperature Bioreactor**
Jordan Hartunians, Raphaël Brizard, Frédéric Fragne, Mohamed Jebbar
- P56 Withdrawn**
- P57 *Thermus thermophilus* as a Whole Cell Factory for the Production of Extremolytes**
Simone Antonio De Rose, William Finnigan, Nicholas Harmer, Jennifer Littlechild
- P58 Implementation of Enzyme Activity Assays at High Temperature for Microfluidic Platforms**
María Luisa Rúa, Ana Torrado, Clara Fuciños, Aurelio Hidalgo, Liisa Van Vliet
- P59 Effect of Branched-chain Polyamine on Protein Expression in the Hyperthermophilic Archaeon *Thermococcus kodakarensis***
Wakao Fukuda, Mamoru Osaki, Yuka Yamori, Masafumi Hamakawa, Ryota Hidese, Yu Kanesaki,
 Shinsuke Fujiwara
- P60 Genetic Tool Development for a Thermoacidophilic Archaeon**
David Sybers, Janne Swinnen, Eveline Peeters
- P61 How to Grow Without Sulfur - Investigations on a Sulfur-Less, H₂-Saturated, Adapted Metabolism of *Thermococcus barophilus***
Jordan Hartunians, Yann Moalic, Madina Ahmed, Pauline Gripon, Guillaume Lannuzel,
 Mohamed Jebbar
- P62 Localization of GvpC and Its Functional Display on the Exterior Surface of Gas Vesicle Nanoparticle in *Halobacterium***
 Kyung-Myo Kang, YeoReum Kim, Siriya Kankanamage, Priya DasSarma, Shiladitya DasSarma,
Jong-Myoung Kim
- P63 Withdrawn**
- P64 Exploration of an Efficient Way to Obtain High Activity Protein by Stability Selection**
 Ryo Kurahashi, Shun-ichi Tanaka, Kazufumi Takano
- P65 Establishing a Rapid Screening Platform for Thermozyms: The Disulfide Isomerase Case**
Antonio Garcia-Moyano, José Berenguer, Nils-Kåre Birkeland, the TIPs consortium
- P66 Biological Process Effective in Co-production of Biohydrogen and α -amylase by the Conversion of Carbon Monoxide**
Seong Hyuk Lee, Sung-Mok Lee, Jae Young Kim, Hyun Sook Lee, Sung Gyun Kang
- P67 Purification of a Formate Respiratory Complex from Hyperthermophilic Archaeon *Thermococcus onnurineus* NA1**
Ji In Yang, Jae Kyu Lim, Hyun Sook Lee, Sung Gyun Kang
- P68 Development of New Gene Expression Vector for *Thermus thermophilus* Using Silica-inducible Promoter**
Yasuhiro Fujino, Yuri Suematsu, Katsumi Doi
- P69 Development of Primer Specific Hydrogenase Gene for Monitoring in Thermophilic Hydrogen Production System**
Chonticha Mamimin, Adilan Hniman, Sompong O-Thong, Tsuyoshi Imai, Poonsuk Prasertsan

- P70 Insights into Molecular Mechanisms of III-B CRISPR-Cas Systems by Studying Cmr4-mediated Synthetic Cell Lethality**
Jinzhong Lin, Yan Zhang, Qunxin She
- P71 Biochemical Characterization of the *Sulfolobus islandicus* III-B Cmr- β System Reveals a Unique III-B System with Four Distinct Activities**
Mingxia Feng, Anders Fuglsang, Qunxin She
- P72 Cmr3 Regulates the Suppression on Cyclic Oligoadenylate Synthesis by Tag Complementarity in a Type III-B CRISPR-Cas System**
Tong Guo, Wenyuan Han, Qunxin She
- P73 Key Amino Acid Residues Required for the Function of Sis10b *in vivo***
Ningning Zhang, Zhenfeng Zhang, Li Huang
- P74 Overexpression of DNA polymerase D in DNA polymerase B disruptant of *Thermococcus kodakarensis***
Takashi Kushida, Issay Narumi, Sonoko Ishino, Yoshizumi Ishino, Hiroki Higashibata
- P75 Examination of PCR Conditions to Remove Stutter Effect for Reliable Human Identification Technology**
Seiya Kouroki, Tetsuya Satoh, Michiyo Takaki, Keita Ogawa, Yorika Tanaka, Kazutoshi Matsumura, Susumu Iwase, Sonoko Ishino, Yoshizumi Ishino
- P76 Functional Characterization of the Conserved Domains of Orc1-2, A Key Regulator in the DNA Damage Response in *Sulfolobus Islandicus***
Mengmeng Sun, Feng Xu, Qunxin She
- P77 Roles of Four DNA Polymerases in DNA Replication and Repair of the Thermophilic Crenarchaeon *Sulfolobus acidocaldarius***
Hiroka Miyabayashi, Shoji Suzuki, Norio Kurosawa
- P78 Organization of Crenarchaeal Chromosomal DNA by Cren7 and Sso7d: DNA Bending and Bridging**
Zhenfeng Zhang, Zhengyan Zhan, Bing Wang, Xiuqiang Chen, Yuanyuan Chen, Cuihong Wan, Yu Fu, Li Huang
- P79 Interactions of Helicase, DNA polymerase, and Primase to Form Functional Replisome in the Hyperthermophilic Archaeon, *Thermococcus kodakarensis***
Keisuke Oki, Mariko Nagata, Sonoko Ishino, Takeshi Yamagami, Tomoyui Numata, Kouta Mayanagi, Yoshizumi Ishino
- P80 Development of Thermolabile Uracil DNA Glycosylase for PCR Diagnostics**
Yong Keol Shin, Woo Kyung Yu, Jeong Yeon Yoon, Ki Hoon Nam, Palinda Ruvan Munashingha, Young Hoon Kang, Yeon Soo Seo
- P81 Robust Growth of Thermophilic Archaeon Lacking a Canonical Single-stranded DNA Binding Protein**
Shoji Suzuki, Norio Kurosawa
- P82 Phosphoproteomic Analysis Revealed the Global Change of Protein Phosphorylation upon UV Irradiation in *Sulfolobus islandicus* REY15A**
Qihong Huang, Jinfeng Ni, Yulong Shen
- P83 Study on Diversity of Mismatch Repair System in Archaea**
Wataru Mine, Hanae Kudo, Takeshi Yamagami, Tomoyuki Numata, Patrick Forterre, Mart Krupovic, Yoshizumi Ishino, Sonoko Ishino

- P84 Structural Basis of Horizontal Gene Transfer Mechanisms of Thermophilic Inteins**
Hannes M. Beyer, Hideo Iwai
- P85 *Methanocaldococcus fervens* (MfAgo): A Thermotolerant Argonaute Protein with Specific Endonuclease Activity by Broad Guide Utilization**
Yuesheng Chong, Xiang Guo, Qian Liu, Fei Huang, Yan Feng
- P86 Specific Structural Feature of Genome-Size DNA at High Temperature in the Presence of Branched-Chain Polyamine from Hyperthermophilic Archaeon *Thermococcus kodakarensis***
Takashi Nishio, Yuko Yoshikawa, Wakao Fukuda, Naoki Umezawa, Tsunehiko Higuchi, Shinsuke Fujiwara, Tadayuki Imanaka, Chen-Yang Shew, Kenichi Yoshikawa
- P87 Reconstitution of Endonuclease Q-mediated and Endonuclease V-mediated Repair Pathways for Deaminated Base Repair in the Hyperthermophilic Archaeon, *Thermococcus kodakarensis***
Meika Harada, Mariko Nagata, Keisuke Oki, Rie Matsumi, Tamotsu Kanai, Haruyuki Atomi, Tomoyuki Numata, Miyako Shiraishi, Sonoko Ishino, Yoshizumi Ishino
- P88 Characterization Of c-di-AMP Metabolism and Physiological Functions in Piezophilic Hyperthermophilic *Pyrococcus yayanosii***
Zheng Jin, Xiang Xiao, Xipeng Liu
- P89 The *nucS* Homologs in the Genomes of Hyperthermophilic Archaea Encode Active Mismatch-Specific Endonuclease, EndoMS**
Takahiro Ichikawa, Enzo Petracco, Hanae Kudo, Takeshi Yamagami, Tomoyuki Numata, Yoshizumi Ishino, Sonoko Ishino
- P90 Substrate Specificity and Functions of Archaeal N-terminal Acetyltransferase Ard1**
Jingjing Cao, Tongkun Wang, Qian Wang, Xiaowei Zheng, Li Huang
- P91 Structure and Function of Piezophilic Hyperthermophilic *Pyrococcus yayanosii* pApase**
Zheng Jin, Xiang Xiao, Xipeng Liu
- P92 Integrative Analysis Combining AFM, NMR, and EM Revealed Two-State Conformational Exchange of a Single-subunit Oligosaccharyltransferase from *Archaeoglobus fulgidus***
Yuki Kawasaki, Hirotaka Ariyama, Daisuke Fujinami, Hajime Motomura, Ashutosh Srivastava, Florence Tama, Daisuke Noshiro, Toshio Ando, Kouta Mayanagi, Daisuke Kohda
- P93 Direct Visualization of DNA Baton Pass between Replication Factors Bound to Archaeal Okazakisome**
Kouta Mayanagi, Sonoko Ishino, Tsuyoshi Shirai, Takuji Oyama, Shinichi Kiyonari, Daisuke Kohda, Kosuke Morikawa, Yoshizumi Ishino
- P94 ThermusDB: Renewal to a Comprehensive Knowledge Simulator of the Biological Information of *Thermus thermophilus***
Kei Yura, Yoshitaka Bessho, Kohsuke Honda, Gota Kawai, Toshiyuki Moriya, Naoki Nemoto, Makoto Nishiyama, Gen-ichi Sampei, Tairo Oshima
- P95 A Thermophilic Gluconolactonase for Selective Hydrolysis of Monosaccharide 1,4-lactones**
Jennifer Littlechild, Mikhail Isupov, Aaron Westlake, Alina Bunescu, Sarah Müller, Roland Wohlgemuth