

Curriculum Vitae
HIROYUKI KOIDE, Ph.D.

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PRESENT STATUS:

Research Assistant Professor
Department of Medical Biochemistry
School of Pharmaceutical Sciences
University of Shizuoka

EDUCATION

Bachelor of Science in Biochemistry, 2002-2006

Josai University, Saitama-ken, Japan
Title: Synthesis of *N*-guanidino-1,7-diaminoheptane (GC7) analogs
Thesis advisor: Prof. Akia Shirahata

Master of Sciences in Biochemistry, 2006-2008

University of Shizuoka, Shizuoka-ken, Japan
Title: Elucidation of accelerated blood clearance phenomenon caused by repeat injection of PEGylated nanocarriers
Thesis advisor: Prof. Naoto Oku

Ph. D. in Pharmaceutical Sciences, 2008-2011

University of Shizuoka, Shizuoka-ken, Japan
Title: Cancer RNA interference therapy targeting to mammalian target of rapamycin
Thesis advisor: Prof. Naoto Oku

Post doc in Chemistry, 2011-2013

University of California, Irvine
Title: Design of a novel plastic antibody to capture and inhibition of angiogenesis-related growth factors for cancer therapy
Advisor: Prof. Kenneth J. Shea

QUALIFICATION:

Pharmacist (Japanese): registered in JAPAN 6/2006

PUBLICATION

(a) ARTICLES

- 1) Ando H, Yonenaga N, Asai T, Hatanaka K, **Koide H**, Tsuzuku T, Harada N, Tsukada H, Oku N., In vivo imaging of liposomal small interfering RNA (siRNA) trafficking by positron emission tomography., *Yakugaku Zasshi*, **132**,1373-1381, 2012
- 2) Siripong P, Yahuafai J, Piyaviriyakul S, Kanokmedhakul K, **Koide H**, Ishii T, Shimizu K, Ruchirawat S, Oku N., Inhibitory effect of liposomal rhinacanthin-N isolated from *Rhinacanthus nasutus* on pulmonary metastasis in mice., *Biol Pharm Bull.*, **35**, 1197-1200, 2012
- 3) **Koide H**, Asai T, Kato H, Ando H, Shiraishi K, Yokoyama M, Oku N., Size-dependent induction of accelerated blood clearance phenomenon by repeated injections of polymeric micelles., *Int J Pharm.*, **432**,75-79, 2012.
- 4) Hoshino Y, **Koide H**, Furuya K, Haberaecker W W., Lee S, Kodama T, Kanawaza H, Oku N, and Shea K J. The Rational Design of a Plastic Antidote: Synthetic Polymer Nanoparticles that Neutralize Toxic Peptides in Vivo., *Proc Natl Acad Sci USA*, **109**, 33-38, 2012

- 5) Asai T, Matsushita S, Kenjo E, Tsuzuku T, Yonenaga N, **Koide H**, Hatanaka K, Dewa T, Nango M, Maeda N, Kikuchi H, and Oku N., Dicetylphosphate-tetra ethylenepentamine-based Liposomes for Systemic siRNA Delivery., *Bioconjug Chem.*, **22**, 429-435. 2011.
- 6) **Koide H** Asai T, Furuya K, Tsuzuku T, Kato H, Dewa T, Nango M, Maeda N, and Oku N., Inhibition of Akt (ser473) phosphorylation and rapamycin-resistant cell growth by mammalian target of rapamycin knockdown with siRNA in VEGFR-1 targeting vector., *Biol. Pharm. Bull.* **34**, 602-608. 2011.
- 7) Asakawa T, Hiza A, Nakayama M, Inai M, Oyama D, **Koide H**, Shimizu K, Wakimoto T, Harada N, Tsukada H, Oku N and Kan T., PET imaging of nobiletin based on a practical total synthesis., *Chem. Commun. (Camb)*. **47**. 2868-2870. 2011.
- 8) **Koide H**, Asai T, Hatanaka K, Akai S, Ishii T, Kenjo E, Ishida T, Kiwada H, Tsukada H and Naoto O., T cell-independent B cell response is responsible for ABC phenomenon induced by repeated injection of PEGylated liposomes., *Int. J. Pharm.*, **392**, 218-223. 2010.
- 9) Hoshino Y, **Koide H**, Urakami T, Kanazawa H, Kodama T, Oku N and Kenneth J. S., Recognition, neutralization, and clearance of target peptides in the bloodstream of living mice by molecularly imprinted polymer nanoparticles: a plastic antibody., *J. Am. Chem. Soc.*, **132**, 6644-6645. 2010.
- 10) Hatanaka K, Asai T, **Koide H**, Kenjo E, Tsuzuku T, Harada N, Tsukada H and Oku N., Development of double-stranded siRNA labeling method using positron emitter and its in vivo trafficking analyzed by positron emission tomography., *Bioconjug. Chem.*, **21**, 756- 763, 2010.
- 11) Hoshino Y, Urakami T, Kodama T, **Koide H**, Oku N, Okahata Y and Kenneth J. S., Design of synthetic polymer nanoparticles that capture and neutralize a toxic peptide., *Small.*, **5**, 1562-1568, 2009.
- 12) Urakami T, Kawaguchi A, Akai S, Hatanaka K, **Koide H**, Shimizu K, Asai T, Fukumoto D, Harada N, Tsukada H and Oku N., In vivo trafficking of liposome-encapsulated hemoglobin determined by positron emission tomography., *Artificial Organs.*, **33**, 164-168, 2009.
- 13) **Koide H**, Asai T, Hatanaka K, Urakami T, Ishii T, Kenjo E, Nishihara M, Yokoyama M, Ishida T, Kiwada H and Oku N., Particle size-dependent triggering of accelerated blood clearance phenomenon., *Int. J. Pharm.*, **362**, 197-200, 2008
- 14) Imanaka H, **Koide H**, Shimizu K, Asai T, Shimizu K N, Ishikado A, Makino T and Oku N., Chemoprevention of tumor metastasis by liposomal beta-sitosterol intake., *Biol. Pharm. Bull.*, **31**, 400-404, 2008.
- 15) Hashimoto M, Takashige K, Furuyashiki M, Yoshidome K, Sano R, Kawamura Y, Ijichi S, Morioka H, **Koide H**, Oku N, Moriya Y, Kusumoto S and Suda Y., Enhancement of antitumor activity of OK-432 (Picibanil) by Triton X-114 phase partitioning., *Int. Immunopharmacology.*, **8**, 12-19, 2008.

(b) REVIEWS

- 1) **Koide H**, Asai T, Shimizu K and Oku N., Drug carrier systems for anticancer agents., *CRC press*. In press
- 2) **Koide H**, Asai T, Hatanaka K, Shimizu K, Yokoyama M, Ishida T, Kiwada H, and Oku N., Elucidation of accelerated blood clearance phenomenon caused by repeat injection of PEGylated nanocarriers., *YAKUGAKU ZASSHI.*, Review, **129**, 1445-1451, 2009.

CONFERENCE PRESENTATION (oral presentation)

- 1) **Koide H**, Asai T, Nango M, Dewa T, Maeda N, Oku N., Development of antiangiogenic cancer therapy targeting to mTOR., 25th The Japan Society of Drug Delivery System., May 12-14, 2010
- 2) **Koide H**, Hatanaka K, Asai T, Ishida T, Kiwada H, Yokoyama M and Oku N., Elucidation of ABC phenomenon caused by repeat injection of PEGylated nanocarrier., 129th Annual meeting of the pharmaceutical society Japan, Graduated students Symposium (invited),. March 26-28. 2010.
- 3) **Koide H**, Hatanaka K, Asai T, Ishida T, Kiwada H, Yokoyama M and Oku N. Elucidation of ABC phenomenon caused by repeat injection of PEGylated nanocarrier., Pharma Bioforum, Nov 29-30, 2010
- 4) **Koide H**, Hatanaka K, Asai T, Ishida T, Kiwada H and Oku N., Elucidation of ABC phenomenon caused by repeat injection of nanocarrier., 24th The Japan Society of Drug Delivery System., Jun 29-30, 2008
- 5) **Koide H**, Hatanaka K, Asai T, Ishida T, Kiwada H and Oku N., T Cell-independent B Cell response in accelerated blood clearance phenomenon caused by a repeated injection of PEGylated liposomes., 128th Annual meeting of the pharmaceutical society Japan, . March 26-28. 2008.

CONFERENCE PRESENTATION (poster presentation)

- 1) **Koide H**, Asai T, Yokoyama M, Ishida T, Kiwada H and Oku N., Elucidation of ABC phenomenon caused by repeat injection of PEGylated nanocarrier., 4th International Liposome Society., London UK, Dec, 12-15, 2009.
- 2) **Koide H**, Hatanaka K, Tsuruta A, Asai T, Ishida T, Kiwada H Oku N., T cell-independent B cell response induces accelerated blood clearance phenomenon caused by repeated injection of PEGylated liposomes.,

3th International Liposome Society., London UK, Dec, 8-11, 2007.