

**The 1st International One Health Congress – Individual Oral Abstract Template
14 – 16 February 2011**

***** A maximum of 250 words applies*****

Your abstract title and author names will be published as you have entered in the online system

<p>Abstract Title:</p>	<p>Estimating and validating a dynamic risk factor model for pathogen transmission using community-level bird census data: avian influenza at the waterfowl/domestic bird interface in Zimbabwe</p>
<p>Author(s): <i>Please BOLD those authors who will present this paper. Name, affiliations eg.</i> John Smith, University of Melbourne; Lisa Jones, University of Monash, Melbourne.</p>	<p>Alexandre Caron, Cirad UPR AGIRs, Michel de Garine-Wichatitsky, Cirad UPR AGIRs, Nicolas Gaidet, Cirad UPR AGIRs, Celia Abolnik, Onderstepoort Veterinary Institute, Graeme S. Cumming, Percy Fitz Patrick Institute, University of Cape Town</p>
<p>Sub-Theme: <i>List the corresponding subtheme for your abstract i.e. Session 2: Disease Emergence Emerging Zoonoses</i></p>	<p>Session 2: Disease Emergence - <i>Emerging Livestock Diseases</i> Session 5: Science, Policy and Political Action - <i>Global, Regional or Bilateral approaches to managing risks</i></p>
<p>Please follow the format outlined on the congress website www.onehealth2011.com/coa.php</p> <p>Abstract: Text should be Arial Font 10 point single spaced.</p> <p>Maximum of 250 words</p> <p>- Your abstract must fit on <u>one</u> page.</p> <p>- Margins of text box are not be altered.</p> <p>Should your abstract <u>not</u> follow the above guidelines, it will <u>not</u> be accepted.</p> <p>Focus on the practical implementation of a project/case study where the outcomes/results have led to changes (i.e. what did you achieve? How did you achieve it? What worked? What didn't work?)</p> <p>State what your presentation adds to what is already known i.e. how/why is your work innovative?</p>	<p>The ecology of hosts is crucial in understanding mechanisms of pathogens transmission and spread in complex multi-hosts systems. This paradigm is used to infer epidemiological interactions in the context of Avian Influenza Virus (AIV) maintenance and spread at the interface between wild and domestic birds in a southern African ecosystem.</p> <p>We counted and sampled waterfowl community every two months during two years in the Chivero-Manyame catchment, an important wetland of Zimbabwe. We used the overlap in space and time of bird communities combined with ecological dynamic and non-dynamic risk factors to evaluate a risk of AIV maintenance in waterfowl and a risk of transmission of AIV to the domestic populations (backyard and intensive poultry, farmed ostriches) through the identification of potential "bridge species". We tested the validity of this risk model using: 1) AIV prevalence data in the waterfowl community estimated in parallel with counting; 2) AIV prevalence data in bridge species identified.</p> <p>The waterfowl risk identified is related to the AIV prevalence but with time lag. Prevalence in the potential bridge species indicates that some of them can play a role as bridge species in the ecosystem.</p> <p>We believe this protocol is a) reproducible using available bird census data and useful to explore AIV risk and identify wild bird species potentially acting as reservoir or spreader of pathogens at a local scale; b) can be used as a management tool to improve surveillance at a local level.</p>

Please check spelling and grammar before you submit.