

Comment on “One health, one literature: Weaving together veterinary and medical research”

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The research community can have confidence in data from well-executed phenotyping projects.

In a broad sense, the Focus entitled “One health, one literature: Weaving together veterinary and medical research” (1) got it right: The sooner we break down artificial barriers separating publishable scientific advances—especially clinically relevant data in humans and a variety of animal species—the faster we can capitalize on translatable research findings of benefit to both human and animal health. Unfortunately, the author also got it wrong when she confused yesterday’s inexperience leading to bona fide past mistakes in pathological diagnoses with today’s approach to large-scale phenotyping projects that rely on established standardized protocols, controlled ontologies, and highly skilled personnel capable of making accurate, reliable, and reproducible diagnoses. Contrary to the author’s opinion, projects like the Knockout Mouse Phenotyping Program (KOMP), part of the International Mouse Phenotyping Consortium (IMPC), involve both veterinary and human medical pathologists and other specialists, such as ophthalmologists, cardiologists, and immunologists, working side by side to examine, assess, and determine the accuracy of any and all identified phenotypes—normal and abnormal (2). As veterinary and medical doctors and pathologists serving as directors and participants of several of those projects, we take seriously and stand by the validity and precision of the phenotyping projects we lead. Further, all data generated, positive and negative, alphanumeric and imaging, are curated centrally (3), undergo highly stringent and transparent statistical analysis (4), and are made freely available online (www.mousephenotype.org) for viewing, downloading, and community input. Our projects are one of the very few that meet today’s guidelines for the reproducibility of biomedical animal studies (5). Indeed, KOMP and the IMPC are already achieving online what Christopher calls a “one-literature” approach to breaking

through species (at least in mouse) barriers to the translation of research findings for the benefit of humans and animals (1). Therefore, instead of concerns about “misinterpretations having serious implications for the integrity of” carefully planned and well-executed phenotyping projects such as KOMP2, the research community can have confidence in this carefully planned and well-executed research as well as in the data. And because all of the data are in the public domain, those results can always be verified.

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