**Table 1.** Studies included in the review in temporal order. The table show the main characteristics: species, type of stimuli, tasks, manipulation to induce the putative affective state and a brief description of main findings.

| Species | Reference | Cue Type | Response | + Reinforcer | - Reinforcer | Affect manipulation | Main finding |
|---|---|---|---|---|---|---|---|
| **Rat** (*Rattus norvegicus*) | Harding *et al* (2004) | Auditory stimuli | Go/No-Go (lever press) | Food | Noise | Unpredictable vs. predictable housing | Rats in the unpredictable housing condition were slower to respond and tended to show fewer responses to ambiguous tones close to the positive tone and to the tone itself |
| **European Starling** (*Sturnus vulgaris*) | Bateson & Matheson (2007) | Visual stimuli (grey scale) | Go/No-Go (lid-flipping) | Food | Unpalatable food | Enriched vs. standard housing | Starlings moved from an enriched to a standard cage were less likely to approach and flip the intermediate grey lid. An opposing trend was found in the birds that had been moved from the standard to the enriched cage |
| **Rat** (*Rattus norvegicus*) | Burman *et al* (2008a) | Spatial location | Go/No-Go (locomotion) | Food | No food | Enriched vs. standard housing | Rats housed without enrichment took longer to approach an ambiguous probe when this was positioned closest to the unrewarded location than rats in the enriched housing condition |
| **Rat** (*Rattus norvegicus*) | Burman *et al* (2008b) | Speed of running | Successive negative contrast (SNC) paradigm | Food | Fewer food items per session | Enriched vs. standard housing | Unenriched rats displayed a prolonged response to a decrease in anticipated food reward |
| **European Starling** (*Sturnus vulgaris*) | Matheson *et al* (2008) | Visual stimuli (key peck illuminated at different times) | Active choice (coloured key peck) | Food delivered instantaneously (1 s) | Food delivered with delay (15 s) | Enriched vs. standard cage | Starlings housed in larger, enriched cages showed significantly increased optimism than animals housed in smaller, standard cages |

| Species | Reference | Cue Type | Response | + Reinforcer | - Reinforcer | Affect manipulation | Main finding |
|---|---|---|---|---|---|---|---|
| **European Starling** (*Sturnus vulgaris*) | Brilot *et al* (2009) | Visual stimuli (eyespots) | Go/No-Go (approach to the food bowl) | None | None | 4 auditory stimuli set up to elicit fear/anxiety | Ambiguous eyespots were treated no differently from the visual stimulus without eyespots. No evidence was found that the auditory stimuli eliciting fear/anxiety caused increased aversion to ambiguous eyespots |
| **Rat** (*Rattus norvegicus*) | Burman *et al* (2009) | Spatial location | Go/No-Go (locomotion) | Food | Unpalatable food | High light level vs. low light level | Rats that switched from high to low light levels displayed a more positive judgement of ambiguous locations compared to those that switched from low to high light levels |
| **European Starling** (*Sturnus vulgaris*) | Brilot *et al* (2010) | Visual stimuli (grey scale background) | Active choice | Food (high reward 3 mealworm) | Food (low reward 1 mealworm) | Enriched vs. standard housing | Stereotyping starlings were more likely to choose the dish associated with the smaller food reward in the presence of the most ambiguous discriminative stimulus |
| **Sheep** (*Ovis aries*) | Doyle *et al* (2010) | Spatial location | Go/No-Go (locomotion) | Food | No food + presence of a dog | Restraint and isolation stress (RIS) | Restrained and isolated sheep were more likely to approach the ambiguous bucket locations, suggesting RIS-treated animals had a more optimistic-like judgement bias |
| **Dog** (*Canis lupus familiaris*) | Mendl *et al* (2010b) | Spatial location | Go/No-Go (locomotion) | Food | No food | Different separation-related behaviour (SRB) scores | Dogs expressing more SRB behaviour showed a more 'pessimistic' judgement of ambiguous test locations |
| **Honeybee** (*Apis mellifera*) | Bateson *et al* (2011) | Odour stimuli | Go/No-GO (proboscis extended or withhold in response to stimulation) | Food reward of high value (CS+) | Food reward of less value (CS-) | 60 s of shaking | Agitated bees were more likely to classify ambiguous stimuli as predicting punishment |

| Species | Reference | Cue Type | Response | + Reinforcer | - Reinforcer | Affect manipulation | Main finding |
|---|---|---|---|---|---|---|---|
| **Dogs** (*Canis lupus familiaris*) | Burman *et al* (2011) | Visual stimuli (grey scale) | Go/No-Go (locomotion) | Food | No food | 'Neutral' treatment vs. 'Post-consumption' treatment (food) | Rewarded dogs took significantly longer to approach an intermediate ambiguous stimulus, suggesting that they were less likely to anticipate food (negative judgement) compared to dogs in the 'Neutral' treatment group |
| **Sheep** (*Ovis aries*) | Doyle *et al* (2011a) | Spatial location | Go/No-Go (locomotion) | Food | No food + fan-forced blower | Chronic, intermittent stressor events (3weeks) | Exposure to unpredictable, aversive events over a long period of time generated a negative judgement bias in lambs, as reflected in the lower number of approaches of the stressed sheep to the bucket located 1.15 m from the positive location |
| **Sheep** *(Ovis aries)* | Doyle et al (2011b) | Spatial location | Go/No-Go (locomotion) | Food | No Food + presence of dog | Administration of p-Chlorophenylanine 50 mg/ml and water solution in a control group | Following 5 days of treatment, p-Chlorophenylanine (pCPA) treated group approached the positive ambiguous location significantly less than the control group a similar trend after the cessation of the treatment, showing a negative judgment bias |
| **Chicks** (*Gallus gallus)* | Salmeto *et al* (2011) | Visual Stimuli (aversive or appetitive morphed silhouettes from chick to owl) | Go/No-Go (locomotion) | None | None | Control condition vs. isolation stressor of 5 m (anxiety-like state) or isolation stressor of 60 m (depressive-like state) | In the control group, runway start and goal latencies increased as a function of amounts of aversive characteristics in the cues. In the anxiety-like state, runway latencies were increased to aversive ambiguous cues, reflecting more pessimistic-like behaviour. In the depression-like state, runway latencies were increased to both aversive and appetitive ambiguous cues, reflecting more pessimistic-like and less optimistic-like behaviour |

| Species | Reference | Cue Type | Response | + Reinforcer | - Reinforcer | Affect manipulation | Main finding |
|---|---|---|---|---|---|---|---|
| **Sheep** (*Ovis aries*) | Sanger *et al* (2011) | Spatial location | Go/No-Go task | Food | No food + presence of dog | Short-term stress of shearing (hypothermia) | In one cohort group the shorn sheep displayed a more positive judgement bias than control sheep. In the second cohort the shorn sheep were no different from controls in judgement bias |
| **Mice** (*Mus musculus*) | Boleij *et al* (2012) | Odour stimuli | Go/No-Go | Palatable food | Unpalatable food | White vs. red light | BALB/c mice showed a negative judgment bias under both the negative and positive conditions |
| **Rat** (*Rattus norvegicus*) | Brydges *et al* (2012) | Tactile discrimination (sandpaper texture) | Active choice | Food reward of high value | Food reward of less value | Juvenile stress (JS) | JS animals were lighter than controls and were more optimistic in the cognitive bias test. JS animals were also faster than controls to make a decision when presented with an ambiguous stimulus |
| **Sheep** (*Ovis aries*) | Destrez *et al* (2012) | Spatial location | Go/No-Go (locomotion) | Food | No food + fan-forced blower | Administration of diazepam (0.10mg/kg) and saline in equal concentration in the control group | Control lamb increased their approach to one of the ambiguous stimuli while the treated animals maintained the same latency |
| **Pig** (*Sus scrofa*) | Douglas *et al* (2012) | Auditory stimuli | Go/No-Go task | Food | Aversive experience | Enriched vs. standard housing | Pigs had more optimistic judgement biases in enriched environments. Also, pigs that have spent time in an enriched environment reacted more negatively to being subsequently housed in a barren environment |
| **Tufted capuchin** (*Cebus apella*) | Pomerantz *et al* (2012) | Visual stimuli | Active choice | Food reward of High value | Food reward of less value | Levels of stereotypic and non-stereotypic activity (head twirls and durations of pacing) | Capuchins with higher levels of stereotypic head twirls exhibited a negative bias while judging ambiguous stimuli and had higher levels of faecal corticoids compared to subjects with lower levels of head twirls |

| Species | Reference | Cue Type | Response | + Reinforcer | - Reinforcer | Affect manipulation | Main finding |
|---|---|---|---|---|---|---|---|
| **Rat** (*Rattus norvegicus*) | Richter *et al* (2012) | Spatial location | Go/No-Go | Food | Unpalatable food | Enriched vs. standard housing | Enrichment was associated with more optimistic interpretation of ambiguous cues in both “helpless” and “non-helpless” male rats |
| **Rat** (*Rattus norvegicus*) | Rygula *et al* (2012) | Auditory stimuli | Operant Skinner box (lever press) | Food | Mild electric shock | Manual stimulation – tickling inducing a positive affective | Tickling induced positive emotions, as indexed by rat’s laughter, and was associated with more optimistic choices under ambiguous stimuli |
| **Hens** (*Gallus gallus*) | Wichman *et al* (2012) | Spatial location | Go/No-Go task (locomotion) | Food | No food | Enriched vs. standard housing | No significant differences between treatments were found |
| **Goat** (*Capra hircus*) | Briefer and McElligott (2013) | Spatial location | Go/No-Go task (locomotion) | Food | No food | Past experience of poor care vs. control group (general good care condition) | Rescued female goats with poor care experience displayed optimistic moods or similar as male without experience of poor care |
| **Sheep** (*Ovis aries*) | Destrez et al (2013) | Spatial location | Go/No-Go task | Food | No food + fan-forced blower | Chronic stress treatment for 9 weeks (unpredictable, uncontrollable aversive events such as predator, dog, conspecific signals and human signals) | Sheep stressed chronically for 9 weeks spend more time reaching the ambiguous location of the stimuli, indicating a negative judgement bias |
| **Grizzly bear** (*Ursus arctos horribilis*) | Keen *et al* (2013) | Visual stimuli | Positive reinforcement techniques (Active choice) | Food reward of High value | Food reward of less value | 2.1 h of exposure to enrichment items varying in attractiveness | Results were unaffected by enrichment type or time spent interacting with enrichment items. A positive relationship between stereotypic behaviour (pacing) and ‘optimistic’ response bias was found |

| Species | Reference | Cue Type | Response | + Reinforcer | - Reinforcer | Affect manipulation | Main finding |
|---|---|---|---|---|---|---|---|
| **Cattle** (*Bos taurus*) | Neave *et al* (2013) | Visual stimuli | Go/No-Go task | Milk (0.14L) | No food | Dehorning | After dehorning calves judge more negative the ambiguous stimuli. First evidence that a pain procedure (dehorning) are able to change the emotional state of calves |
| **Rats** (*Rattus norvegicus*) | Papciak *et al* (2013) | Auditory stimuli | Active choice | Food reward | Electric shock | Social defeat in the resident-intruder paradigm for 3 weeks (stressed group) and daily manipulation (control group) | Stressed group made more pessimistic choice at ambiguous cues |
| **Cattle** (*Bos taurus*) | Daros et al (2014) | Visual stimuli | Go/No-Go task | Milk | 1 min of delay to the next trial + noise whistle sound | 1) Separation from the mother<br>2) Dehorning | Maternal separation calves judge the ambiguous stimuli more negatively. Also separation from the mother generates a similar judgement bias highlighted during the dehorning procedure (see also Neave *et al* 2013) |
| **Sheep** (*Ovis aries*) | Verbeek *et al* (2014a) | Visual and spatial stimuli | Go/No-Go task | Social reward (sheep) | Dog | Level of feeding restriction. Two groups: high feeding level and low feeding level for 7 days | Sheep under prolonged food restriction express more positive interpretation of ambiguous cues compared with a group of sheep with high feeding level |
| **Sheep** (*Ovis aries*) | Verbeek *et al* (2014b) | Visual and spatial stimuli | Go/No-Go task | Social reward (sheep) | Dog | Palatable and unpalatable food and subsequent administration of opioid agonist (Morphine 1 mg/Kg), administration of opioid antagonist (Naloxone 2 mg/Kg) and sterile water (10 mg/Kg) | Palatable food induces positive judgement bias in the animals that received the unpalatable food. Also a near-significant interaction treatment and location/cue when injected with morphine, which enhanced the positive bias |

Study identification: Harding *et al* 2004; Bateson and Matheson 2007; Burman *et al* 2008a; Burman *et al* 2008b; Matheson *et al* 2008; Brilot *et al* 2008; Burman *et al* 2009; Brilot *et al* 2010; Doyle *et al* 2010; Mendl *et al* 2010b; Bateson *et al* 2011; Burman *et al* 2011; Doyle *et al* 2011a, b; Salmeto *et al* 2011; Sanger *et al* 2011; Boleij *et al* 2012; Brydges *et al* 2012; Destrez *et al* 2012, 2013; Douglas *et al* 2012; Pomerantz *et al* 2012; Richter *et al* 2012; Rygula *et al* 2012; Wichman *et al* 2012; Briefer *et al* 2013; Keen *et al* 2013;Neave *et al* 2013; Papciak *et al* 2013; Daros *et al* 2014; Verbeek *et al* 2014a, b.

**Table 2.** Studies included in this review in temporal order. The table shows the main characteristics of each: species used, reference, number of cues utilized, behaviours measured in the judgement task, prediction in relation to judgment bias, outcome (prediction confirmed or not), and bias location.

| Species | Reference | No. of cues utilized | Behaviours measured | Prediction | Outcome | Bias location detected |
|---|---|---|---|---|---|---|
| **Rat** (*Rattus norvegicus*) | Harding *et al* (2004) | 3 (1 ambiguous) | Proportion of tones responses; Time to respond to the tone | Negative bias | Confirmed | Nearest cue to the positive training cue |
| **European Starling** (*Sturnus vulgaris*) | Bateson & Matheson (2007) | 5 (3 ambiguous) | Proportion of lids flipped | Negative bias | Confirmed | Nearest cue to the positive training cue |
| **Rat** (*Rattus norvegicus*) | Burman *et al* (2008a) | 5 (3 ambiguous) | Average time to reach the cue | Negative bias after moving from an enriched to a standard housing condition | Confirmed | Nearest cue to the unrewarded location |
| **Rat** (*Rattus norvegicus*) | Burman *et al* (2008b) | None | Time to reach the cue; Time to feed | Negative bias in rats housed in standard conditions | Confirmed | None |
| **European Starling** (*Sturnus vulgaris*) | Matheson *et al* (2008) | 9 (7 ambiguous) | Choice of cue | Positive judgement bias associated with enriched cage | Confirmed | None |
| **European Starling** (*Sturnus vulgaris*) | Brilot *et al* (2009) | 4 (2 ambiguous) | Proportion of time spent in each zone in the cage; Latency to make first movement; Latency to first approach the food bowl; Proportion of time spent facing the eyespot stimulus | Interaction between the state of the birds and their response to the eyespot stimuli | Not confirmed | None |
| **Rat** (*Rattus norvegicus*) | Burman *et al* (2009) | 5 (3 ambiguous) | Latency to reach the goal pot | Contrast in the judgement of ambiguous stimuli in two groups of rats tested under high and low levels of light | Confirmed | No specific locations of ambiguous cues |

| Species | Reference | No. of cues utilized | Behaviours measured | Prediction | Outcome | Bias location detected |
|---|---|---|---|---|---|---|
| **European Starling** (*Sturnus vulgaris*) | Brilot *et al* (2010) | 5 (3 ambiguous) | Choice of cue; Latency between presentation of cue and choice | Negative judgement bias in non-enriched conditions compared with enriched conditions | Not confirmed | None |
| **Sheep** (*Ovis aries*) | Doyle *et al* (2010) | 5 (3 ambiguous) | Average time to approach the cue | Sheep exposed to the stressor would show negative judgement bias compared to control sheep | Negative bias not confirmed. Found a positive bias instead. Sheep exposed to the stressor showed a positive judgement bias | Central cue |
| **Dog** (*Canis lupus familiaris*) | Mendl *et al* (2010b) | 5 (3 ambiguous) | Latency to reach the cue | Dogs with higher levels of separation-related behaviour (SRB) would show negative judgement bias | Confirmed | Central cue and near negative cue |
| **Honeybee** (*Apis mellifera*) | Bateson *et al* (2011) | 5 (3 ambiguous) | Extension of proboscis | Shaken bees would exhibit negative judgement bias | Confirmed | Near negative cue |
| **Dogs** (*Canis lupus familiaris*) | Burman *et al* (2011) | 5 (3 ambiguous) | Latency to approach the cue | Dogs with a rewarding experience before testing would exhibit a positive judgment bias compared with a control group | Negative bias not confirmed. Positive bias found instead. Rewarded dogs showed a pessimistic judgment bias | Central cue |
| **Sheep** (*Ovis aries*) | Doyle *et al* (2011a) | 7 (5 ambiguous) | Latency to approach the cue | Stressed sheep would have a more negative judgement bias | Confirmed | Near positive cue |
| **Sheep** (*Ovis aries*) | Doyle *et al* (2011b) | 5 (3 ambiguous) | Latency to approach the cue | Sheep treated with (pCPA) would have more negative judgement bias compared with the a control group | Partially confirmed. No difference following three days of treatment, but a negative bias found followed 5 days of treatment and a trend after 5 days from the cessation of treatment | Central cue and near to the positive cue |

| Species | Reference | No. of cues utilized | Behaviours measured | Prediction | Outcome | Bias location detected |
|---|---|---|---|---|---|---|
| **Chicks** (*Gallus gallus)* | Salmeto *et al* (2011) | 5 (3 ambiguous) | Start latency (time to step outside the start box); Goal latency (time to cross a defined mark located 10 cm away from the cue) | Non stressed chick runway latencies would differ according to the cue used; Chicks isolated for 5 min less approach behaviour to ambiguous cues close to the negative cue; Chicks isolated for 60 min less approach behaviour to ambiguous cues closest to both positive or negative | Confirmed | Central cue and near negative cue |
| **Sheep** (*Ovis aries*) | Sanger *et al* (2011) | 5 (3 ambiguous) | Approach the cues | Sheep released from the short-term stress of shearing would show positive judgement bias | Confirmed | Central cue |
| **Mice** (*Mus musculus*) | Boleij *et al* (2012) | 5 (3 ambiguous) | Latency to eat; Latency and duration of exploratory behaviour; Locomotor behaviours; Picking up the food | BALB/c mice more negative judgement bias compared with129P3; BALB/c mice tested under white light condition more negative judgement than mice tested under dark light condition | Confirmed | None |
| **Rat** (*Rattus norvegicus*) | Brydges *et al* (2012) | 4 (2 ambiguous) | Choice of bowl (Chocolate recorded as an optimistic choice and Cheerio recorded as a pessimistic choice) | Animals with juvenile stress would show negative cognitive bias compared to control animals | Negative bias not confirmed. Positive bias found instead. | None |

| Species | Reference | No. of cues utilized | Behaviours measured | Prediction | Outcome | Bias location detected |
|---|---|---|---|---|---|---|
| **Sheep** *(Ovis aries)* | Destrez *et al* (2012) | 5 (3 ambiguous) | Latencies to approach the cue | Ability of diazepam treatment to induce an optimistic-like judgement bias | Confirmed | Close to the positive cue |
| **Pig** (*Sus scrofa*) | Douglas *et al* (2012) | 3 (1 ambiguous cues) | Approach behaviour to the cue; Latency to approach the cue | Pigs housed in enriched pens would show positive judgement bias compared with pigs housed in barren pens; Experience of barren pen following the enrichment condition would increase negative judgment bias | Confirmed | None |
| **Tufted capuchin** (*Cebus apella*) | Pomerantz *et al* (2012) | 3 (1 ambiguous cue) | Choice associated with preferred reward; Pacing behaviour; Head-twirls | Association between stereotypic behaviour and negative judgement bias | Confirmed. Monkeys with head twirls displayed negative judgement bias | None |
| **Rat** (*Rattus norvegicus*) | Richter *et al* (2012) | 5 (3 ambiguous) | Latency to "reach" the cue (time taken to touch the cue); Latency to "choose" the cue (time taken to place nose in food bowl); Number of arm choices; Number of head dips; Number of rearing (standing upright on its hind limbs) | Enrichment would affect judgment biases in helpless and non-helpless rats | Partially confirmed. Enrichment housing condition increased positive judgement bias in both groups (only evident in latency to choose behaviour) | None |
| **Rat** (*Rattus norvegicus*) | Rygula *et al* (2012) | 3 (1 ambiguous cues) | Response to cues; Number of omissions | Association between positive emotion (induced by tickling) and positive judgement bias compared with handled rats | Partially confirmed. No differences in judgement bias between tickling and handled group. Only rats that emitted 50 kHz vocalization after tickling showed more positive judgement bias | None |

| Species | Reference | No. of cues utilized | Behaviours measured | Prediction | Outcome | Bias location detected |
|---|---|---|---|---|---|---|
| **Hens** (*Gallus gallus*) | Wichman *et al* (2012) | 5 (3 ambiguous) | Latency between leaving the start box and pecking the cue | Difference in enriched and standard housing conditions | No confirmed | None (trend toward Central cue) |
| **Goat** (*Capra hircus*) | Briefer and McElligott (2013) | 5 (3 ambiguous) | Latency to reach the location of cue | Goats with poor welfare experience more negative judgement bias; Absence of negative judgement bias would indicate recovery | Partially Confirmed. Only females with poor welfare experience showed a positive judgement bias | Close to the positive cue and close to the negative cue |
| **Sheep** (*Ovis aries*) | Destrez et al (2013) | 5 (3 ambiguous) | Latency to reach the location of cue | Chronic stress treatment for 9 weeks induce a negative mood | Confirmed | Negative, close to negative middle and closed to positive cues |
| **Grizzly bear** (*Ursus arctos horribilis*) | Keen *et al* (2013) | 5 (3 ambiguous) | Response to the central cue; Time interaction with the enrichment item; Pacing behaviour (repetition of the same route with or without head tossing/ pirouetting) | Bears would show more positive judgement bias to the central cue after long interaction with enrichment item (associated with high reward); bears would show negative judgement bias towards central cue after longer periods engaged in stereotypic behaviour (associated with low reward) | Not Confirmed. Enrichment was not a significant predictor of cognitive bias response at the central cue. Pacing behaviour was associated with a positive judgement bias | None |
| **Cattle** (*Bos taurus*) | Neave *et al* (2013) | 5 (3 ambiguous) | Responses to ambiguous cue | Experience of dehorning associated with pessimistic bias | Confirmed | Central cue and Near negative cue |
| **Rats** (*Rattus norvegicus*) | Papciak *et al* (2013) | 3 (1 ambiguous) | Response to the cues; Number of omissions | Effect of psychosocial stress (resident-intruder paradigm) on negative judgement bias | Confirmed | None |
| **Cattle** (*Bos taurus*) | Daros *et al* (2014) | 5 (3 ambiguous) | Response to the cues; Number of omissions | Separation from the mother to induce a negative judgement bias | Confirmed | Near negative and central cue |

| Species | Reference | No. of cues utilized | Behaviours measured | Prediction | Outcome | Bias location detected |
|---|---|---|---|---|---|---|
| **Cattle** (*Bos taurus)* | Daros et al (2014) | 5 (3 ambiguous) | Response to the cues; Number of omissions | Separation from the dam induce a negative judgement bias | Confirmed | Near negative and central cue |
| **Sheep** (*Ovis aries*) | Verbeek *et al* (2014a) | 5 (3 ambiguous) | Approach response to the cue; Number of steps, Number of vocalisations Number of oral manipulations of the walls and floor | Chronic food restriction would lead to a negative judgement bias | Negative judgment bias not found. Positive judgment bias found instead | None |
| **Sheep** (*Ovis aries*) | Verbeek *et al* (2014b) | 5 (3 ambiguous) | Approach response to the cue | Consuming palatable food reward induces positive judgement bias compared when receiving unpalatable food. Also morphine administration boosts the positive bias after consuming the food reward and reduces the negative bias after receiving the unpalatable food. Naloxone would prevent the formation of positive judgement bias after consumption of food reward and little effect after receiving the unpalatable food | Partially confirmed. Consuming food reward induces positive judgement bias compared when receiving unpalatable food. Morphine administration boosts the positive bias after receiving the food reward. No evidence of reduction of negative bias after the consuming the unpalatable food with the administration of morphine. Noloxone had no effect in these experiments | None |

Study identification: Harding *et al* 2004; Bateson and Matheson 2007; Burman *et al* 2008a; Burman *et al* 2008b; Matheson *et al* 2008; Brilot *et al* 2008; Burman *et al* 2009; Brilot *et al* 2010; Doyle *et al* 2010; Mendl *et al* 2010b; Bateson *et al* 2011; Burman *et al* 2011; Doyle *et al* 2011a, b; Salmeto *et al* 2011; Sanger *et al* 2011; Boleij *et al* 2012; Brydges *et al* 2012; Destrez *et al* 2012, 2013; Douglas *et al* 2012; Pomerantz *et al* 2012; Richter *et al* 2012; Rygula *et al* 2012; Wichman *et al* 2012; Briefer *et al* 2013; Keen *et al* 2013; Neave *et al* 2013; Papciak *et al* 2013; Daros *et al* 2014; Verbeek *et al* 2014a,