

Introducing the 2023 *Bioconjugate Chemistry* Editorial Team



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Along with the celebration of the new year, we celebrate many successes at *Bioconjugate Chemistry*. This includes additions and renewal of our editors, who play a critical role in service to our research community of authors, reviewers, and readers. As highlighted in our January 2023 editorial,¹ we sincerely thank Prof. Vince Rotello, who stepped down after a decade of success as Editor-in-Chief. We also extend a sincere thank you to Prof. Bradley Smith, who also stepped down after 10 years of service as Associate Editor for the journal. With great enthusiasm, we introduce the 2023 editorial team at *Bioconjugate Chemistry*, which includes five new additions to the editorial staff: Prof. Gonçalo Bernardes from the University of Cambridge, Prof. Peng Zou, from the Peking University, Mr. Nathan Quinn and Dr. Christina MacLaughlin from ACS Publications, and Prof. Theresa Reineke from the University of Minnesota. We also introduce and celebrate the team of four editors that are continuing in dedicated service to our community and ACS Publications: Prof. Zhifei Dai from Peking University, Prof. Jan van Hest from Eindhoven University of Technology, Prof. Erin Lavik from the University of Maryland Baltimore County, and Prof. Gang Zheng from the University of Toronto. We wish our entire scientific community a happy, healthy, and productive 2023 and look forward to working with you all to disseminate many exciting advances in *Bioconjugate Chemistry*.

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Notes

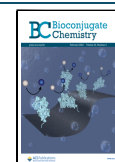
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Biographies



Gonçalo Bernardes, Associate Editor. I grew up in small town in Portugal called Torres Vedras, and I am a first generation higher-education student and graduate. After graduating in Chemistry at the University of Lisbon, I moved to the UK where I completed my DPhil in Chemical Biology in 2008 under the guidance of Prof. Ben Davis. After postdoctoral experiences with Profs. Peter Seeberger and Dario Neri, I started my independent career in 2013 at the University of Cambridge as a Royal Society University Research Fellow. In 2018, I became a Lecturer, and I have been promoted to Reader in 2019 and Full Professor in 2022. Our research program sits at the interface of chemistry and cancer biology, and we pursue key questions in chemistry and molecular medicine by using innovative, interdisciplinary strategies from reaction engineering to targeting, from computing to immunology. To help translation of our discoveries from the bench to the clinic, I have founded a satellite laboratory at Instituto de Medicina Molecular in Lisbon, where we perform translational, preclinical research. Bioconjugate chemistry is a central and interdisciplinary research topic — it involves any reaction that incorporates a modification into a peptide/protein/antibody/biomaterial. Such modification can either result in structural and/or activity changes. In addition, such reaction may be done in the test tube, cell, or even in an organism. Within this view, the uses of such bioconjugates as tools to provide new biological insight and to generate new candidates for disease treatment, imaging, or diagnosis is of relevance. This description represents my view of the field of bioconjugation, and I hope to handle manuscripts on these

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topics where *Bioconjugate Chemistry* should be a primary journal to report new and impactful findings.



Peng Zou, Topic Editor. I am currently an associate professor at the College of Chemistry and Molecular Engineering of Peking University. I received my B.S. degree in Chemistry with a double major in Physics from Peking University in 2007, and a PhD in Biological Chemistry from MIT in 2012. Following my postdoc training at Harvard University, I started my independent career at Peking University (PKU) in 2015 and was promoted to a tenured associate professor in 2021. I am jointly appointed as a principal investigator at the PKU-IDG/McGovern Institute for Brain Research and the PKU-Tsinghua Center for Life Sciences. My lab focuses on inventing chemical tools for the high-resolution mapping of biomolecules and biophysical signaling that underlie neuronal functions. This mainly follows two lines of efforts: free radical-based probes for profiling proteins and RNAs in neurons, and optical reporters for neural activities. In the rapidly evolving field of bioconjugate chemistry, I look forward to a future where bioconjugation techniques enable spatiotemporally controlled assembly of biomaterial and specific labeling of biomolecules in the context of living animals.



Zhaipei Dai, Associate Editor. I obtained my Ph.D. degree at Technical Institute of Physics and Chemistry, CAS in 1998, and am now a professor in the Department of Biomedical Engineering, in the College of Future Technology at Peking University. I serve as the Chairman of Contrast Enhanced Imaging Technology in the Branch of China Pharmaceutical Biotechnology Association, the Chairman Designate of Nano Oncology Branch of the China Anti-Cancer Association, as well as the originator and chair of the International Conference on Molecular Imaging and Minimally Invasive Therapy (MIMIT), which is held every two years. I teach three courses: Introduction to Biomedical Engineering, Nanomedicine, and Molecular Imaging. My research is focused on sophisticated bioconjugate methodologies for the development of advanced drug delivery systems, molecular imaging,

and sensing of diseased cells and organs. Bioconjugate chemistry has brought revolutionary techniques for drug discovery and development, cell surface engineering, immunomodulation, and other fields. Especially, the emergence of biorthogonal click chemistry is reshaping the future of medicine and biology.



Jan van Hest, Associate Editor. I was trained as a polymer and macro-organic chemist in the group of Bert Meijer. During my postdoctoral stay with Dave Tirrell, I became fascinated by the possibilities that biosynthesis has to offer for the construction of well-defined macromolecules. Since then, I have been drawn to explore in my research the interface between chemistry and biology. Our current group's focus is on the development of well-defined polymer assemblies that can be used for nanomedicine and artificial cell research. We aim to create bioinspired materials and processes in order to combine the functionality of biological systems with the flexibility and robustness of synthetic structures. Smart hybrid materials are developed based on a combination of polymers and proteins, using a variety of synthetic techniques, such as protein engineering, peptide synthesis and controlled polymerization methods. Natural synthetic processes are mimicked by compartmentalization and positional assembly of biocatalysts in polymeric capsules. Over the past years as Associate Editor for *Bioconjugate Chemistry*, I have seen how the field has made exciting progress, which received its recognition in the 2022 Nobel prize in Chemistry. To me, it is clear that in the coming years we will see a further fading away of the perceived boundary between biology and chemistry. More and more we will be capable of approaching biology from a molecular perspective by synthesizing and modulating bioderived and synthetic molecules with equal agility. *Bioconjugate Chemistry* will be at the core of this development and will be your guide for the coming years in this exciting field of science.



Erin Lavik, Associate Editor. I joined BC as an Associate Editor shortly after my son was born, and I have watched them grow together in vastly different ways. In my research life, I look at biomaterials for tissue

models and for drug delivery, both with the goal of treating injury and disease. If one needs more humility, try growing tissues in a dish while one is growing a person. As scientists, we are often chasing the shadows of what we hope to study. It is so essential to remember that we only see what we look for. I love teaching, and I am most proud of hands-on and open-ended work I helped to develop in concert with thinking about inclusion in science and how we have systematically ignored the contributions of people from marginalized groups. That has to change if we are to do the best science. Bioconjugate chemistry is a mature field in many ways, which is exciting—we are seeing the clinical applications of many of the technologies developed in this journal. As we develop, evaluate, and deploy these technologies, it is critical to think about the implications for individuals and society. Who will have access and how? These therapies can change lives, so how do we make sure they are as accessible as possible? As scientists, we cannot content ourselves to think about science without thinking about its impact. As human beings, we must do everything we can to make that impact equitable, accessible, and inclusive.



Gang Zheng, Associate Editor. I am a Professor of Medical Biophysics, Biomedical Engineering, Pharmaceutical Sciences and Medical Sciences at the University of Toronto, a Canada Research Chair in Cancer Nanomedicine, and the Associate Research Director of the Princess Margaret Cancer Centre. My research focuses on developing innovative, clinically translatable cancer imaging and therapy agents, ranging from single molecules to nanomedicines and microparticles. As a chemist within a cancer research centre, I have the privilege of driving this materials development with laser focus towards addressing the foremost unmet clinical needs in cancer management. This harmonization of chemistry and clinical care endows my research group with an interdisciplinary foundation that has allowed me to recruit outstanding students across a wide array of disciplines (chemistry, physics, engineering, biology, and medicine). I am a firm believer in welcoming new ideas, perspectives, and interests that come with such a diverse team to shape a truly trainee-driven research program. I take great pride in nurturing these trainees into becoming independent thinkers and doers. My interest in interdisciplinary materials development has also culminated into a strong association with *Bioconjugate Chemistry* for over two decades. This journey started with publishing my first research article as faculty in *Bioconjugate Chemistry* in 2002, evolved into my first journal Editorial Advisory Board role (2010) and finally resulted in my ongoing role as its Associate Editor from 2014 onwards. This journal has always been known for its scientific rigor and has enjoyed a reputation of publishing high quality science that converges synthetic and biological research entities. Looking to the future, I am excited for the journal's continued growth on two particular accounts. First, the *Bioconjugate Chemistry* community is at the forefront of several recent life-changing scientific discoveries and medical breakthroughs, such as mRNA vaccines,

nanomedicines, antibody–drug conjugates, and cancer theranostics. These advancements within the journal's scope, makes it all-the-more relevant and impactful. Equally important, the recent Nobel recognition of click chemistry and biorthogonal chemistry, which are the backbones of site-specific bioconjugation reactions, is a tremendous boost to the *Bioconjugate Chemistry* community. I expect that the momentum created in these arenas will lead to a generation of new researchers working towards novel bioconjugate methodologies and applications, for which *Bioconjugate Chemistry* is the perfect forum.



Nathan Quinn, Marketing Manager. Throughout my childhood I was always fascinated by science and looked up to science communicators like Carl Sagan and Bill Nye, who gave me a curiosity about the world and a passion for sharing my knowledge with others. As a Marketing Manager at ACS I feel lucky that I get to contribute to the scientific community, even in my small way. My job is an exciting mix of cheerleader and evangelist, where I get to tell the world about all the exciting work being published in *Bioconjugate Chemistry*. It is thrilling to work on a journal with such a passionate community and a brilliant team. In addition to *Bioconjugate Chemistry*, I also work on other ACS journals covering biological chemistry, medicinal chemistry, and polymer science. I especially enjoy work that lets me engage with the diverse global community of scientists around the world. Science has no boundaries and, if given the opportunity and support, new discoveries can come from anyone or anywhere!



Christina MacLaughlin, Managing Editor. Shifting from academic research to scholarly publishing was a major adjustment for me, but an exciting one. I've always had broad scientific interests and believe that seeking knowledge on the broadest range of scientific areas possible is important to gain a better understanding of the world around us. I completed my BSc at University of Toronto with double majors in Chemistry and Physiology followed by working for two years as a tech and sales support person in advanced microscopy. I obtained my PhD working with Prof. Gilbert Walker at University of Toronto, and

postdoctoral research with Profs. Hedley, Wilson, and Zheng at Princess Margaret Cancer Centre and U of T. My graduate and postdoctoral research involved the development of SERS nanoparticles, and porphyrin-loaded liposomes, respectively, for applications in cancer imaging and therapy. Working at ACS in the Managing Editor role has afforded the opportunity to learn and collaborate with leading researchers across many areas of chemistry. I've managed journals and worked with editorial teams publishing in materials, energy, toxicology, biochemistry, chemical biology, neuroscience, and natural products, and am thrilled to be working with the *Bioconjugate Chemistry* team, returning to my core area of expertise, as we continue to grow the journal and evolve with the definition of bioconjugate chemistry. Furthermore, this career has also afforded the opportunity to impact how science is communicated including organizing webinars and promoting content on COVID-19 related research, strengthening our ties to preprint servers, and making key contributions to ACS Staff Catalyst Award-winning projects under the umbrella of Advancing Publication Integrity in ACS journals. It is been a joy to help authors promote their work; to organize initiatives highlighting early career authors, women in research, stigma in neuroscience research; and to ensure that we keep diversity, equity, inclusion, and respect (DEIR) at the center of everything we do.



Theresa Reineke, Editor-in-Chief. I have always been fascinated by scientific discovery from an early age, which was solidified by many positive experiences growing up. I had many further excellent experiences participating in undergraduate research at the University of Wisconsin – Eau Claire, where I received my B.S. degree in Chemistry with a minor in Physics. After graduation, I worked in the pharmaceutical industry for a year and then entered graduate school at Arizona State University. There, I began research in the field of materials chemistry with Prof. Omar Yaghi and moved with his research group to the University of Michigan, where I completed my Ph.D. in Chemistry. Afterward, I was excited to broaden my research experience into the field of biomaterials and nucleic acid delivery and completed a National Institutes of Health Postdoctoral Fellowship at the California Institute of Technology working with Prof. Mark Davis. I then began my independent career and have held faculty positions at the University of Cincinnati, Virginia Tech, and in 2011 joined the University of Minnesota, where I am currently a Prager Chair for Macromolecular Science and a Distinguished McKnight University Professor. I also have graduate faculty appointments in the Departments of Chemical Engineering and Materials Science and Pharmaceutics. My group is focused on enabling fundamental chemistry and applied technology advancements of macromolecules for drug delivery, imaging, gene and cell therapy, genome editing, and sustainability. I am highly collaborative with academic and industrial laboratories and entrepreneurial in spirit through leading several corporate collaborations to translate bioconjugates into the healthcare industry. Bioconjugate

chemistry is the nexus of many fields that encompass both fundamental and applied research from academia, industry, and national laboratories. Society has recently witnessed many exciting successes in the field such as mRNA vaccines, monoclonal antibodies, antibody–drug conjugates, and gene therapies. The field is now poised for expansion through revolutions in synthetic biology, automation, and artificial intelligence making accessible gene and cell therapy, regenerative medicine, immunochemistry, and microbiome revolutions. *Bioconjugate Chemistry* is a premier publisher of transformative research at the chemistry–biology interface. I look forward to working with our authors, reviewers, and readers to build community, fostering DEIR, and promote our next generation of global researchers in this exciting field!

■ REFERENCES

- (1) Reineke, T. M. Bioconjugate Chemistry: Enabling Innovation and Fostering Community at the Nexus of Synthetic and Biological Research. *Bioconjugate Chem.* **2023**, *34* (1), 1–2.