The combined sponsorship statement has to be less than 3 pages. I’ll combine them when I hear back from you.

CURRENT RESEARCH and FUNDING

Prof Lee is an evolutionary biologist whose work integrates genetic and phenotypic data to bridge the extinct/extant divide. This requires extensive experience with empirical morphological data, including an understanding of the underlying ecology and functional morphology, paired with finesse with molecular genetic and genomic analyses. He implements much of his research computationally in a Bayesian framework, and is considered one of the leading global experts in Bayesian phylogenetic analysis of evolutionary data. Though he has worked across numerous phyla, much of his research is on reptiles, focusing on their evolution and biogeography, and is particularly drawn to Australian lizards and snakes. His work is currently supported by Australian Research Council (ARC) Discovery and Linkage grants, that aim to (**1**) understand the evolutionary problems and ecological settings of the fish-tetrapod transition (2016-18), (**2**) integrate fossils and genomes to resolve the early evolution of snakes (2016-18, (**3**) investigate phenotypic and venom evolution in Australian tiger snakes (2017-19). There is no direct financial overlap for Ian’s proposed research, though there is shared interest in the empirical system, Australian reptiles.

COMPLEMENTARY RESEARCH

Dr. Lee is Research Leader in Palaeontology at the South Australian Museum (SAM), and holds a joint professorial appointment in the Department of Biological Sciences at Flinders University of South Australia. He has worked on the evolution of reptiles for over two decades, using morphology and molecular phylogenetics to unravel their stories. Ian’s project would be a welcomed contribution to the understanding of Australia’s rich reptile diversity.

DEVELOPMENTAL PLAN

In his first year, Ian will join the South Australian Museum as a Research Associate, under the mentorship of Prof. Lee. The Lee lab focuses on resolving paleontological/neontological evolutionary questions using diverse sets of data and cutting-edge Bayesian methods. There are a number of PhD student, associates, and faculty researchers employed or affiliated with the SAM (including Prof. Steve Donnellan, Dr. Mark Hutchinson; see below), who form a high-calibre group for evolutionary and methodological discussions. The SAM also provides a great opportunity for community-outreach and public science discussions and awareness. We expect Ian will contribute to existing programs where interested.

SPONSORSHIP ROLES and RESOURCES

The proposed research requires Ian to develop an efficient plan for data collection and management, learn new computational skills, and delve deeply into macroevolutionary theory, to unite computational and evolutionary biology. To reach this goal, we intend to support him in all pursuits. We will meet regularly, but informally, to discuss conceptual and empirical progress and stimulate ideas. It is important to respect the independence of early career researchers, and so we pledge to provide the tools necessary for success. The SAM is full of some of Australia’s best and brightest in ecology, natural history, and of course herpetology. This includes Dr. Mark Hutchinson (Senior Research Scientist—an expert in Australian Herpetology), Dr. Steve Donnellan (Chief Research Scientist—vertebrate evolution and biogeography), who are existing colleagues of Ian. Dr. Kate Sanders (molecular ecology of reptiles) and Dr. Emma Sherratt (geometric morphometrics) also have joint affiliations with the SA museum and neighbouring Adelaide University. The museum also houses the oldest and largest collection of DNA samples in the Southern Hemisphere, a cutting-edge next-gen DNA laboratory (led by Donnellan), and unparalleled alcohol and skeletal specimen holdings of Australian reptiles.

LIMITATIONS

Upon completion of this postdoctoral fellowship, the collected data will be integrated into a freely available database, and the methods distributed freely as well. This position will help develop Ian as a rising star in the field, and we encourage him to pursue further research without any restrictions or limitations.