

CURRICULUM VITAE

1. Personal:

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2. Education:

B.S.: Pharmaceutical Sciences, Kumamoto University, Kumamoto, Japan (1992)
M.S.: Pharmaceutical Sciences, Kumamoto University, Kumamoto, Japan (1994)
Ph.D.: Pharmaceutical Sciences, Kumamoto University, Kumamoto, Japan (1998)

3. Employment:

Kumamoto University, Research Associate (1998-2003)
University of Delaware (Prof. Charles Riordan), Postdoctoral Associate (2002-2003)
Kumamoto University, Assistant Professor (2003-2008)
University of Shizuoka, Associate Professor (2008-)

4. Research areas:

Structure-Based Drug Design
Cheminformatics
X-ray crystallography
Bioinorganic Chemistry

5. Recent publications:

· Nagasaka Y, Shintaku S, Matsumura K, Masuda A, Asakawa T, Inai M, Egi M, Hamashima Y, Ishikawa Y, Kan T.

Total Synthesis of TAN1251C via Diastereoselective Construction of the Azaspiro Skeleton
Org. Lett., **19**, 3839-3842 (2017).

· Ishikawa Y.

Crystal structure of 7-iodo-4-oxo-4*H*-chromene-3-carbaldehyde
Acta Cryst., **E72**, 1724-1727 (2016).

· Murata T, Ishikawa Y, Saruul E, Selenge E, Sasaki K, Umehara K, Yoshizaki F, Batkhuu J.
Abietane-type diterpenoids from the roots of *Caryopteris mongolica* and their cholinesterase inhibitory activities

Phytochemistry, **130**, 152-158 (2016).

· Ishikawa Y.

Crystal structure of 6,7-dichloro-4-oxo-4*H*-chromene-3-carbaldehyde
Acta Cryst., **E71**, o652-o653 (2015).

· Ogo N, Ishikawa Y, Sawada J, Matsuno K, Hashimoto A, Asai A.

Structure-guided Design of Novel L-Cysteine Derivatives as Potent KSP Inhibitors

ACS Med. Chem. Lett., **6**, 1004-1009 (2015).

· Ishikawa Y.

Crystal structure of 4-oxo-4*H*-chromene-3-carboxylic acid

Acta Cryst., **E71**, o580-o581 (2015).

· Ishikawa Y.

Crystal structure of 8-bromo-4-oxo-4*H*-chromene-3-carbaldehyde

Acta Cryst., **E71**, o572-o573 (2015).

· Ishikawa Y., Yoshida N.

Crystal structure of ethyl 8-chloro-4-oxo-1,4-dihydroquinoline-3-carboxylate

Acta Cryst., **E71**, o566 (2015).

· Ishikawa Y.

Crystal structure of 7,8-dichloro-4-oxo-4*H*-chromene-3-carbaldehyde

Acta Cryst., **E71**, 902-905 (2015).

· Ishikawa Y.

Crystal structure of 3-acetyl-4*H*-chromen-4-one

Acta Cryst., **E71**, o527 (2015).

· Ishikawa Y.

Crystal structure of
6-bromo-7-fluoro-4-oxo-4*H*-chromene-3-carbaldehyde

Acta Cryst., **E71**, 857-860 (2015).

· Ishikawa Y.

Crystal structure of 3-(hydroxymethyl)chromone

Acta Cryst., **E71**, o495 (2015).

· Yokoyama H, Sawada J, Katoh S, Matsuno K, Ogo N, Ishikawa Y., Hashimoto H, Fujii S, Asai A.

Structural Basis of New Allosteric Inhibition in Kinesin Spindle Protein Eg5

ACS Chem. Biol. **10**, 1128-1136 (2015).

· Ishikawa Y., Motohashi Y.

Crystal structure of
(3,5-dichloro-2-hydroxyphenyl){1-[(naphthalen-1-yl)carbonyl]-1*H*-pyrazol-4-yl}methanone

Acta Cryst., **E70**, 522-524 (2014).

· Ishikawa Y., Motohashi Y.

Crystal structure of
(3,5-dibromo-2-hydroxyphenyl){1-[(naphthalen-1-yl)carbonyl]-1*H*-pyrazol-4-yl}methanone

Acta Cryst., **E70**, o1033 (2014).

- Ishikawa Y.
Crystal structure of 7-bromo-4-oxo-4*H*-chromene-3-carbaldehyde
Acta Cryst., **E70**, o996 (2014).
- Todoroki K, Nakano T, Watanabe H, Min JZ, Inoue K, Ishikawa Y., Toyo'oka T.
Computational Prediction of Diastereomeric Separation Behavior of Fluorescent *o*-Phthalaldehyde Derivatives of Amino Acids.
Anal. Sci., **30**, 865-870 (2014).
- Ishikawa Y., Watanabe, K.
(*E*)-3,4,5-trimethoxy-*N'*-((6-methoxy-4-oxo-4*H*-chromen-3-yl)methylene)benzohydrazide
Acta Cryst., **E70**, o832 (2014).
- Ishikawa Y.
7-Chloro-4-oxo-4*H*-chromene-3-carbaldehyde
Acta Cryst., **E70**, o831 (2014).
- Ishikawa Y.
6-Chloro-7-fluoro-4-oxo-4*H*-chromene-3-carbaldehyde
Acta Cryst., **E70**, o825 (2014).
- Ishikawa Y.
6-Chloro-7-methyl-4-oxo-4*H*-chromene-3-carbaldehyde
Acta Cryst., **E70**, o804 (2014).
- Ishikawa Y., Watanabe K.
(*E*)-4-Methoxy-*N'*-[(6-methyl-4-oxo-4*H*-chromen-3-yl)methylidene]benzohydrazide monohydrate
Acta Cryst., **E70**, o784 (2014).
- Ishikawa Y.
8-Fluoro-4-oxo-4*H*-chromene-3-carbaldehyde
Acta Cryst., **E70**, o774 (2014).
- Ishikawa Y.
6-Iodo-4-oxo-4*H*-chromene-3-carbaldehyde
Acta Cryst., **E70**, o744 (2014).
- Ishikawa Y.
8-Chloro-4-oxo-4*H*-chromene-3-carbaldehyde
Acta Cryst., **E70**, o743 (2014).
- Ishikawa Y., Yoshida N.
Ethyl 8-methoxy-4-oxo-1,4-dihydroquinoline-3-carboxylate
Acta Cryst., **E70**, o719 (2014).
- Ishikawa Y., Sugisawa Y.
Diethyl 7,7'-4-oxo-4*H*-[1,4'-biquinoline]-3,3'-dicarboxylate
Acta Cryst., **E70**, o655 (2014).
- Ishikawa Y.

- 6-Fluoro-4-oxo-4*H*-chromene-3-carbaldehyde
Acta Cryst., **E70**, o583 (2014).
- Ishikawa Y, Watanabe K.
(*E*)-4-Methyl-*N'*-[(4-oxo-4*H*-chromen-3-yl)methylene]benzohydrazide
Acta Cryst., **E70**, o565 (2014).
- Ishikawa Y.
6-Bromo-4-oxo-4*H*-chromene-3-carbaldehyde
Acta Cryst., **E70**, o555 (2014).
- Ishikawa Y.
6-Chloro-8-nitro-4-oxo-4*H*-chromene-3-carbaldehyde
Acta Cryst., **E70**, o547 (2014).
- Ishikawa Y.
6,8-Diiodo-4-oxo-4*H*-chromene-3-carbaldehyde
Acta Cryst., **E70**, o536 (2014).
- Ishikawa Y, Yoshida N.
Diethyl 4-oxo-4*H*-[1,4'-biquinoline]-3,3'-dicarboxylate
Acta Cryst., **E70**, o523 (2014).
- Ishikawa Y.
6-Chloro-4-oxo-4*H*-chromene-3-carbaldehyde
Acta Cryst., **E70**, o514 (2014).
- Ishikawa Y, Watanabe K.
(*E*)-3,4,5-Trimethoxy-*N'*-[(4-oxo-4*H*-chromen-3-yl)methylidene]benzohydrazide
Acta Cryst., **E70**, o472 (2014).
- Ishikawa Y, Suzuki T, Yoshida N.
3-Acetyl-2-fluoro-6*H*-benzo[*c*]chromen-6-one
Acta Cryst., **E70**, o470-o471 (2014).
- Ishikawa Y.
6,8-Dibromo-4-oxo-4*H*-chromene-3-carbaldehyde
Acta Cryst., **E70**, o439 (2014).
- Ishikawa Y.
A Script for Automated 3-Dimensional Structure Generation and Conformer Search from 2-Dimensional Chemical Drawing
Bioinformatics, **9**, 988-992 (2013).
- Ishikawa Y, Yoshida N, Suzuki T.
4'-Acetyl-3''-carbamoyl-[1,1':3',1''-terphenyl]-2-carboxylic acid
Acta Cryst., **E69**, o1596 (2013).
- Ishikawa Y, Motohashi Y.
(*E*)-3-{[(1,1-Biphenyl)-3-ylmethyl]iminiumyl[methyl]}-6,8-dichloro-2*H*-chromen-4-olate

Acta Cryst., **E69**, o1448 (2013).

· Ishikawa Y, Motohashi Y.

6,8-Dichloro-4-oxochromene-3-carbaldehyde

Acta Cryst., **E69**, o1416 (2013).

· Ishikawa Y, Matsuo S.

2-(Benzyloxy)isoquinoline-1,3(2*H*,4*H*)-dione

Acta Cryst., **E69**, o1311 (2013).

· Ishikawa Y, Matsuo S.

2-Hydroxyisoquinoline-1,3(2*H*,4*H*)-dione

Acta Cryst., **E69**, o1312 (2013).

· Ishikawa Y, Ugai A

Ethyl (Z)-4-(4-ethoxy-1-hydroxy-3,4-dioxobut-1-en-1-yl)-[1,1-biphenyl]-3-carboxylate

Acta Cryst., **E69**, o1231 (2013).

· Ishikawa Y, Motohashi Y

(*E*)-6,8-Dichloro-3-[[naphthalen-1-ylmethyl]iminiumyl]methyl}-2*H*-chromen-4-olate

Acta Cryst., **E69**, o1226 (2013).

· Ishikawa Y, Motohashi Y

3-[(*E*)-(Benzyliminiumyl)methyl]-6,8-dichloro-2*H*-chromen-4-olate

Acta Cryst., **E69**, o1225 (2013).

· Ikawa T, Takagi A, Goto M, Aoyama Y, Ishikawa Y, Itoh Y, Fujii S, Tokiwa H, Akai S.

Regio-complementary Cycloaddition Reactions of Boryl- and Silylbenzynes with 1,3-Dipoles:
Selective Synthesis of Benzo-Fused Azole Derivatives.

J. Org. Chem., **78**, 2965-2983 (2013).

· Matsuno K, Yamazaki H, Isaka Y, Takai K, Unno Y, Ogo N, Ishikawa Y, Fujii S, Takikawa O, Asai A.

Novel candesartan derivatives as indoleamine 2,3-dioxygenase inhibitors.

Med. Chem. Commun., **3**, 475-479 (2012).

· Ishikawa Y, Fujii S.

Binding mode prediction and inhibitor design of anti-influenza virus diketo acids targeting metalloenzyme RNA polymerase by molecular docking.

Bioinformatics, **6**, 221-225 (2011).

· Ikawa T, Nishiyama T, Shigeta T, Mohri S, Morita S, Takayanagi S, Terauchi Y, Morikawa Y, Takagi A, Ishikawa Y, Fujii S, Kita Y and Akai.

ortho-Selective Nucleophilic Addition of Primary Amines to Silylbenzynes: Synthesis of 2-Silylanilines.

Angew. Chem. Int. Ed., **50**, 5674-5677 (2011).

· Ishikawa Y, Yamashita T, Fujii S, Uno T.

1,1',1'',1'''-[Porphyrin-5,10,15,20-tetra-yl-tetrakis(3,1-phenylenemethylene)]tetraquinolinium Tetrabromide.

Molbank, M704 (2010).

- Ishikawa Y, Yamashita T, Fujii S, Uno T.
Zinc(II)-5,10,15,20-tetrakis(α -pyridino-*m*-tolyl)porphyrin Tetrabromide.
Molbank, M637 (2009).
- Ishikawa Y, Yamakawa N, Uno T.
Binding of Cationic Bis-porphyrins Linked with *p*- or *m*-Xylylenediamine and Their Zinc(II) Complexes to Duplex DNA.
Molecules, **13**, 3117-3128 (2008).
- Ishikawa Y, Fujii S.
Molecular docking study of binding of TMPyP4 to a bimolecular human telomeric G-quadruplex.
Nucleic Acids Symp. Ser., **52**, 173-174 (2008).
- Ishikawa Y, Higashi E. and Morioka H.
Molecular Docking of porphyrins with cationic limbs on Intramolecular G-quadruplex.
Nucleic Acids Symp. Ser., **51**, 247-248 (2007).
- Ishikawa Y, Yamakawa N, Uno T.
Synthetic Control of Interchromophoric Interaction in Cationic Bis-porphyrins toward Efficient DNA Photocleavage with Singlet Oxygen Production in Aqueous Solution.
Bioorg. Med. Chem., **15**, 5230-5238 (2007).
- Ishikawa Y, Tomisugi Y, Uno T.
Molecular modeling of Anti-parallel G-quadruplex DNA/TMPyP Complexes.
Nucleic Acids Symp. Ser., **50**, 331-332 (2006).
- Yamashita T, Uno T, Ishikawa Y.
Stabilization of Guanine Quadruplex DNA by the Binding of Porphyrins with Cationic Side Arms.
Bioorg. Med. Chem., **13**, 2423-2430 (2005).
- Kurosaki H, Ishikawa Y, Ishihara T, Yamamoto T, Yamaguchi Y, Goto M.
Mechanism of Formation of Iron(II) Complexes with Pentadentate Ligands via C-C Bond Formation between *trans*-[Fe(2,4-bis(2-pyridylmethylimino)pentane)(MeCN)₂][ClO₄]₂•MeCN and Various Nitriles and Their Kinetic Fluctuation in Solution.
Dalton Trans., 1086-1092 (2005).
- Yamashita T, Hoashi Y, Tomisugi Y, Ishikawa Y, Uno T.
The C-Helix in CoxA Rolls upon CO Binding to Ferrous Heme.
J. Biol. Chem., **279**, 47320-47325 (2004).
- Yamashita T, Hoashi Y, Watanabe K, Tomisugi Y, Ishikawa Y, Uno T.
Roles of Heme Axial Ligands in the Regulation of CO Binding to CoxA.
J. Biol. Chem., **279**, 21394-21400 (2004).
- Uno T, Ryu D, Tsutsumi H, Tomisugi Y, Ishikawa Y, Wilkinson AJ, Sato H, Hayashi T.
Residues in the Distal Heme Pocket of Neuroglobin: Implications for the Multiple Ligand Binding Steps
J. Biol. Chem., **279**, 5886-5893 (2004).
- Uno T, Aoki K, Shikimi T, Hiranuma Y, Tomisugi Y, Ishikawa Y.

Copper Insertion Facilitates Water-Soluble Porphyrin Binding to rA.rU and rA.dT Base Pairs in Duplex RNA and RNA.DNA Hybrids.

Biochemistry, **41**, 13059-13066 (2002).

· Ishikawa Y, Yamakawa N, and Uno T.

Potent DNA Photocleavage by Zinc(II) Complexes of Cationic Bis-porphyrins Linked with Aliphatic Diamine.

Bioorg. Med. Chem., **10**, 1953-1960 (2002).